Christian School

Scope & Sequence

Preschool–Grade 12

2025–2026



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Scope & Sequence

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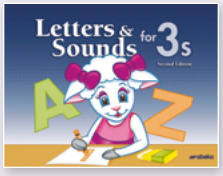
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Language Arts: Phonics 3-Year-Olds



Letters and Sounds for 3s is a beginning ABC book for three-year-olds. Each new letter is introduced by an animal alphabet friend. This animal friend helps the child recognize the letter and learn the letter's sound.

Letters and Sounds for 3s is also designed to teach early writing skills. Children learn letter formation and practice hand-eye coordination as they trace or glue items to letters.

Added Enrichment

- Lessons featuring 12 themes including circus, farm, rain forest, community helpers, children of the world, zoo
- Games involving parades, animals, playing community helpers, and more (126)

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Phonics Skills Development

- Recognize each letter's shape and sound

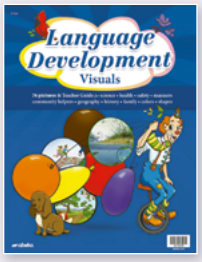
Motor Skills Development

- Practice hand-eye coordination:
  - Trace letter shapes
  - Glue objects on letter shape
  - Work puzzles
  - Fish with magnet on pole
  - Toss a beanbag
  - Identify articles in a bag by touch
  - Zip and unzip an item
  - Play games that include galloping, tightrope walking, bouncing a ball

Creativity Development

- Animal Alphabet Friends (26)
- Recognize letters on picture flashcards
- Practice letter name and sound with Amber Lamb puppet and felt letters
- Learn a song for each letter

Language Arts: Language 2- & 3-Year-Olds



Children love to learn new things. With the *Language Development Visuals,* children develop their language and listening skills as they learn about and discuss God's creation and the people and world around them. Ninety-nine topics include science, health, safety, manners, community helpers, geography, history, family, colors, and shapes.

Added Enrichment

- Corresponding poems in most lessons
- Comprehension questions
- Learning games
- Picture flashcards (76)
- Additional activities
- Animal Alphabet Friends Flashcards (26)

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Language Skills Development

- Develop language and listening skills through 99 topical studies including:
  - Animals and their habitats: ants, arctic animals, bears, butterflies, birds, cats, camels, ducks, dogs, forest animals, hummingbirds, insects, jellyfish, jungle animals, koalas, ladybugs, lambs, mice, ostriches, pandas, rabbits, reptiles, underground animals, woodpeckers
  - Countries around the world: Canada, England, Israel, Japan, Australia, Mexico, The Netherlands, land of Africa
  - Health, safety, manners:
    - God made me, healthy bodies, kitchen safety, manners, neighbors
    - Senses: tasting and smelling, seeing, hearing, touching
    - Table manners
  - Community helpers: doctor, dentist, firefighter, letter carrier, nurse, pastor, police officer, veterinarian
  - Character development: kindness, listening, obeying quickly, being quiet
  - Science: apples, eggs, Edison and light bulb, flowers, garden, magnets, night, jungle, peanuts, pond, rain forest, rubber, sea, spring, fall, summer, winter, vegetables, water, wind and weather, zinnias
  - Miscellaneous topics: rainbow colors, What color is it?, shapes and shape pictures, astronaut, buses and boats, cars, family, farm, games, Here we go!, groceries, house, jelly, jam, juice, jellybeans, kindergarten, names, olives, opposites, pairs of things, quarter, quilt, reading, telephone, transportation, yarn, zipper, zoo

Motor Skills Development

- Increase motor skills through language-driven activities:
  - Action games such as hide-and-seek, monkey tag, jellyfish tag, and "Simon Says" (50)
  - Finger plays including "Fish for Fish," "My House," and "The Woodpecker's Home" (20)
  - Activities involving play dough, building blocks, finger painting, puzzles, and more (85)
  - Coloring activities (5)
  - Directed drawings (18)

Language cont. p. 2

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Language cont.

Creativity Development

- Poems (77)
- Games involving feeding animals, pretending to help at home, finding hidden items, matching pairs, and more (88)
- 237 special activities such as:
  - Having certain foods for snacks
  - Acting out familiar stories
  - Bringing animals to the classroom
  - Having community helpers visit the classroom
  - Taking field trips
- Songs such as "Old MacDonald's Farm" and "Oh, Be Careful" (13)

Language Arts: Poetry 2- & 3-Year-Olds



Fun Poems and Finger Plays, a compilation of more than 120 poems and finger plays, includes many of the traditional poems young children have enjoyed for generations, together with new works in rhyme.

Added Enrichment

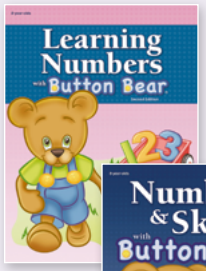
- Additional resource poems and finger plays (21)

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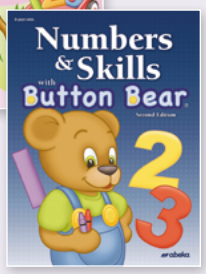
Skills Development

- Memorize poems and finger plays (42)
- Recite in unison
- Develop use of appropriate expression
- Benefit from exposure to basic literature skills such as rhyming words
- Practice motor skills

Numbers 2- & 3-Year-Olds



Learning Numbers with Button Bear is a number-recognition and coloring book especially designed for **two-year-olds**. This text helps children to listen, follow directions, and practice hand-eye coordination as they learn number concepts 1–10.



Numbers and Skills with Button Bear helps **three-year-olds** sharpen their listening skills, follow directions, and practice hand-eye coordination as they learn number concepts 1–15. Children enjoy tracing pathways, doing dot-to-dot, and coloring large, simple forms on these skill sheets.

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Numbers Skills Development

2-Yr.-Olds

- Count from 1–25
- Understand number concepts 1–10:
  - Counting objects
  - Number recognition
  - Proper sequence

3-Yr.-Olds

- Review counting from 1–25
- Count from 26–30
- Review number concepts 1–10
- Understand number concepts 11–15:
  - Counting objects
  - Number recognition
  - Proper sequence

Numbers cont. p. 3

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Numbers cont.

Motor Skills Development

2-Yr.-Olds

- Jump and clap a given number of times
- March and hop while counting to a given number
- Color given pictures

3-Yr.-Olds

- Break a piñata
- Jump and clap a given number of times
- March and hop while counting to a given number
- Color
- Trace and follow dot-to-dots

Creativity Development

2-Yr.-Olds

- Learn each number using Button Bear puppet
- Count felt objects, paper objects such as acorns, flowers, apples, leaves, points on a caribou's antlers, money pieces, and toy animals
- Apply skills and concepts in activities such as counting animals, picking apples, delivering the mail, and feeding peanuts to an "elephant" (64 games)

3-Yr.-Olds

- Learn each number using Button Bear puppet
- Practice number recognition and concepts with puppet, felt numbers, and objects
- Apply skills and concepts in activities such as placing dots on lady-bug, shopping in a grocery store, delivering the mail, building a turtle shell, and gathering eggs (76 games)

Bible 2- & 3-Year-Olds



Preschool Bible Coloring Sheets provide a review for Bible stories that children have heard during Bible time. These 40 coloring sheets are assigned in the Preschool Curriculum to be done during Skills Development time.



Large, colorful Abeka Flash-a-Cards are designed to hold each child's interest as he learns about God and His Son, Jesus. Selected Old and New Testament lessons are presented using *Old Testament Stories, Series 1 & 2,* and *New Testament Stories, Series 1 & 2.*

Preschoolers will also enjoy learning about the first Thanksgiving, the birth of Christ, and Christ's resurrection while viewing the *Holiday Stories* Flash-a-Cards. At the end of the year, a cumulative review of Bible lessons will help children remember what they have learned.

Evaluation

- Memory verses (not graded)

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Lessons *174 Abeka Flash-a-Cards*

- Old Testament lessons (18):
  - Feature biblical events and people including: Creation, Adam and Eve, Noah, Abraham, Isaac (2), Joseph, Moses, Hannah, Samuel, David (3), Elijah, Elisha and Naaman, Daniel, Queen Esther, Jonah
- New Testament lessons (22):
  - Include events in the life of Christ and some of the stories Jesus told such as Jesus' Boyhood, Follow Me, First Miracle, Woman at Well, Nobleman's Son, Fishing with Jesus, Jesus Heals Paralyzed Man, Beside the Pool, Jesus Stills the Storm, Jairus's Daughter, Feeding Five Thousand, Jesus Walks on Water, Blind Bartimaeus, Ten Lepers, Good Samaritan, Lost Lamb, Prodigal Son, Jesus Loves the Children, Rich Young Ruler, Zacchaeus, Friends at Bethany, Heaven
- Holiday lessons (7):
  - Cover the First Thanksgiving, Birth of Jesus, Shepherds See the Savior, Wise Men Worship Jesus, Triumphal Entry and Last Supper, Christ's Crucifixion and Resurrection, Jesus Appears Alive and Returns to Heaven

Music *37 songs*

- Choruses, holiday songs, patriotic songs
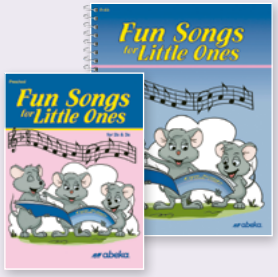
Memory Work

- Place stickers on verse chart after correctly reciting verse:
  - 2- and 3-yr.-olds: new verses (10 each)
  - 3-yr.-olds: review verses (9)

Prayer Time

- Learn to pray with thanksgiving

Music 2- & 3-Year-Olds



Fun Songs for Little Ones contains 50 songs including both traditional and newer songs young children love. The sing-along CD makes song time easy for the teacher and enjoyable for the children.

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Skills Development *50 songs*

- Reinforce letters and numbers being taught
- Understand message of the song
- Improve coordination by using motions to keep time with words
- Benefit from fun activities that spark and keep interest: making appropriate animal sounds; using hand motions; placing their name in a song

Variety of Songs to Memorize

- Animal songs, motion songs, seasonal songs
- Fun songs about the alphabet, character building, colors, counting, family, and food

Arts & Crafts 2- & 3-Year-Olds



Arts and Crafts with Button Bear has been designed to give **two-year-olds** delightful opportunities to enjoy art as they develop motor skills. The variety of projects, which introduces young children to basic art and craft concepts, correlates with academics, Bible teaching, seasons, and holidays.



Child Art for 2s gives children additional art sheets emphasizing coloring skills.

Added Enrichment

- *Child Art for 2s:* coloring pages that coordinate with themed topics



The colorful projects in *Arts and Crafts with Amber Lamb* give **three-year-olds** delightful opportunities to enjoy art and develop motor skills while they paint, glue, and color projects with seasonal, biblical, and fun themes.



Three-year-olds learn colors and shapes, learn how to follow directions, and develop hand-eye coordination with the projects in *Child Art for 3s.* Pictures have been drawn with wide, colorful lines in simple styles with the preschooler in mind.

Added Enrichment

- *Child Art for 3s:*
  - Coloring pages that coordinate with themed topics
  - Occasional poems to enhance coloring page

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Skills Development

2-Yr.-Olds *51 projects*

- Recognize 8 colors: red, yellow, blue, green, purple, orange, black, brown
- Recognize 4 shapes: square, circle, rectangle, triangle
- Apply proper colors to guided practice activities
- Reinforce Language Development topics
- Coloring, gluing, taping, applying glitter

3-Yr.-Olds *52 projects*

- Review 8 colors and 4 shapes
- Associate groups of objects with colors
- Develop comprehension by answering thinking questions
- Reinforce Language Development topics
- Gluing, coloring
- Folding
- Applying glitter

Technique Development

2-Yr.-Olds

- Coloring in the lines
- Finger painting, sponge painting

3-Yr.-Olds

- Coloring in the lines, gluing, finger painting, sponge painting
- 3-D Objects

Language Arts: Phonics



ABC-123 contains brightly-colored exercises that will appeal to 4-year-olds and reinforce their beginning phonics and reading skills.

Writing with Phonics K4 provides phonics practice later in the year.

Added Enrichment

- Abeka games (19)
- Additional games and activities (45)
- Enrichment activities (37)
- Guided and independent practice activities

Evaluation

- Oral evaluations (8) include letter recognition, blending, and reading

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Skills Development

- Recognize:
  - The five vowels and their short sounds
  - The 21 consonants and their sounds
  - The long sounds of the five vowels
- Blend a consonant and vowel together (19 consonants)
- Sound one- and two-vowel words
- Learn these phonics rules:
  - *c/k* rule: *k* goes with *i* and *e;* c goes with the other three, *a, o,* and *u*
  - When c and *k* come together we say the sound only once
  - s can say "s" or "z"
  - *q* is always followed by *u;* vowel sound students hear will not be short *u,* but sound of vowel which follows *u*
  - When a word ends in a double consonant, we say its sound only once
- One- and two-vowel words phonetically
- Apply phonics concepts to reading:
  - Blends
  - One- and two-vowel words
  - Simple sentences and stories
  - Learn sight words *the, a,* and *I*
  - Learn purpose of a story title
  - Learn that words ending in *'s* are possessive
- Know to:
  - Capitalize letters at beginning of sentences
  - Place period at end of sentences
- Apply phonics concepts through abundant guided and independent practice activities including:
  - Letter picture recognition and association
  - Blend and word association with picture
  - Sound recognition
  - Dictation for developing sound recognition and spelling application

Language Arts: Reading



Little Books 1–12 and *Animal Friends Books 1–8* are the basis of the K4 reading program. The *Little Books* give children practice reading letters, words, and simple sentences. Each book is short enough to complete in two or three sessions. Later, students are thrilled to be able to read simple stories in their very own *Animal Friends* readers.





Materials

- Readers (20)
- Letter Picture Flashcards, Blend Practice Cards A, and One-Vowel Word Cards for review

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Skills Development

- Apply phonics sounds and rules
- Achieve accuracy
- Improve comprehension
- Read sight words *the, a, I*
- Receive differentiated instruction with ability grouping
- Successfully follow along with oral readers
- Build oral skills including:
  - Accuracy
  - Expressive reading
  - Smoothness
  - Appropriate pace

Reading cont. p. 6

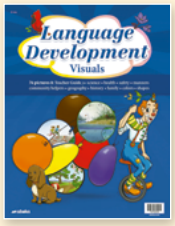
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Reading cont.

Readers

- *Little Book 1* practices 5 vowels (names and sounds); includes a written exercise matching capital with lowercase letters
- *Little Book 2* practices 5 vowels, and consonants *m, s,* and *r* (names and sounds); practices blending consonants *m, s,* and *r* with a vowel and reading a one-vowel word; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 3* reviews 5 vowels, *m, r,* and *s;* practices *b* and *t,* blending *b* and *t* with a vowel and reading one-vowel words for each; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 4* reviews 5 vowels, *m, r, s, t,* and *b;* practices *f* and *g,* blending *f* and *g* with a vowel and reading one-vowel words for each; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 5* reviews 5 vowels, *f, t, b, s,* and *g;* practices *p* and *h,* blending *p* and *h* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 6* reviews 5 vowels, *p, f, h, b,* and *g;* practices *l* and *c,* blending *l* and *c* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 7* reviews 5 vowels, *c, l, p, h,* and *m;* practices *k* and *n,* blending *k* and *n* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 8* reviews 5 vowels, *r, l, c, n,* and *k;* practices *d* and *j,* blending *d* and *j* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 9* reviews 5 vowels, *s, j, n, d,* and *k;* practices *y* and *v,* blending *y* and *v* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 10* reviews 5 vowels, *d, j, y, v,* and *t;* practices *w* and *z,* blending *w* and *z* with several vowels and reading several one-vowel words; combines these letters to read one short sentence; includes a written exercise matching capital with lowercase letters, matching letters with pictures beginning with that sound, and pictures to color
- *Little Book 11* reviews 5 vowels, *v, w, y,* and *z;* practices *w* and *z,* blending *w* and *z* with several vowels and reading many one-vowel words; combines these letters to read one short sentence including sight word *the;* includes a written exercise matching capital with lowercase letters, matching words with pictures, and pictures to color
- *Little Book 12* reviews 5 vowels, *w, x, z,* and *q;* practices reading several words and short sentences including sight words *a* and *the* which make up two stories; includes a written exercise matching words with pictures and pictures to color
- *Tip and Gus* are readers that include a warm-up with several one-vowel words, a review of sight words *a* and *the,* the "*z*" sound for the letter *s* sometimes, and a story made up of one-vowel words and sight words.
- The reader *Tess and Bess* includes a warm-up with several one-vowel words, a review of sight words *a* and *the,* and a story made up of these and other one-vowel words and sight words, observing new punctuation, and practicing appropriate expression
- *Matt the Rat* includes a warm-up with several one-vowel words many of them ending in double consonants, blending two consonants, a review of sight words *I, a,* and *the,* and a story made up of these and other one-vowel words, rhyming words, and sight words.
- *Pet Pete* practices one- and two-vowel rules; includes several (5) exercises for phonetically marking short and long sounds in one- and two-vowel words and a story made up of these and other words; encourages observing new punctuation and practicing appropriate expression
- *Jake* practices one- and two-vowel rules; includes several (4) exercises for phonetically marking short and long sounds in one- and two-vowel words and a story made up of these and other words
- *Dave* and *A Pal* practice many one- and two-vowel words; each includes a story made up of many one- and two-vowel words

Language Arts: Language



The *Language Development Teacher Guide* and 76 accompanying picture flashcards provide a delightful way for children to expand their language skills as they learn new vocabulary words, increase listening skills as they hear new information and then answer questions, and strengthen motor skills as they participate in fun games and activities. By learning about the world around them, children will develop an appreciation for God's creation.

Added Enrichment

- Picture flashcards (76)
- Corresponding poems in most lessons
- Comprehension questions, learning games, additional activities
- Animal Alphabet Friends Flashcards (26) (optional)

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Language Skills Development

- Develop language and listening skills through 99 topical studies including:
  - Animals and their habitats: ants, arctic animals, bears, butterflies, birds, cats, camels, ducks, dogs, forest animals, hummingbirds, insects, jellyfish, jungle animals, koalas, ladybugs, lambs, mice, ostriches, pandas, rabbits, reptiles, underground animals, woodpeckers
  - Countries around the world: Canada, England, Israel, Japan, Australia, Mexico, The Netherlands, land of Africa
  - Health, safety, manners:
    - God made me, healthy bodies, kitchen safety, manners, neighbors
    - Senses: tasting and smelling, seeing, hearing, touching
  - Community helpers: doctor, dentist, firefighter, letter carrier, nurse, pastor, police officer, veterinarian
  - Character development: kindness, listening, obeying quickly, being quiet
  - Science: apples, eggs, Edison and light bulb, flowers, garden, magnets, night, jungle, peanuts, pond, rain forest, rubber, sea, spring and fall seasons, summer and winter seasons, vegetables, water, wind and weather, zinnias
  - Miscellaneous topics: rainbow colors, What color is it?, shapes and shape pictures, astronaut, buses and boats, cars, family, farm, games, Here we go!, groceries, house, jelly, jam, juice, jellybeans, names, olives, opposites, pairs of things, quarter, quilt, reading, telephone, transportation, yarn, zipper, zoo

Motor Skills Development

- Action games (50), finger plays (20)
- Activities such as dress-up, puzzles, working with play dough, making and flying a kite (85)
- Coloring activities and directed drawings (23)

Creativity Development

- Poems (78)
- Games about feeding animals, practicing table manners and household chores, counting different objects, and more (87)
- Additional activities such as identifying and associating tastes and sounds, acting out familiar stories, making apple prints, listening to recorded animal sounds (238)
- Songs (13)

Language Arts: Cursive Writing





Kindergartners love to "write like Mom and Dad." In the *ABC Writing Tablet* and *Writing with Phonics K4,* they practice tracing and then writing the lowercase letters of the alphabet and 12 capital letters in cursive. By the end of the year, they are writing blends and words and their own first name.

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Skills Development

- Achieve:
  - Good writing posture, proper pencil hold, and slanted paper position
  - Careful writing
  - Correct letter placement and formation
  - Increased hand-eye coordination through tracing
  - Good overall appearance
  - Writing first name
- Correctly write:
  - 26 lowercase letters and 12 capital letters
  - Blends and one-vowel words
  - Smooth connections between difficult letter blends
- Follow step-by-step instruction using key strokes: waves, loops, ovals, mountains

Language Arts: Poetry



The purpose of *Poetry for You and Me* is to acquaint children with a wide variety of good poetry through classroom recitation and memorization. Children are exposed to poetry by well-known authors such as "A Good Boy" by Robert Louis Stevenson and "Hiding" by Dorothy Aldis.

Fun Poems and Finger Plays includes simple rhymes coupled with finger actions. Instead of singing the rhyme, the children act out the finger play. Finger plays have a twofold purpose: to entertain and to teach through play. They instruct, aid motor control and observation skills, and help the memory span.

Added Enrichment

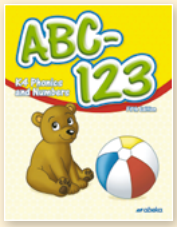
- Poems and finger plays (94):
  - Build appreciation for biblical creation
  - Present and encourage good character traits
- Additional resource poems and finger plays (21)
- Poetry is part of activity time which also includes drama (acting out children's stories and nursery rhymes), music, Bible Activity book, and art. Included in daily lesson plans.

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Skills Development

- Memorize 22 poems, 4 finger plays, and 12 nursery rhymes including actions and motions
- Develop appreciation and enjoyment of a wide variety of appealing rhymes and classic poetry
- Recite in unison
- Gain confidence performing in front of an audience
- Develop use of appropriate expression
- Increase comprehension through questions that encourage listening and thinking skills
- Identify with main characters
  - Benefit from exposure to basic literature skills such as rhyming words
  - Practice motor skills and observation skills
- Gain vocabulary enrichment such as understanding and producing rhyming words and opposite words

Numbers



In K4, children learn to recognize and understand the concepts of numbers. By the end of the year, they will be able to count from 1 to 100, recognize numbers 1–20, distinguish *before* and *after* numbers, and answer simple combinations. *ABC-123* has practice pages that reinforce the concepts and the formation of numbers 1 to 20 by having children count and color familiar objects.

Added Enrichment

- Abeka games (17)
- Additional games (36)
- Enrichment activities (39)
- Many guided and independent practice activities

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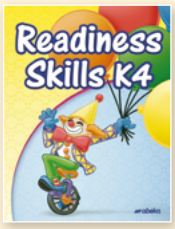
Numbers

- Establish building blocks of learning numbers through object counting
- Recognize numbers 1–20
- Recognize concepts 1–20
- Develop observation, listening, and motor skills through counting sounds and counting while clapping, jumping, hopping
- Count by ones to 100
- Write numbers 1–20
- Associate sets of concrete objects and pictorial representations with numbers
- Develop concepts of patterning and sequencing using colors, shapes, and numbers
- Connect numbers 1–20 in sequence by dot-to-dot
- Comparing:
  - Larger and smaller
  - Before and after 1–20
  - More or less
  - Largest and smallest 1–20
- Addition:
  - Recognize symbols:
    - \+ (plus)
    - = (equal)
  - Add 1 to 1–9 using concrete objects
  - Add number 1 to numbers 1–9:
    - Ordered and in mixed order
    - Horizontal and vertical format

Geometry

- Recognize shapes: circle, square, rectangle, triangle

Developmental Skills



Readiness Skills K4 includes pages that help develop children's listening skills and motor coordination through activities such as following instructions, coloring, cutting, and directed drawing. Free art, which allows children to draw or color their own original creations on art paper, will also help develop visual perception and motor skills.

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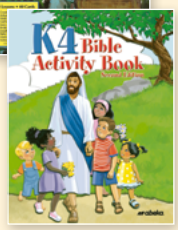
Social & Personal Skills Development

- Develop skills with coordinating character-building stories, including biblical character traits encouraging kindness, courtesy, gentleness, obedience, truthfulness, attentiveness, respect, good manners, helpfulness, cheerfulness, orderliness, diligence, dependability, thoughtfulness, self control, unselfishness, and generosity
- Health and safety skills development:
  - Promote:
    - Home safety, playground safety, community safety, and recognizing and obeying simple traffic signs
    - Personal hygiene, nutrition, rest, exercise
- Visual perception skills development:
  - Builds visual perception skills through:
    - Separating out items in a grouping
    - Maneuvering through mazes
    - Finding hidden shapes
    - Recognizing and reproducing missing parts
    - Connecting dot-to-dots, coloring by number
    - Matching sets of items
  - Includes thinking questions
- Motor skills development:
  - Refining motor skills through:
    - Coloring
    - Tracing
    - Cutting
    - Manipulatives such as:
      - Play dough, puzzles, interlocking and building blocks
      - Lacing cards and beads
    - Following step-by-step instructions for directed drawing with placement of lines and shapes
- Listening skills development: learn to follow step-by-step directions
- Language skills development: development of vocabulary and usage—recognizing 29 sets of opposites and 14 positional words with picture interpretation

Bible



Large, colorful Flash-a-Cards are used to hold the children's interest as they learn about God and His Son, Jesus. Selected Old Testament stories are presented using *Old Testament Stories, Series 1 & 2,* and New Testament lessons use *New Testament Stories, Series 1 & 2. Holiday Stories* teach the events surrounding the first Thanksgiving, the birth of Christ, and the resurrection.



K4 Bible Activity Book is correlated with the Bible stories taught in the K4 Bible curriculum. These 72 activities are designed to bring Bible truths to mind again during activity time later on in the day. Activities include counting, drawing, comparing, dot-to-dot, and color by number. Some activities will be used in assembling New Testament and Old Testament story books.

Evaluation

- Memory verses and passage (not graded)

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Lessons *174 Abeka Flash-a-Cards*

- Old Testament lessons (18):
  - Feature biblical events and people including: Adam and Eve, Noah, Abraham, Isaac (2), Joseph, Moses, Hannah, Samuel, David (3), Elijah, Elisha and Naaman, Daniel, Queen Esther, Jonah
- New Testament lessons (22):
  - Include events in the life of Christ: Jesus' Boyhood, Follow Me, First Miracle, Woman at Well, Nobleman's Son, Fishing with Jesus, Jesus Heals Paralyzed Man, Beside the Pool, Jesus Stills the Storm, Jairus's Daughter, Feeding Five Thousand, Jesus Walks on Water, Blind Bartimaeus, Jesus Loves the Children, Rich Young Ruler, Zacchaeus, Friends at Bethany, Heaven, Ten Lepers; also includes some stories Jesus told such as Good Samaritan, Lost Lamb, Prodigal Son
- Holiday lessons (7):
  - Cover the first Thanksgiving, Birth of Jesus, Shepherds See the Savior, Wise Men Worship Jesus, Triumphal Entry and Last Supper, Christ's Crucifixion and Resurrection, Jesus Appears Alive and Returns to Heaven

Bible cont. p. 10

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Bible *cont.*

Music *38 songs*
- Choruses, holiday songs, patriotic songs

Memory Work
- Place sticker on verse chart after correctly reciting verse:
  - New verses (26) and new passage: The Lord's Prayer

Doctrinal Drill
- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation

Prayer Time
- Learn to pray with thanksgiving for God's creation, each other, school, parents, and country

Music



Preschool Fun Songs contains traditional songs that boys and girls have enjoyed singing for generations—songs that are part of our rich American heritage. These songs are mixed with fun, new songs that will appeal to all children.

Added Enrichment
- Activities that spark and keep interest:
  - Making animal sounds
  - Reinforcing alphabet and numbers 1–10 musically
  - Activities encouraging interaction and social skills
  - Singing poetry

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Skills Development *49 songs*
- Exercise creativity acting out story in song
- Develop motor skills through motion songs
- Follow a song leader and stay together with classmates or CD

Variety of Songs to Memorize
- Animal songs, Mother Goose rhymes, songs to act out, motion songs, finger plays, songs with character-building and biblical principles, holiday songs, and other fun songs

Arts & Crafts



Art Projects K4 provides children with 36 bright, colorful projects which include coloring, painting, cutting, and gluing. Practicing these skills will aid in the development of small-muscle coordination.

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Skills & Concept Development *36 projects*
- Develop fine motor skills with:
  - Gluing
  - Coloring
  - Folding
  - Incorporating moving parts
  - Applying glitter
  - Cutting
  - Tracing
  - Increase listening skills through following step-by-step instructions to complete more difficult projects
  - Drawing
  - Writing their name
- Projects include: animal, seasonal, and scriptural themes
- Projects promote:
  - Creativity with puppets
  - Encourage storytelling and drama
  - Recitation of poetry and rhymes
  - Making projects that visualize songs

Technique Development
- Finger painting (5 lessons)
- 3-D objects (4)
- Coloring with chalk (2)
- Assembling cards and puzzles

Language Arts: Phonics K5 & AK5



Students enjoy the varied activities found in *Letters and Sounds K5* as they learn and review vowel and consonant sounds, blends, one- and two-vowel words, words with special sounds, and sentence comprehension.

Added Enrichment

- Abeka games (K5 18/AK5 16)
- Additional games and activities (K5 56/AK5 59)
- Enrichment activities (K5/AK5 9)

Evaluation

- Graded written papers to check comprehension of concepts (20)
- Oral evaluations (11; to determine individual application of phonics concepts in reading blends and words)

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Skills Development

K5

- Master:
  - The five vowels and their short and long sounds using letter sound association
  - The 21 consonants and their sounds using letter sound association
- Blend a consonant and vowel together
- Sound one- and two-vowel words
- Master one- and two-vowel rules
- Learn and review these phonics rules:
  - *c/k* rule: *k* goes with *i* and *e; c* goes with the other three, *a, o,* and *u.*
  - When *c* and *k* come together, we say the sound only once.
  - *s* can say "s" or "z."
  - *q* is always followed by *u.* Vowel sound students hear will not be short *u,* but sound of vowel which follows *u.*
  - When a word ends in a double consonant, we say its sound only once.
- ➤ Recognize and read 49 special sounds and clue words (special sounds include 27 consonant blends, 5 consonant digraphs, 5 diphthongs, and 12 letters/letter groups that say a special sound)
- ➤ Learn the following rules for special sounds:
  - ➤ *ck* follows a short vowel.
  - ➤ *e* and *o* say their long sound when they are only vowel at end of short word; *y* says long *i* when only vowel at end of short word.
  - ➤ *th* in *thick* is a whisper sound and very quiet; *th* in *this* is a voiced sound and louder.
  - ➤ *sh* and *ch* can come at the beginning or end of a word.
  - ➤ *ou* usually comes in the middle of a word.
- Mark:
  - One- and two-vowel words phonetically
  - ➤ Special sounds phonetically
- Apply phonics concepts to reading:
  - Blends
  - One- and two-vowel words
  - Simple sentences and stories
  - ➤ Words with special sounds
  - ➤ Compound words
- ➤ Apply phonics concepts to spell dictated words, including words with two different ending consonants *(band)*
- Review the sight words *the, a,* and *I*
- ➤ Learn to read the sight words *to, do,* and *of*
- Learn purpose of a story title
- Recognize words that rhyme
- Learn that words ending in *'s* are possessive
- Know to:
  - Capitalize letters at beginning of sentences
  - Place period at end of sentences
  - ➤ Place exclamation point or question mark at end of sentences
- Apply phonics concepts through abundant guided and independent practice activities including:
  - Letter picture recognition and association
  - Blend and word association with picture
  - ➤ Associate sentence with picture
  - ➤ Color by letter and sound
  - ➤ Decode hidden pictures through letters and sounds
  - Sound recognition
  - Choose the correct ending sound/letter
  - Choose the correct beginning sound/letter
  - Dictation for developing sound recognition and spelling application
  - ➤ Word recognition with creative drawing
  - ➤ Finish the sentence
  - ➤ Order words correctly to finish a sentence

Advanced K5

- ➤ AK5 students learn all of the sounds and rules that are taught in regular K5. AK5 students also learn and apply 83 additional special sounds, including 11 suffixes and 5 prefixes (special sounds include 27 consonant blends, 5 diphthongs, 9 consonant digraphs, and 75 letters/letter groups that say a special sound)

Language Arts: Reading



The *Basic Phonics Readers* are twelve small readers that are an excellent introduction to reading. The stories and word pages are correlated with the phonics sounds that are presented in class, beginning with one-vowel words and then progressing to two-vowel words. Kindergartners are thrilled with how rapidly they are able to move from one reader to the next. Students will gain a firm foundation in reading and develop a love for books that will last a lifetime.

Materials

- *My Blend and Word Book* contains blends, one- and two-vowel words, words with simple consonant blends and digraphs
- Readers (K5 13 readers/AK5 24 readers)
- *Family Fun* readers (AK5 7)
- *Primary Bible Reader* (AK5)
- *Friends and Helpers* readers (AK5 3)

Evaluation

- K5 oral reading grades taken bi-weekly beginning second semester
- AK5 oral reading grades taken bi-weekly beginning second six weeks

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Reading Skills Development

K5 Readers *14 readers*

➤ Read and decode by applying phonics sounds, 47 special sounds, rules, and 12 sight words

- Improve: accuracy, correct enunciation, expression, comprehension

➤ Strive for: smoothness, fluency, appropriate volume, alertness to punctuation

- Receive differentiated instruction with ability grouping
- *I Learn to Read, Book 1* practices 5 vowels (names and sounds); blends consonants and vowels; practices reading one-vowel words, words ending in double consonants, sight word *the,* and one short sentence; includes an oral comprehension question
- *I Learn to Read, Book 2* practices 5 vowels, blending consonants and vowels, reading one-vowel words, sight word *a,* phrases, and several short sentences; practices use of apostrophes, words ending in two different consonants, and the "*z*" sound for the letter *s* sometimes; includes observing new punctuation and practicing appropriate expression; includes oral comprehension questions
- *I Learn to Read, Book 3* practices blends, reading one-vowel words, sight word *to* and several short sentences; includes observing new punctuation, practicing appropriate expression, and answering oral comprehension questions
- *I Learn to Read, Book 4* practices one- and two-vowel rules, reading short and long vowel sounds; demonstrates phonetically marked vowels; reading similar one- and two-vowel words, sight words, and several short sentences; includes observing punctuation and practicing appropriate expression, answering oral comprehension questions and defining vocabulary
- *I Do Read, Book 1* practices blends, adding double consonants, and blending two different consonants; contains 5 little stories reading one- and two-vowel words, sight words, and several short sentences, use of apostrophes, two consonants; includes observing punctuation, practicing appropriate expression, answering oral comprehension questions, and defining vocabulary words
- *I Do Read, Book 2* contains 9 little stories reading one- and two-vowel rules, sight words including *to,* several short sentences, words ending in two different consonants; includes observing punctuation, practicing appropriate expression, and answering oral comprehension questions
- *I Do Read, Book 3* contains 11 little stories reading one- and two-vowel words, sight words including *I, was,* and *of,* words ending in two consonants, simple compound words, and simple consonant blends found at the beginning of a word such as *st* in stop and *bl* in block; includes observing punctuation, practicing appropriate expression, answering oral comprehension questions, and defining vocabulary words
- *I Do Read, Book 4* contains 8 stories reading one- and two-vowel words, sight words including *says,* words ending in two consonants, simple compound words, and words beginning with simple consonant blends; includes observing punctuation, use of apostrophes, practicing smooth reading and appropriate expression, and answering oral comprehension questions
- *I Can Read Well, Book 1* contains 11 stories reading one- and two-vowel words, sight words, words ending in two consonants, simple consonant blend words containing special sounds such as *fl* in flake, *gl* in glue, *bl* in block, *cl* in clock, *pl* in plane, and *sl* in sleep; developing appropriate expression, answering oral comprehension questions, and defining vocabulary words
- *I Can Read Well, Book 2* contains 11 stories reading one- and two-vowel words, sight words; practices words ending in two consonants, more difficult consonant blend words containing special sounds such as *br* in bride, *cr* in crab, *dr* in drum, and *pr* in pray; developing appropriate expression, answering oral comprehension questions, and defining vocabulary words
- *I Can Read Well, Book 3* contains 7 stories reading one- and two-vowel words, sight words; practices words ending in two consonants, words with diphthongs, and many more difficult consonant blend words containing special sounds such as *sh* in ship, *sm* in smoke, *st* in stop, *ay* in pray, *pl* in plane, *sw* in swim, *gl* in glue, *tr* in train, *fl* in flake, *cl* in clock, *squ* in squeak, *scr* in scream, *dr* in drum, *cr* in crab, *str* in stream, *sp* in spade, *spl* in splash, *ch* in church, *thr* in three, *tw* in twins, *th* in thick, *th* in this, *o* in go; developing appropriate expression, answering oral comprehension questions , and defining vocabulary words
- *I Can Read Well, Book 4* contains 13 stories reading one- and two-vowel words, sight words including *Bible, are, they,* and *from,* words ending in two consonants, simple compound words, words with digraphs, diphthongs, and consonant blend words containing special sounds such as *sh* in ship, *st* in stop, *ay* in pray, *pr* in pray, *pl* in plane, *sw* in swim, *gl* in glue, *tr* in train, *fl* in flake, *cl* in clock, *squ* in squeak, *scr* in scream, *dr* in drum, *cr* in crab, *bl* in block, *str* in stream, *sn* in snack, *ch* in church, *thr* in three, *tw* in twins, *th* in thick, *th* in this, *o* in go, *ow* in owl, *ou* in out, *ar* in stars, *ir* in bird, *fr* in frog, *ur* in nurse, *er* in verse, *ow* in bowl, *sc* in scat, *sk* in skate, *sp* in spade, *br* in bride, *gr* in grin, *oo* in book, *wor* in worms, *igh* in night, *or* in morning; developing appropriate expression, answering oral comprehension questions, and defining vocabulary words
- *I Can Read Well, Book 5, Our Week* contains one story divided into 7 little stories reading one- and two-vowel words, sight words, words ending in two consonants, words with digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–8) such as *sh* in ship, *st* in stop, *ay* in pray, *pr* in pray, *pl* in plane, *gl* in glue, *tr* in train, *cl* in clock, *sl* in sleep, *y* in fly, *dr* in drum,

Reading cont. p. 13

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Reading cont.

sn in snack, *ch* in church, *th* in this, *e* in me, *o* in go, *ou* in out, *ar* in stars, *ir* in bird, *fr* in frog, *ur* in nurse, *ow* in bowl, *br* in bride, *oo* in book, *wor* in worms, *igh* in night, *or* in morning, and more advanced words; developing appropriate expression, and answering oral comprehension questions

Advanced K5 Readers *24 readers*

- ➤ Read and decode by applying phonics sounds, 132 special sounds, rules, and 12 sight words
- Improve: accuracy, correct enunciation, expression, comprehension
- ➤ Strive for: smoothness, fluency, appropriate volume, alertness to punctuation, appropriate pace, poise
- Receive differentiated instruction with ability grouping
- Basic Phonics Readers (13)
- *The Little Pie* includes practice words and sight words; contains one longer story reading one- and two-vowel words, words with prefixes, suffixes, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–11) including: *ou* in out, *ow* in owl, *ank* in bank, *th* in thick, *ir* in bird, *st* in stop, *sh* in ship, *sw* in swim, *le* in little, *ear* in bear, *ear* in ear, *ang* in bang, *ung* in strung, *wor* in worms, *or* in morning, *ing* in king, *ch* in church, *ong* in long, *igh* in night, *-ed* in looked, *wa* in wash, *tch* in patch, *sm* in smoke, *-es* in peaches, *all* in ball, *oo* in book, *o* in shovel, *th* in this, *br* in bride, *o* in go, *thr* in three, *dr* in drum, *e* in me, *cr* in crab, *ay* in pray, *wh* in whale, *-ed* in played, *ea* in leaf, *fr* in frog; answering oral comprehension questions and defining vocabulary words
- *Jesus Helps* includes practice words and sight words; contains 4 stories reading one- and two-vowel words, words ending in two consonants, words with prefixes, suffixes, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–13) such as *pr* in pray, *bl* in block, *c* in city, *br* in bride, *igh* in night, *wa* in wash, *wh* in who, *ear* in earth, *all* in ball, *alk* in walk, *st* in stop, *ar* in stars, *-ed* in wanted, *-ed* in played, *-ed* in looked, *sh* in ship, *ou* in out, *-ing* in pointing, *tr* in train, *gr* in grin, *th* in thick, *ing* in king, *ind* in kind, *ay* in pray, *ear* in ear, *ow* in owl, *oi* in coin, *y* in fly, *cr* in crab, *e* in me, *th* in this, *sm* in smoke, *oo* in tooth, *oo* in book, *ong* in long, *oy* in boy, *old* in gold, *ey* in obey, *ea* in thread, *le* in little, *a-* in asleep, *o* in shovel, *er* in verse, *ch* in church, *gl* in glue, *are* in care, *o* in go, *aw* in saw, *wh* in whale, *ow* in bowl, *tch* in patch, *a* in adopt, *be* in because, *-er* in bigger, *cl* in clock, *fr* in frog; answering oral comprehension questions and defining vocabulary words
- *Penny Porcupine* includes practice words and sight words; contains one longer story reading one- and two-vowel words, words ending in two consonants, words with prefixes, suffixes, digraphs, diphthongs, and consonant blend words containing special sounds from Basic Phonics Charts 6–12 such as *ind* in kind, *or* in morning, *kn* in knot, *y* in baby, *th* in this, *sk* in skate, *unk* in trunk, *ou* in out, *squ* in squeak, *be* in because, *pr* in pray, *-ly* in slowly, *ay* in pray, *ou* in out, *br* in bride, *igh* in night, *ir* in bird, *sh* in ship, *e* in me, *sm* in smoke, *oo* in book, *-ed* in looked, *er* in verse, *pl* in place, *th* in think, *st* in stop, *ck* in duck, *tr* in train, *alk* in walk, *y* in fly, *-ing* in pointing, *fr* in frog, *ear* in ear, *ow* in owl, *ch* in church, *all* in ball, *-ed* in played, *oo* in tooth, *ow* in bowl, *ur* in nurse, *cr* in crab, *oi* in coin, *sc* in scat, *o* in go, *-ed* in wanted; answering oral comprehension questions and defining vocabulary words
- *Primary Bible Reader* contains selected passages from Scripture; students read Genesis 37:3–5, 18–20, 26–28; Genesis 39:1–6, 17–23; Genesis 41:1a, 14–16, 28b–30, 33–40; Genesis 42:1, 2; 43:13–16; 45:1–10; Luke 23:32–46; 24:1–9; Acts 1:8–11; Psalm 100; and Psalm 23; passages include words with digraphs, diphthongs, prefixes, suffixes, and many consonant blend words containing special sounds such as *ph* in phone, *-ly* in slowly, *ow* in owl, *-ed* in played, *th* in this, *all* in ball, *ch* in church, *dr* in drum, *be* in because, *old* in gold, *g* in giant, *e* in me, *br* in bride, *aw* in saw, *er* in verse, *-ed* in wanted, *ould* in could, *c* in city, *ey* in obey, *wh* in whale, *ar* in stars, *a-* in asleep, *ear* in ear, *sp* in spade, *sl* in sleep, *ay* in pray, *th* in thick, *st* in stop, *bl* in block, *pr* in pray, *sh* in ship, *fl* in flake, *ew* in flew, *tw* in twins, *ought* in thought, *gr* in grin, *igh* in night, *ou* in out, *or* in morning, *kn* in knot, *aught* in caught, *ea* in thread, *-ing* in pointing, *y* in fly, *oi* in coin, *cr* in crab, *ear* in earth, *wr* in wrinkle, *le* in little, *ing* in king, *ea* in leaf, *oo* in book, *thr* in three, *ind* in kind, *o* in shovel, *y* in baby, *fr* in frog, *tr* in train, *ea* in steak, *arr* in carry, *pl* in plane, *a* in adopt, *a* in banana, *wh* in who, *ch* in chorus, *-ed* in looked, *ang* in bang, *-en* in sharpen, *al-* in also, *o* in go, *or* in sailor, *scr* in scream, *tion* in nation, *war* in warm, *ir* in bird, *-es* in peaches, *are* in care, *un-* in unbutton, *wor* in worms, *cl* in clock, *oy* in boy, *gl* in glue, *ow* in bowl, *ture* in pasture, *ank* in bank, *-ful* in wonderful, *wa* in wash, *-est* in biggest, *ure* in pure; answering oral comprehension questions and defining vocabulary words
- *Family Fun by the Lake, Book 1* contains one story divided into 3 parts reading one- and two-vowel words, advanced words to watch for: *to, thank you, from, of, into;* includes words ending in two consonants, practice words, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–8) such as *fl* in flake, *sp* in spade, *pl* in plane, *ay* in pray, *tr* in train, *st* in stop, *sw* in swim, *gr* in grin, *th* in thick, *sh* in ship, *str* in stream, *spl* in splash, *cl* in clock, *sk* in skate, *sm* in smoke, *dr* in drum, *thr* in three, *th* in this, *gl* in glue; answering oral comprehension questions and defining vocabulary words
- *Family Fun on a Hike, Book 2* contains one story divided into 4 parts reading one- and two-vowel words, advanced words to watch for: *says, you, thank, do;* includes words ending in two consonants, practice words, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–8) such as *fl* in flake, *sp* in spade, *ay* in pray, *tr* in train, *y* in fly, *st* in stop, *br* in bride, *ch* in church, *oo* in book, *ir* in bird, *wor* in worms, *ow* in owl, *ou* in out, *all* in ball, *oo* in tooth, *cr* in crab, *bl* in block, *oi* in coin, *sw* in swim, *gr* in grin, *th* in thick, *sh* in ship, *sk* in skate, *sm* in smoke, *dr* in drum, *th* in this, *gl* in glue, *sl* in sleep, *sn* in snack, *tw* in twins, *squ* in squeak, *ank* in bank, *ar* in stars, *ur* in nurse, *ow* in bowl, *igh* in night, *or* in morning; answering oral comprehension questions and defining vocabulary words
- *Family Fun at the Zoo, Book 3* contains one story divided into 4 parts reading one- and two-vowel words, advanced words to watch for: *onto, two, one, two, lion, tiger, monkey, they, are;* includes words using apostrophes, words ending in two consonants, practice words, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–11) such as *oi* in coin, *alk* in walk, *ch* in church, *ou* in out, *sm* in smoke, *all* in ball, *sh* in ship, *ur* in nurse, *oo* in book, *th* in this, *ir* in bird, *or* in morning, *igh* in night, *gr* in grin, *br* in bride, *dr* in drum, *cr* in crab, *oy* in boy, *tr* in train, *cl* in clock, *ay* in pray, *pl* in plane, *ong* in long, *all* in ball, *st* in stop, *sl* in sleep, *gl* in glue, *th* in thick, *ow* in owl, *sc* in scat, *oo* in tooth, *thr* in three, *str* in stream, *sw* in swim, *ar* in stars, *are* in care, *bl* in block, *ey* in key; answering oral comprehension questions and defining vocabulary words
- *Family Fun on the Farm, Book 4* contains one story divided into 4 parts reading one- and two-vowel words, advanced words to watch for: *does, calf, mama, are, I'm, mother, from, four, said, saw, donkey, mew, hee-haw;* includes words ending in two consonants, practice words, digraphs, diphthongs, suffixes, and consonant blend words containing special sounds (from Basic Phonics Charts 6–11) such as *ar* in stars, *sn* in snack, *oo* in tooth, *br* in bride, *dr* in drum, *squ* in squeak, *kn* in knot, *-ing* in pointing, *y* in baby, *ay* in pray, *igh* in night, *ow* in owl, *sm* in smoke, *ow* in bowl, *tr* in train, *y* in fly, *ing* in king, *cl* in clock, *fr* in frog, *str* in stream, *ou* in out, *th* in thick, *sh* in ship, *oo* in book, *ink* in wink, *pl* in plane, *spl* in splash, *oi* in coin, *all* in ball, *alk* in walk, *sp* in spade, *gl* in glue, *gr* in grin, *ch* in church, *wa* in wash, *-ed* in wanted, *fl* in flake, *ang* in bang, *a* in adopt, *sw* in swim, *-ed* in looked, *aw* in saw, *o* in go, *cr* in crab, *or* in morning, *ew* in few, *le* in little, *ank* in bank, *ey* in key; answering oral comprehension questions and defining vocabulary words

Reading cont. p. 14

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Reading cont.

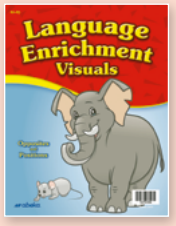
Advanced K5 Readers cont.

- *Family Fun at the Beach, Book 5* contains one story divided into 5 parts reading one- and two-vowel words, advanced words to watch for: *are, I'm, laughed, watch, what, they, castle, have, when, was, dolphin, ocean, Jesus, love;* includes words ending in two consonants, practice words, compound words, digraphs, diphthongs, and consonant blend words containing special sounds (from Basic Phonics Charts 6–11) such as *-ed* in played, *bl* in block, *ow* in bowl, *-ing* in pointing, *sk* in skate, *wa* in wash, *alk* in walk, *st* in stop, *ar* in stars, *-ed* in wanted, *th* in thick, *kn* in knot, *y* in baby, *er* in verse, *ur* in nurse, *pr* in pray, *ay* in pray, *oo* in book, *igh* in night, *y* in fly, *a* in banana, *ing* in king, *ch* in church, *cr* in crab, *gr* in grin, *sm* in smoke, *o* in go, *pl* in plane, *le* in little, *-ed* in looked, *sh* in ship, *wh* in whale, *th* in this, *tr* in train, *be-* in because, *ow* in owl, *ir* in bird, *sc* in scat, *are* in care, *a* in adopt, *gl* in glue, *tch* in patch, *fl* in flake, *dr* in drum, *ou* in out, *all* in ball, *oi* in coin, *or* in morning, *ang* in bang, *spl* in splash, *sw* in swim, *oo* in tooth, *ph* in phone, *thr* in three, *ey* in obey, *br* in bride, *e* in me, *str* in stream, *ea* in thread; answering oral comprehension questions and defining vocabulary words
- *Family Fun in the Park, Book 6* contains one story divided into 5 parts reading one- and two-vowel words, advanced words to watch for: *tiny, saw, lions, monkey, were, ice;* includes words ending in two consonants, practice words, compound words, digraphs, diphthongs, prefixes, suffixes, and consonant blend words containing special sounds (from Basic Phonics Charts 6–12) such as *-ed* in looked, *fl* in flake, *ow* in bowl, *y* in baby, *dr* in drum, *ear* in ear, *-ed* in played, *squ* in squeal, *ir* in bird, *wa* in wash, *tch* in patch, *oi* in coin, *ew* in flew, *ear* in earth, *oo* in tooth, *-ing* in pointing, *wh* in whale, *le* in little, *old* in gold, *ang* in bang, *wh* in who, *ar* in stars, *th* in thick, *st* in stop, *o* in go, *th* in this, *sp* in spade, *thr* in three, *ou* in out, *tr* in train, *ea* in leaf, *cl* in clock, *bl* in block, *cr* in crab, *ow* in owl, *sl* in sleep, *all* in ball, *sm* in smoke, *ch* in church, *oo* in book, *igh* in night, *aw* in saw, *sh* in ship, *ey* in obey, *scr* in scream, *gr* in grin, *ur* in nurse, *o* in shovel, *ey* in key, *y* in fly, *-er* in bigger, *-ly* in slowly, *-ed* in wanted, *ind* in kind, *be-* in because, *onk* in honk, *air* in hair, *pl* in plane, *or* in morning, *ink* in wink, *sc* in scat, *sk* in skate, *a* in adopt, *er* in verse, *fl* in flake, *gl* in glue, *ay* in pray, *ank* in bank; answering oral comprehension questions and defining vocabulary words
- *Family Fun at the Play, Book 7* contains one story reading one- and two-vowel words, advanced words to watch for: *great, lived, porridge, some, door, were, someone, been, voice, gone;* includes words ending in two consonants, practice words, compound words, digraphs, diphthongs, prefixes, suffixes, and consonant blend words containing special sounds (from Basic Phonics Charts 6–12) such as *old* in gold, *ind* in kind, *wh* in whale, *br* in bride, *ing* in king, *-ing* in pointing, *y* in fly, *sh* in ship, *y* in baby, *-ly* in slowly, *cl* in clock, *mb* in lamb, *-ed* in played, *sn* in snack, *ow* in bowl, *a-* in asleep, *ong* in long, *sl* in sleep, *ay* in pray, *or* in morning, *ou* in out, *le* in little, *ank* in bank, *pl* in plane, *thr* in three, *gr* in grin, *oo* in book, *ch* in church, *dge* in fudge, *alk* in walk, *oo* in tooth, *st* in stop, *ea* in steak, *a* in adopt, *th* in this, *ir* in bird, *er* in verse, *aw* in saw, *all* in ball, *ear* in ear, *ar* in stars, *th* in thick, *fr* in frog, *igh* in night, *cr* in crab, *ear* in bear, *sp* in spade, *oi* in coin, *c* in city, *str* in stream, *tch* in patch, *sc* in scat, *sw* in swim; answering oral comprehension questions and defining vocabulary words

Comprehension, Discussion, & Analysis Skills Development

- ➤ Answer factual comprehension questions for most stories
- ➤ Answer inferential comprehension and discussion questions for most stories
- Complete integrated phonics and reading skills exercises with progressing level of difficulty throughout readers

Language Arts: Language



A full-color set of visual illustrations, the *Language Enrichment Visuals,* provides an interesting way to teach children the concept of opposites and the difference between positions such as over, under, in, and out. These visuals will help to develop skills in picture interpretation and vocabulary development.

Added Enrichment

- Language and Skills Development times include the use of *Language Enrichment Visuals* as well as activities suggested below. Included in daily lesson plans.

➤ **RED** *indicates first introduction of content.*

Language Skills Development

- Recognize 38 pairs of opposites and 9 positional words and picture interpretation

Vocabulary Skills Development

- ➤ Recognize similar and different items
- ➤ Make complete statements
- ➤ Give simple analogies; use descriptive words

Cognitive Skills Development

- ➤ Solve riddles using rhyming words
- ➤ Group like items
- ➤ Classify groups of words and items
- ➤ Develop deductive reasoning
- ➤ Make comparisons
- ➤ Recognize incorrect information

Character Development

- Learn basic biblical character traits such as obedience, honesty, kindness, etc., from:
  - Scripture applications
  - Maxims (traditional sayings rich in general truth) including explanation and application

Social Skills Development

- Develop positive social interaction through: show and tell, sharing time, acting out stories

Language Arts: Cursive Writing



Writing with Phonics K5 is an appealing cursive writing book that is correlated with the phonics program. Students learn to write the letters as they learn what sound the letters say. Teachers appreciate the sample letters that show exactly how each letter is to be written. The "houses" help students remember where each letter "lives." Review is included along with new instruction. Students will write letters, blends, words, and even sentences.

Evaluation

- Written tests to evaluate formation (13)

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Skills Development

- Achieve:
  - Good writing posture; proper pencil hold; slanted paper position
  - Careful writing
  - Correct letter placement and formation
  - Good overall appearance
  - Good control of fine motor skills
  - Writing first name
  - ➤ Consistent slant of letters and words
- Correctly write:
  - 12 capital letters
  - All lowercase letters
  - Blends and one- and two-vowel words
  - ➤ Sentences
  - ➤ Smooth connections between more difficult letter blends
- Follow:
  - Step-by-step instruction using key strokes: trace, smile, wave, loop, oval, mountain
- ➤ Complete guided as well as independent practice writing worksheets

Language Arts: Poetry



The beautifully illustrated *My Favorite Kindergarten Poems* introduces young children to the wonderful world of poetry with familiar, enjoyable poems that evoke laughter, paint a picture with words, and touch children's sensitive hearts. Children learn poetry of well-known authors such as "The Swing" by Robert Louis Stevenson and "What Can I Give Him?" by Christina Rossetti. Children enjoy poetry rich in visual imagery and ear-tickling rhythm and rhyme. Hearing the poems repeated often helps in memorization. Discussing the art in these teaching cards and the meaning of the poems helps develop a better vocabulary.

Added Enrichment

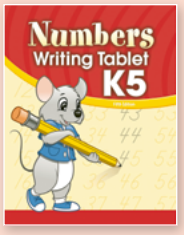
- Descriptions to enhance vocal inflection
- Actions and hand motions
- Demonstrations
- Comprehension and discussion questions for deeper thinking
- Biblical applications
- Suggested activities such as creating a poem using rhyming words; playing dress-up; drawing with free art; acting out poems with play dough; making construction paper cards

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Skills Development

- ➤ Memorize 13 lyrical poems
- Increase appreciation and enjoyment of classic poetry and whimsical rhymes
- Recite in unison
- Gain confidence performing in front of an audience
- Increase comprehension through:
  - Good expression
  - Appropriate volume
  - ➤ Art analysis
- Benefit from exposure to basic literature skills
- Gain vocabulary enrichment through use of terms such as
  - Rhyming words
  - ➤ Title, author

Numbers





Numbers Skills K5 is a colorful workbook that reinforces number concepts and formation through 100, addition and subtraction combinations, number sequences, number words, telling time, and working with money. Some pages are designed to be worked together as a class while others are designed as independent work.

Added Enrichment

- Abeka games (13)
- Additional games (11)
- Enrichment activities (18)

Evaluation

- Written tests (19)
- Oral tests (11)

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Numbers

- Reinforce building blocks of learning numbers through object counting
- Count by ones to 100
- Compare: larger and smaller; more and less
- ➤ Recognize numbers 1–100
- ➤ Understand concepts 1–100
- ➤ Count by tens, fives, and twos to 100
- ➤ Write numbers to 100 by ones, tens, fives, twos
- ➤ Recognize and spell number words one–ten
- ➤ Recognize left from right
- ➤ Recognize and spell ordinal numbers first–tenth
- ➤ Compare: before and after 1–100; largest and smallest 1–100

Addition

- Understand symbols: + (plus); = (equal)
- ➤ Add to 10 with concrete objects
- ➤ Add number combination families 1–10:
  - ➤ Ordered and in mixed order
  - ➤ Horizontal and vertical format
- ➤ Solve oral word problems
- ➤ Add money: pennies; dimes and pennies; nickels and pennies
- ➤ Understand simple concept of commutation

Subtraction

- ➤ Introduction to subtraction
- ➤ Recognize symbol: – (minus)
- ➤ Understand subtracting one or all of a number from numbers 1–10
- ➤ Write subtraction sentences (5 – 5 = 0)

Multiplication

- ➤ Establish building blocks: counting by tens, fives, twos

Fractions

- ➤ Learn parts of a whole: one half

Problem Solving & Applications

- ➤ Establish building blocks: solving story problems

Time

- ➤ Recognize the parts of a clock: face, hour and minute hands
- ➤ Read and write time: o'clock (:00), half past (:30), quarter past (:15)
- ➤ Recognize 5-minute intervals of time: counting minutes by fives
- ➤ Recognize months, dates, days, weeks, years
- ➤ Complete calendar: fill in month, days of week, date, year

Measures

- ➤ Recognize an inch
- ➤ Measure objects more or less than an inch
- ➤ Measure and record individual growth of students throughout the year (Growth Chart)

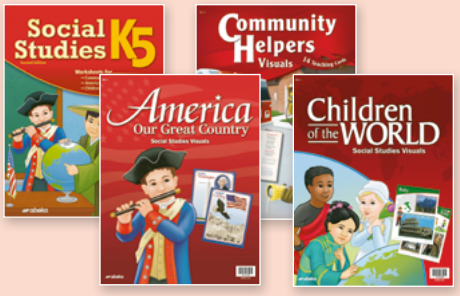
Geometry

- Recognize shapes: circle, square, rectangle, triangle

Numbers Writing

- ➤ Learn formation for numbers 0–9
- ➤ Write numbers 1–100 by ones, twos, fives, tens

Social Studies K5 & AK5



Social Studies K5 introduces kindergartners to community helpers, beginnings of American history, interesting features of countries around the world, and simple geography. Children will enjoy coloring, drawing, and completing other fun activities on the worksheet pages.

Added Enrichment

- Corresponding worksheets
- Maps of the world, North and South America, and the U.S.
- Comprehension questions and questions for deep thinking
- Poems; finger plays
- Additional enrichment activities

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Community Helpers *19 lessons*

- In the family
- In the community:
  - Community helpers such as firefighter, police officer, doctor, nurse, dentist, postal employee, pastor
  - ➤ Salesperson, baker, teacher, server, mayor, farmer

America: Our Great Country *16 lessons*

- ➤ Introduction to the history of America containing:
  - ➤ Historical figures such as Christopher Columbus, the Pilgrims, George Washington, Abraham Lincoln, George Washington Carver, Pocahontas
  - ➤ Landmarks and symbols: Statue of Liberty, U.S. flag, Washington, D.C., currency ("In God We Trust"), Liberty Bell, Mt. Rushmore, bald eagle
  - ➤ Globe studies: directions—north, south, east, west; equator
  - ➤ United States (50), neighboring countries, 7 continents, 4 oceans
  - ➤ Study of native American culture, Alaska, Hawaii, and American territories

Children of the World *34 lessons*

- Learn about the landscape, location, famous landmarks, historical people, and culture of 12 different countries:
  - ➤ Italy, Peru, Kenya, China, Canada, The Bahamas
  - Mexico, England, The Netherlands, Israel, Japan, Australia
- ➤ Globe studies: learn to identify 7 continents, 4 oceans, 12 countries

Science



Even at a very young age, children are curious about everything around them and ask many questions. The science text *God's World K5* is a simple, exciting introduction to God's plan for the universe. Children will enjoy reading aloud from their first textbook. As the study progresses, even beginning readers will want to read the book aloud because of its intrinsic interest. Units on the five senses, the weather, seasons, seeds, animals, and the seashore all show the amazing wonders of God's design in this world He has created. Simple drawing and coloring activities highlight the units.

Added Enrichment

- Hands-on activities (63)
- Activity and color sheets (23)

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Health & Human Body

- Designed by God
- Parts of the body: eyes, nose, tongue, ears, skin
- Safety guidelines
- Growth
- Hygiene

Weather

- ➤ Kinds of weather: sunny, cloudy, windy, hot, cold, rainy
- ➤ Storms: thunder, stay inside for safety
- ➤ Snow: made of air, water, and dust; six points
- Wind: air that moves, breeze
- Dressing appropriately

Seasons

- Spring: planting time, baby animals
- Summer: hot weather, plants grow
- Fall: harvest time, leaves change colors, animal preparation
- Winter: cold, resting time, snow; animals grow warm coats or sleep

Seeds & Plants

- Seeds grow into the plant they came from (tiny plant inside seed)
- Steps of plant growth; parts of a plant
- Seeds need sunshine, water, soil
- Planting: farmers, animals, wind
- Seeds to eat such as corn, strawberries, beans

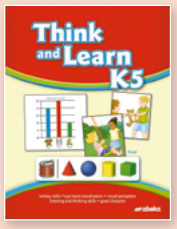
Animals

- God's care
- Baby animal names
- Born alive or hatch from eggs
- Animal instincts
- Animal homes such as holes, nests, tunnels
- Insects such as bumblebees, ladybugs, crickets
- ➤ Spiders: eight legs, spider homes
- Zoo animals such as monkeys, bears, snakes
- Bird, reptiles, amphibians
- Farm animals such as cows, pigs, chickens
- Pets: proper care

Seashore

- ➤ Kinds of seashores: rocky or sandy (beach)
- ➤ Animals such as fish, crabs, starfish, sea gulls

Developmental Skills



Think and Learn K5 features coloring pages, mazes, directed-art pages, and other activities designed to aid the kindergarten child in the development of writing readiness, hand-eye coordination, visual perception, listening and thinking skills, and good character.

Added Enrichment

- Skills Development time includes the use of *Think and Learn K5* as well as suggested activities below. Included in daily lesson plans.

➤ **RED** *indicates first introduction of content.*

Social & Personal Skills

- Develop good character traits including: kindness, courtesy, gentleness, obedience, truthfulness, attentiveness, respect, good manners, helpfulness, cheerfulness, orderliness, diligence, dependability, thoughtfulness, self control, unselfishness, and generosity
- ➤ Learn good telephone manners and how to handle emergency situations

Health & Safety Skills

- Learn how to be well and safe by:
  - Eating a balanced diet
  - Developing good dental care habits
  - Obeying traffic signs
- Learning about:
  - Home and playground safety
  - Community safety and simple traffic signs
  - Developing good personal hygiene
  - Good nutrition
  - Getting adequate rest and exercise

Visual Perception Skills Development

- Separating out items in a grouping
- Maneuvering through mazes
- Finding hidden shapes
- Recognizing and reproducing missing parts
- Using lines and shapes to assemble a directed drawing
- ➤ Creating pictographs, bar graphs, tally charts
- Identifying opposites and positional words
- ➤ Recognizing similarities
- ➤ Associating items with the appropriate place
- ➤ Recognizing items out of place
- ➤ Creating objects through paper folding or shapes
- ➤ Identifying and assembling 3-D shapes
- ➤ Drawing missing items
- ➤ Ordering events in sequence
- ➤ Reading maps and map keys

Motor Skills Development

- Refining motor skills through grade-appropriate activities with increasing level of difficulty:
  - Coloring, cutting; free art (creative drawing on a blank page)
  - Painting, gluing
  - ➤ Buttoning and unbuttoning; tying shoes; zipping and unzipping
  - Following step-by-step instructions for directed drawing with placement of lines and shapes
- Manipulatives suggested include:
  - Play dough; puzzles; interlocking and building blocks; lacing cards; stringing beads; tracing objects and shapes
  - ➤ Simple science tools such as magnets, magnifying glasses, planting seeds

Listening Skills Development

- Identifying sounds
- Imitating sequences of rhythms such as snapping, clapping, stomping
- Listening carefully to follow oral directions
- Classifying things in categories
- ➤ Solving riddles

Bible



In K5 Bible, children will review many stories that were taught in Preschool and K4 Bible, and this year they will hear additional stories. Students will learn stories about God's creation of the world and about the life of Christ while viewing beautifully illustrated Abeka Flash-a-Cards. Age-appropriate applications are included in each lesson.

K5 Bible Activity Book is correlated with the Genesis and Life of Christ Bible lessons taught in the K5 Bible curriculum. These 68 activities are designed to bring Bible truths to mind again during language enrichment or seatwork time. Activities include simple mazes, hidden pictures, dot-to-dot pages, and stand-up and fold-out pictures.

Evaluation

- Graded memory verses and passages

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Lessons *366 Abeka Flash-a-Cards*

- ➤ Salvation Series (5 lessons)
- ➤ Genesis Series (21 lessons): Creation, Adam, Cain; Enoch, Noah, Babel; Abraham and Isaac; Jacob; Joseph
- ➤ Life of Christ Series (36 lessons): First Christmas; Boyhood and Early Ministry of Jesus; Jesus Heals and Helps; Later Ministry of Jesus; Crucifixion and Resurrection
- ➤ Missionary Stories (3); The First Thanksgiving

Music *39 songs and choruses*

- Choruses, holiday songs, hymns, patriotic songs include:
  - ➤ 9 new hymns and songs; 14 new choruses

Bible cont. p. 19

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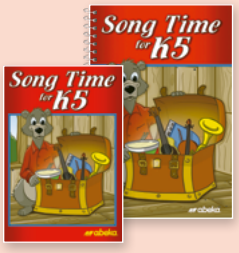
Bible cont.

Memory Work
- ➤ New: individual verses (20) and passages (2)
- Review individual verses (8) and passage (1)

Doctrinal Drill *38 questions and answers*
- Basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation further detailed study

Prayer Time
- Learn to pray with thanksgiving for God's creation, each other, school, parents, and country

Music



Song Time for K5 presents traditional, patriotic, and learning songs that have delighted children for years and make a lively addition to the classroom. The sing-along CD makes song time easy for the teacher and enjoyable for the children.

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Skills Development *43 songs*
- Gain understanding of a song's message
- Exercise creativity while acting out songs with props
- Define unfamiliar words
- Develop:
  - Coordination through motions that keep time with words
  - Skills in following a song leader, singing out on pitch, and staying together with classmates or CD
- Benefit from fun activities that spark and keep interest:
  - Making animal sounds
  - Reviewing numbers and formations, vowel sounds
  - Singing Mother Goose rhymes

Variety of Songs to Memorize
- Motion songs
- Fun songs about animals, Mother Goose rhymes, toys, friends, holidays, and character-building traits
- Songs to act out with props; patriotic songs
- ➤ Includes 20 new songs

Arts & Crafts



The assortment of colorful projects found in *Art Projects K5* introduces students to basic concepts of art and gives them a variety of opportunities to build upon concepts that have already been taught such as coloring, painting, tracing, drawing, cutting, and gluing with a variety of materials. Month-by-month projects correlate with academics, Bible teaching, and the seasons and holidays.

Added Enrichment
- *When I Grow Up* Booklet
- Motivational pencil toppers (9)

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Skill & Concept Development *37 projects*
- Develop fine motor skills with increasing level of difficulty through:
  - Cutting, gluing, coloring, folding
  - ➤ Mixing colors
  - Incorporating moving parts
  - Directed drawings, painting
  - ➤ Paper modeling
  - ➤ Introducing perspective
  - ➤ Lacing, play dough modeling
  - 3-D crafting
- Increase listening skills through following step-by-step instructions to complete more difficult projects
- Projects include these themes:
  - Animal, season, holiday, scriptural, historical, cultural
  - ➤ Phonetic, counting, telling time, game assembly

Technique Development
- Develop basic concepts of color, line, shape, and texture through:
  - Projects that include:
    - ➤ Crayon overlay, shape painting, directional coloring
    - ➤ Shading according to a light source
    - Finger and hand stamping
    - ➤ 3-D curling, 3-D layering
    - Assembling song and story booklets and song visuals
  - Projects that promote:
    - Safety, creativity with stick puppets, storytelling, and drama

Language Arts: Phonics



Letters and Sounds 1 is a complete phonics practice seatwork book. Each phonics element necessary for learning to read is systematically reviewed in an appealing way. The many puzzles, riddles, exercises, and illustrations are designed to teach word analysis skills, build vocabulary, and increase reading comprehension.



Handbook for Reading is an invaluable teaching tool for the application of phonics rules. The words for students to read are arranged to correlate with the sequence in which diphthongs, digraphs, consonant blends, etc., are taught. Ample practice and thorough review help students master phonics concepts. The early introduction of short vowels allows students to read whole words, sentences, and stories during the first few weeks of first grade.

Added Enrichment

- Review games
- During independent seatwork:
  - Circle special sounds /mark vowels
  - Write word other than clue word for special sound
  - Underline root word/circle suffix
- Write or match rhyming words
- Add correct special sound to beginning/middle of word
- Add suffix to given root word
- Match special sound to correct word

Evaluation

- Oral and written phonics tests (32)

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Skills Development

- Review: long and short vowel sounds, consonant sounds
- Blend consonants with vowels
- Blend special sounds with vowels
- Review 47 special sounds and clue words learned in K5
- ➤ Learn and apply 85 additional special sounds and clue words: special sounds include consonant blends, diphthongs, digraphs, 11 suffixes, 5 prefixes
- Demonstrate ability to provide other example words that contain special sounds
- ➤ Understand that syllables are parts of words
- ➤ Be able to identify root words
- ➤ Demonstrate ability to add suffixes using the rules:
  - ➤ When a root word ends with a single consonant and the vowel is short, the consonant is usually doubled before adding a suffix beginning with a vowel.
  - ➤ When a root word ends with a silent *e,* the *e* is usually dropped before adding a suffix that begins with a vowel
- ➤ Demonstrate ability to add prefixes to root words correctly
- ➤ Correctly divide words into syllables between:
  - ➤ Double consonants; root words and suffixes
  - ➤ A vowel and a consonant
  - ➤ Two differing consonants
  - ➤ Prefixes and root words
- Master phonics rules including:
  - One- and two-vowel rules: When there is one vowel in a word, it usually says its short sound. When there are two vowels in a word, the first vowel says its long sound and the second vowel is silent.
  - When a consonant is doubled at end of a short word, it says its sound one time.
  - *c-k usually* follows a short vowel (ex.: back)
  - ➤ *k-e* follows a long vowel (ex.: bake)
  - *c/k* rhyme: *k* comes before *i* and *e; c* before the other three—*a, o, u* (ex.: key, cat)
  - Suffix *-s* says "s" or "z"
- Know and apply tips for learning special sounds:
  - "*ck* in duck" usually follows a short vowel; says the *k* sound one time only
  - "*e* in me" says long *e* sound when only vowel at end of short word
  - "*o* in go" says long *o* sound when only vowel at end of short word
  - "*y* in fly" says long *i* sound when at end of short word
  - "*ay* in pray" usually comes at end of word
  - ➤ "*ou* in out" usually comes in middle of word
  - ➤ "*ow* in owl" usually comes before n, l, or at end of word
  - ➤ "*oi* in coin" usually comes in middle of word or syllable
  - ➤ "*oy* in boy" usually comes at end of word or syllable
  - ➤ "*kn* in knot" comes at beginning of word or syllable; *k* is silent
  - ➤ "*gn* in gnat" comes at the beginning of a word; *g* is silent
  - ➤ "*a* in adopt" comes at the beginning of a word ("*a*" usually says short "*u*" at the beginning of any word)
  - ➤ "*le* in little" usually comes at end of word with two or more syllables
  - ➤ Suffix *-ed* can say "t" or "d," or it can say "ed" when it comes after *t* or *d*
  - ➤ "*wh* in whale" says "*h*" when followed by *o*
  - ➤ "*tch* in patch" usually follows a short vowel
  - ➤ "*ew*" can say "oo" or long "*u*"
  - ➤ When *c* comes before *e, i,* or *y,* it says "s"
  - ➤ When *g* comes before *e, i,* or *y,* it says "*j*"
  - ➤ "*dge* in fudge" usually follows a short vowel
  - ➤ "*wr* in wrinkle" has a silent *w*
  - ➤ "*are* in care" can be sounded using two-vowel rule
  - ➤ "*ure* in pure" can be sounded using two-vowel rule
  - ➤ "*sion* in television" is usually found in a word with one *s*
  - ➤ "*sion* in missionary" *s* says "sh"; usually followed with another *s*
  - ➤ "*or* in sailor" comes at end of word with two or more syllables
  - ➤ "*ar* in dollar" comes at end of word with two or more syllables
- ➤ Apply phonics concepts to reading

Language Arts: Reading



First graders learn that there is a whole new world just waiting for them as they advance their reading skills. The early readers coordinate the reading material with the phonics concepts students are learning. Students move from stories with simple one- and two-vowel words to stories based on children's classics, giving them valuable practice in applying phonics skills. Each reader features delightful, character-building selections that appeal strongly to the interests of first graders.

Literary Value

- 44 authors, including well-known writers such as Aesop, Christina Rossetti, Robert Louis Stevenson, and Lewis Carroll
- Character-building and patriotic story themes such as honesty, integrity, courage, kindness, industry, forgiveness, and unselfishness

Materials

- Readers (10) containing:
  - Short stories (184)
  - Plays (3)
  - Poems (73)
- *Primary Bible Reader* containing selected Scripture reading (24 lessons)

Evaluation

- Weekly oral reading grade

➤ **RED** *indicates first introduction of content.*

Reading Skills Development

- Read and decode (sound out) words by applying phonics sounds and rules
- Strive for increasing:
  - Accuracy, correct enunciation, fluency
  - ➤ Phrasing
  - Alertness to punctuation; good expression; comprehension
  - Appropriate pace for grade level
  - Volume; poise
- Follow along as others read orally
- Receive differentiated instruction with ability grouping

Readers

- *Fun with Pets* contains 15 stories including one- and two-vowel words, sight words, words ending in two different consonants, phrases, and sentences; using apostrophes in possessives and contractions; practicing "z" sound for letter s; observing punctuation and practicing appropriate expression; defining vocabulary; answering oral and written comprehension questions; practicing rhyming words, marking words phonetically; includes story/character themes and scriptural applications.
- *Tiptoes* contains 32 stories and 8 poems (realistic fiction, animal tales, Scripture reading) reviewing one- and two-vowel words, sight words, and sentences; practicing special sounds with consonant blends from phonics charts 6–7, all punctuation marks, contractions and compound words; answering oral comprehension and discussion questions with written comprehension/application activities; practicing accuracy in reading with smoothness and speed; includes introductions and story themes featuring Christian virtues and character traits.
- *Stepping Stones* contains 18 stories, 7 poems, and 1 play focusing on phonics charts 8–9; practicing new sight words, punctuation marks, apostrophes in possessives, compound words, contractions; introducing two-syllable words, root words, and suffixes; answering inferential questions, drawing conclusions, recalling events of story in proper sequence; answering oral and written comprehension questions/application activities; building vocabulary using advanced words and definitions; applying story themes to build Christian virtues/character.
- *Secrets and Surprises* contains 11 stories, 31 poems, and 2 plays for practicing special sounds from phonics charts 8–11, root words, and suffixes; defining unfamiliar vocabulary words; practicing accuracy in reading with smoothness and expression; responding to oral comprehension/discussion questions; completing analytical activities including plot sequencing, character comparisons, illustration interpretation, content application, and word usage.
- *Kind and Brave* contains 18 stories and 10 poems including fables, folk literature, realistic fiction, animal tales, biographical stories, Scripture reading; emphasizing special sounds from phonics charts 10–11; expanding reading vocabulary through use of prefixes and suffixes; applying phonics rules through oral/written word practice pages; improving enunciation, poise, and volume; applying character themes with related Scripture verses; answering comprehension/discussion questions; drawing conclusions from facts given in story; completing sequencing, choral reading, supplemental library enrichment activities.
- *Aesop's Fables* contains 27 character-/moral-themed stories including related Scripture for each fable; practicing phonics charts 8–11; reviewing syllabification and word division rules, suffixes, prefixes, root words, and compound words; emphasizing conversational tone in reading dialog; analyzing given information to select correct answers for oral/written comprehension activities; play-acting and visual demonstration activities.
- *Strong and True* contains 22 stories and 7 poems consisting of fables, folk literature, animal tales, biographical stories, realistic fiction, Scripture reading; reviewing phonics charts 12–13; including character themes emphasizing loyalty and patriotism; applying phonics rules through oral/written word practice pages; expanding vocabulary using unfamiliar words and definitions; answering inferential questions, drawing conclusions, recalling events of story in proper sequence; answering oral and written comprehension questions; completing sequencing, choral reading, supplemental library enrichment activities.
- *Down by the Sea* contains 16 stories and 4 poems including animal tales, Scripture reading, poetry, realistic fiction; providing comprehensive review of phonics charts 6–13, punctuation, contractions, prefixes, and suffixes while increasing vocabulary; answering factual, inferential, and interpretive questions; drawing conclusions relating to setting, main characters, climax, moral, cause and effect, plot; applying language skills to written activities including synonyms, antonyms, homonyms, rhyming words; completing sequencing, choral reading, visual recognition/comprehension, supplemental library enrichment activities.

Reading cont. p. 22

➤ **RED** *indicates first introduction of content.*

Reading cont.

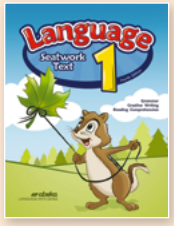
Readers cont.

- *Animals in the Great Outdoors* contains 25 stories and 6 poems including animal tales, Scripture reading, poetry, realistic fiction; providing comprehensive review of phonics charts 6–13, contractions, and compound words; including story/character themes/Bible verses for application; answering literal and interpretive comprehension/discussion questions; drawing conclusions relating to setting, main characters, climax, moral, cause and effect, plot; applying language skills to written activities including compound words, homonyms, rhyming words, illustration interpretation; recognizing false/incorrect information and formulating correct responses; completing sequencing, choral reading, visual recognition/comprehension, supplemental library enrichment activities.
- *Primary Bible Reader* contains familiar stories of Scripture such as Creation, the Christmas story, Life of Christ, as well as selected verses for age-appropriate personal application to promote independent Bible reading.

Comprehension, Discussion & Analysis Skills Development

- Answer factual and interpretive questions for most stories and poems
- Answer inferential comprehension and discussion questions
- Read sight words; challenging words
- Complete integrated phonics, language, and reading skills activities such as:
  - Marking short and long vowel sounds
  - Circling special sounds
  - Adding correct special sounds to complete words
  - Reading clues to solve puzzles
  - Filling in the blank with correct word/phrase to complete a sentence
  - Matching pictures with descriptive words
  - ➤ Matching pictures with descriptive phrases or sentences
  - ➤ Choosing correct sentences for telling events in story
  - Choosing correct picture to answer comprehension questions about the story
  - ➤ Numbering pictures in correct story sequence
  - ➤ Marking root words and suffixes
  - ➤ Identifying parts of compound words
  - ➤ Forming contractions
  - ➤ Matching rhyming words; writing rhyming words
  - ➤ Matching picture with correct homonym
  - ➤ Reading comprehension question and circling correct answer

Language Arts: Language



Designed for use during independent work times, the work-text *Language 1* provides daily exercises to help students increase thinking skills, improve reading comprehension, and develop creative writing ability. By the end of the year, students will be able to write in complete sentences, capitalize the first word of a sentence, capitalize the days and months, place a period at the end of a sentence, know and use suffixes and prefixes, and alphabetize words.

Added Enrichment

- Review games
- During independent seatwork:
  - Copy sentences (16)
  - Finish sentences (61)
  - Write original sentences (48)
  - Alphabetical Order (12)
  - Reading Comprehension (8)
  - Verb Tenses (5)

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Grammar

- Capitalization:
  - First word in the sentence
  - ➤ Days of week and months of year
  - ➤ Proper Names
  - ➤ Names of God
- The word *I*
- Punctuation: correctly use period at end of a telling sentence
  - ➤ Correctly use question mark at end of asking sentence
  - ➤ Correctly use exclamation point at end of expressive sentence
- The sentence: always begin with capital letter
- Word study and diction:
  - ➤ Determine number of syllables
  - ➤ Find root words
  - ➤ Add suffixes and prefixes to root words
  - Recognize and use:
    - ➤ Compound words; rhyming words
    - Opposite words (antonyms)
    - ➤ Same-meaning words (synonyms); same-sounding words (homonyms)
    - ➤ Contractions
  - ➤ Divide a word into syllables between:
    - ➤ Double consonants
    - ➤ Possessives
    - ➤ Plurals
    - ➤ Verb tenses/subject-verb agreement
    - ➤ Root words and suffixes

Language cont. p. 23

➤ **RED** *indicates first introduction of content.*

Language *cont.*

Grammar *cont.*

- ➤ A vowel and a consonant
- ➤ Two consonants that are not alike
- ➤ Two vowels that are not alike
- ➤ Prefixes and root words
- ➤ Alphabetize words
- ➤ Comprehend reading material and answer questions

Composition

- ➤ Write:
  - ➤ Interesting sentences, paragraphs
  - ➤ Short narratives
  - ▪ Copying/completing sentences (74)
  - ▪ Writing original sentences (52)

Language Arts: Cursive Writing/Creative Writing



Cursive Writing

Writing with Phonics 1 is designed for use as a first-grade cursive writing work-text. Students learn the proper formation and slant of letters and the correct spacing between letters, words, and sentences. Through daily writing exercises, students will practice and review what they are learning in phonics, beginning with single letters and progressing to special sounds, words, sentences, paragraphs, and poems.

Creative Writing

Beginning in lesson 81, penmanship class will focus primarily on creative writing skills and some penmanship review. Creative writing skills will be taught in a sequence that will prepare students to write their own stories.

Added Enrichment

- ▪ Animal booklet compilation
- ▪ Creative writing exercises/drawing during:
  - ▪ Science (11)
  - ▪ History (9)
  - ▪ Health (4)

Evaluation

- ▪ Tests (31)

➤ **RED** *indicates first introduction of content.*

Skills Development

- ▪ Achieve good writing position:
  - ▪ Sitting properly in desk
  - ▪ Holding pencil correctly
  - ▪ Slanting paper correctly
- ▪ Review correct formation for all lowercase letters, numbers 1–10, and the 12 capital letters learned in K5
- ➤ Learn formation for remaining 14 capital letters
- ▪ Perfect writing skills for a good overall appearance:
  - ▪ Forming difficult letters correctly
  - ▪ Placing letters correctly on the lines
  - ▪ Using proper spacing between letters and words
  - ▪ Slanting letters properly
  - ▪ Writing slowly and carefully
  - ▪ Making smooth connections between letters, difficult letters, blends
  - ▪ Using key strokes: trace, smile, wave, loop, oval, mountain
  - ➤ Gradually decrease size of writing
- ▪ Evaluate writing for personal improvement
- ▪ Correctly write:
  - ▪ Blends, one- and two-vowel words, and sentences
  - ➤ Paragraphs and poems
- ➤ Creative Writing
  - ➤ Learning the writing process: read and gather, think and plan, write and rewrite, check and polish, share your results
    - ➤ Use proper punctuation and capitalization; simple sentence structure; recognize difference between phrases and sentences; fill in missing words in sentences; write sentences using suggested words; choose titles; develop stories using assigned themes; solving riddles; sequencing; writing a process summary, starting/concluding sentences; writing friendly letters
  - ➤ Compositions include these themes:
    - ➤ Animal, historical, seasonal, character building, plants, school, ocean, "how to"
  - ➤ Compositions:
    - ➤ During Creative Writing (8)
    - ➤ During Seatwork (12)

Language Arts: Spelling & Poetry



In *Spelling and Poetry 1,* first graders apply the phonics concepts they are currently learning as they master the spelling of approximately 420 words. Most of the words in *Spelling and Poetry 1* are arranged phonetically, which teaches students to recognize basic spelling patterns. They will learn sight words, contractions, and abbreviations that they will encounter frequently in their reading and writing. First graders will also learn eight poems that will help them develop their oral speaking skills while deepening their appreciation for poetry.

Added Enrichment

- Spelling lists (30):
  - Total words (420)
  - Organized by special sounds
- Worksheet activities reinforce new concepts
- Homework sheets include spelling list and helpful hints or special sounds featured in the list (30)
- Spelling games

Evaluation

- Spelling words tested in 30 of the 32 phonics tests

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Spelling Skills Development

- ➤ Master spelling lists including sight words, abbreviations, and contractions
- ➤ Apply spelling and phonics concepts through daily:
  - ➤ Teacher-directed oral practice
  - ➤ Independent written practice
- ➤ Hear spelling words used in sentences and clearly picture each word's meaning
- ➤ Learn to differentiate between words that sound alike
- ➤ Use spelling words in creative writing exercises
- ➤ Learn spelling rules:
  - ➤ Know: one- and two-vowel rules; *k* comes before *i* and *e; c* comes before *a, o, u*
  - ➤ Correctly use at end of word:
    - ➤ Double consonants *ll, ff,* or *ss*
    - ➤ Vowels *e, o,* or *y*
    - ➤ *ck* after a short vowel; *ke* after a long vowel
  - ➤ Double a consonant before adding a suffix that begins with a vowel
  - ➤ Drop the silent *e*

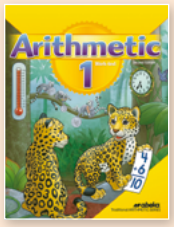
Worksheet Activities:

- Marking special phonics sounds
- ➤ Marking roots and suffixes
- Completing words and sentences
- ➤ Arranging words alphabetically
- ➤ Identifying misspelled words, opposites, rhyming words
- ➤ Categorizing words by special phonics sounds
- ➤ Solving word puzzles and riddles
- Associating words with pictures
- ➤ Matching words with their meaning
- ➤ Combining root words and suffixes *-ing, -ed*

Poetry Skills Development

- ➤ Memorize 8 lyrical poems
- Develop appreciation of poetry
- Perform in front of an audience
- Recite in unison
- ➤ Develop appropriate expression and volume
- ➤ Improve comprehension through thinking questions
- ➤ Learn terms such as *title* and *author*
- Maintain interest and increase comprehension through added learning features such as actions and hand motions

Arithmetic



Using delightful themes and full-color illustrations, *Arithmetic 1* presents concepts in an orderly manner, building on prior learning and including consistent year-long review. Concepts include counting, writing and reading numbers, place value, addition and subtraction, money, graphs, measurements, time, temperature, and fractions. Applications to real-life situations and daily thinking questions stretch the students' reasoning ability.

Added Enrichment

- Thematic units: zoo, farm, ocean, spring
- Introductory song and/or poem for each unit
- Review games

Evaluation

- Written tests (32)
- Daily timed skills-development exercises (126)
- Oral tests (32): combinations, answers, and complete instructions for oral tests in daily lesson plans

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Numbers

- Recognizing numbers:
  - 1–100
  - ➤ 101–1,000
- Understanding concepts:
  - 1–100
  - ➤ 101–1,000
  - Counting:
    - Money
    - Ordinal numbers: 1–10

Arithmetic cont. p. 25

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Numbers *cont.*

- ➤ Forward and backward by ones, twos, fives, and tens
- ➤ Forward by twenty-fives
- ➤ By threes from 3 to 36
- ➤ Tally marks
- ➤ Roman numerals 1–10
- ➤ By even and odd numbers
- ➤ Ordinal numbers: 11–20

- Writing numbers:
  - By ones, twos, fives, and tens to 100
  - Words one–twelve
  - ➤ Words thirteen–twenty
  - ➤ To 1,000
  - ➤ By threes to 36
  - ➤ Using tally marks
- Comparing:
  - Greater / less, greatest / least
  - Before / after
  - By ones, twos, fives, tens
  - ➤ Using symbols > and < to show greater than and less than
  - ➤ Before and after: by twos, fives, tens
  - ➤ Place value:
    - ➤ Illustrating numbers and place value with objects
    - ➤ Understanding hundreds, tens, ones
    - ➤ Ordering four numbers
    - ➤ Addition with carrying

Addition

- Review of addition families 1–10
  - ➤ Learn addition families 11–18
  - Horizontal and vertical form
  - Oral or written
- Addition "twins" (concept of commutative principle)
- ➤ Timed mastery
- ➤ Missing terms
- Word problems:
  - Oral
  - Written
- ➤ Writing addition number sentences
- ➤ Addends:
  - ➤ Column addition with up to five single-digit addends
  - ➤ Two- and three-digit problems without carrying
- ➤ Carrying two- and three-digit numbers with carrying to the tens and hundreds places
- ➤ Mental arithmetic:
  - ➤ Problems with up to 5 single-digit numbers
  - ➤ Problems combining single-digit addition and subtraction up to 3 numbers
- Adding coins

Subtraction

- Recognizing symbol: – (minus)
- ➤ Subtraction families 1–18:
  - ➤ Vertical and horizontal form
  - Oral or written
- ➤ Subtracting coins
- ➤ Timed mastery
- ➤ Missing terms
- ➤ Mental arithmetic: problems combining single-digit addition and subtraction up to 3 numbers
- ➤ Writing subtraction number sentences
- ➤ Subtracting:
  - ➤ One-digit problems
  - ➤ Two- and three-digit problems without borrowing
- ➤ Word problems: oral, written

Multiplication

- Building blocks:
  - ➤ Repeated addition
  - ➤ Objects to multiply
    - Counting by twos, fives, tens
  - ➤ Counting by threes
- ➤ Concept of multiplication
- ➤ Writing a multiplication fact

Fractions

- ➤ Concept of fractions
- ➤ Building blocks: equal parts
- Parts of a whole:
  - One half
  - ➤ One fourth, one third
- ➤ Parts of a group: one half, one fourth, one third
- ➤ Comparing one half, one fourth, one third
- ➤ Least to greatest

Problem Solving & Applications

- Building blocks: oral word problems
- ➤ Written word problems
- ➤ Solving word problems:
  - ➤ Addition, subtraction, money
  - ➤ Illustrating story problems
  - ➤ Creating story problems
  - ➤ Extra facts; missing facts
  - ➤ Choosing the operation
- ➤ Applications:
  - ➤ Temperature; time
  - ➤ Weight; length; money
  - ➤ Number puzzles; graphs
  - ➤ Calendars; maps
- ➤ Thinking logically: patterns; thinking caps; sequencing; clue words

Time

- Clock: face, hour and minute hands
- Reading and writing time:
  - O'clock (:00), half past (:30), quarter past (:15)
  - ➤ Quarter till (:45)
  - ➤ Five-minute intervals
  - ➤ A.M. and P.M.
- Calendar: months, days, date, year
- ➤ Calendar: rhyme
- ➤ Measures of time

Arithmetic cont. p. 26

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Money
- Recognize coin and value: penny, nickel, dime, quarter
- ➤ Recognize coin and value: half dollar, dollar
- Count:
  - Pennies, dimes, nickels
  - ➤ Quarters, half dollars, dollars
- Add:
  - Pennies, dimes and pennies, nickels and pennies
  - ➤ Quarters and pennies, dimes and nickels
- ➤ Count: combinations of coins, coins in mixed order
- ➤ Adding and subtracting money
  - Recognize symbol: ¢ (cent)
  - ➤ Recognize symbol: $ (dollar)
  - Word problems: oral and written

Measures
- Word problems: oral and written
- Temperature: reading and writing degrees
- Length:
  - ➤ Inch, foot, yard, centimeter
- Weight:
  - ➤ Ounce, pound
  - ➤ Comparing weights
- ➤ Dozen, half dozen
- ➤ Capacity: cup, pint, quart, gallon

Graphing, Statistics, Probability
- ➤ Graphs:
  - ➤ Horizontal bar graphs: scales by 1s, 2s, 10s, 5s, and 3s
  - ➤ Pictographs
  - ➤ Graphing tally marks

Geometry
- Recognize shapes: circle, square, rectangle, triangle, diamond, oval, cone, cube, sphere
- ➤ Recognize shapes: hexagon, trapezoid
- ➤ Symmetry
- ➤ Shapes in a grid
- ➤ Perimeter of a rectangular object

History & Geography



In *My America and My World,* students will learn how our country was founded and what our basic freedoms are. They meet several famous American patriots and take a trip across America. Good citizenship is emphasized and reading skills are developed. In addition, students will learn new patriotic songs and be introduced to major countries and U.S. Territories. *America: Our Great Country, Children of the World,* and *Community Helpers* are used in correlation with *My America and My World.*

Added Enrichment
- Vocabulary boxes to point out difficult words
- Activities such as:
  - Artistic projects
  - Learning foreign words and phrases
  - Listening to classical music
  - Reading stories by writers of given country
- Suggested creative writing topics (9)

➤ **RED** *indicates first introduction of content.*

America
- U.S. flag:
  - History
  - ➤ Meaning of colors
  - ➤ Flag etiquette
- Meaning of Pledge of Allegiance
- ➤ America's freedoms
- Symbols such as:
  - ➤ Great Seal of the U.S., Uncle Sam
  - Statue of Liberty, U.S. coins, American bald eagle, Liberty Bell
- ➤ Great U.S. documents: Declaration of Independence, Constitution, Bill of Rights
- Great People of America
  - Pilgrims (First Thanksgiving)
  - George Washington, Abraham Lincoln
  - ➤ Paul Revere, Benjamin Franklin
- ➤ America grows by communication and travel: telephone, mail, television, radio, computers, Internet; changes in transportation
- American holidays:
  - ➤ Presidents' Day
  - Thanksgiving Day
- ➤ American legends:
  - ➤ George Washington and the cherry tree
- American places and territories:
  - Washington, D.C.; Niagara Falls, Mount Rushmore
  - ➤ Plymouth Rock, Plymouth Plantation, Fort McHenry
  - ➤ Williamsburg, Virginia; Mississippi River
  - ➤ Yellowstone National Park, Grand Teton National Park, Rocky Mountain National Park, Grand Canyon, Death Valley, Yosemite National Park, San Francisco
  - U.S. Virgin Islands, Puerto Rico, Guam, American Samoa
- Patriotic Songs:
  - "My Country, 'Tis of Thee"
  - "The Star-Spangled Banner"
  - ➤ "America, the Beautiful"

History & Geography cont. p. 27

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

The World

- Countries:
  - Mexico, Peru, The Bahamas, England, The Netherlands, Israel, Italy, Kenya, China, Australia
  - ➤ Canada, Norway, France, Germany, Switzerland, Egypt, India, Japan

Geography Study

- Continents: North America, South America, Africa, Europe, Australia, Asia
- Globe
- Oceans: Atlantic and Pacific
- Cardinal directions and compass rose
- What is an island?
- ➤ Location of 21 specific states in America
- ➤ North and South poles
- ➤ Home state, neighboring states, corner states
- ➤ Thirteen original colonies
- ➤ Equator
- ➤ Gulf of Mexico, Mississippi River, Rocky Mountains, Grand Canyon, Death Valley, Great Plains, Yosemite National Park
- Map symbols—national capitals

Community Helpers

- Pastor
- Firefighter
- Doctor
- Dentist
- Server
- Postal Employee
- Teacher
- Police Officer
- Nurse
- Farmer
- Baker
- Mayor

Science



The colorfully illustrated science text *Discovering God's World* presents God as the Master Designer of the world around us. The studies of plants, animals, insects, energy, health, the seasons, and the five senses provide an excellent introduction to science, with the emphasis on building student interest and augmenting students' reading skills. Hands-on activities and demonstrations also increase students' comprehension of basic science concepts.

Added Enrichment

- Additional hands-on learning activities
  - Lesson activities (22)
  - Additional activities (66)
  - Creative Writing (11)

➤ **RED** *indicates first introduction of content.*

Health & Human Biology

- Special to God: five senses and sense organs
- ➤ Hands: fingerprints
- ➤ Hair:
  - ➤ Hair types, skin, oil gland, follicle
  - ➤ Root, pigment
- ➤ Eyes: placement in skull; eyelids, eyelashes, tears
- ➤ Ears: outer ear, eardrum; vibrate
- Nose: nostrils; sneezing
- Tongue:
  - Taste buds: sour, salty, bitter, sweet
  - ➤ Speaking
- Skin:
  - ➤ Experiencing cold, warmth
  - Experiencing tickles, pain
  - ➤ Pores, "goose-bumps," proper care of skin

Activities & Demonstrations:

- ➤ Comparing thumb prints
- ➤ Discovering how sound travels
- ➤ Seeing how senses work together

Energy

- ➤ Forces: nonliving things
- ➤ Water: push, pull
- ➤ Air: wind, provides push
- ➤ Wind: moving air, gravity
- Magnets: attract (pull), repel (push)
- ➤ Simple machines: wheels, ramps, levers, balanced forces

Activities & Demonstrations:

- ➤ Making a balloon jet
- Discovering what magnets pick up
- ➤ Seeing how wheels help
- ➤ Having a ramp race
- ➤ Using a lever lifter

Animals

- ➤ Living Creatures
- Instinct
- Reproduce after their kind
- ➤ Babies that are born drink mother's milk: opossum, kangaroo
- ➤ Babies that hatch do not drink mother's milk: tadpoles, frogs, chicks, alligators, ducklings
- God's wonderful plan:
  - ➤ Elephants: ears, trunk, tusk
  - ➤ Ducks: sac of oil, webbed feet, bill
  - Turtles:
    - Shell
    - ➤ Jaws; land turtles, water turtles
  - ➤ Owls: herbivores, carnivores, omnivores; eyes, head rotation; feathers, talons

Activities & Demonstrations:

- ➤ Raising tadpoles
- ➤ Conducting the elephant ear experiment
- ➤ Observing oil on a duck
- ➤ Insects

Science cont. p. 28

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Insects
- ➤ Importance of insects
- ➤ Insect identification: head, thorax, abdomen
- ▪ Insect identification: six legs
- ➤ Ants: workers, queen

Activities & Demonstrations:
- ➤ Observing a caterpillar change into a butterfly
- ➤ Making an insect zoo
- ▪ Making an ant farm

Plants
- ➤ Uses for plants: oxygen, food, medicine, building
- ▪ Parts of the plant: roots, stem, leaves, flowers, fruits, seeds
- ➤ Parts of the plant: cones
- ▪ Reproduce after their kind
- ▪ Flowers

Activities & Demonstrations:
- ➤ Opening a seed
- ▪ Germinating seeds
- ➤ Growing a plant from root
- ➤ Water rising up a stem
- ▪ Seeds need sunlight, water, soil
- ➤ Types of soils

Seasons
- ▪ God made seasons
- ▪ Winter: rest, hibernate
- ▪ Spring: new life
- ▪ Summer: grow
- ▪ Fall: get ready for winter
- ➤ A sunflower's year
- ➤ A squirrel's year
- ▪ Stewardship

Activities & Demonstrations:
- ➤ Bringing some twigs to life
- ➤ Finding air in water and soil
- ➤ Making a bird feeder
- ▪ Planting a bean garden

Health



Health, Safety, and Manners 1 is an interesting and attractive health reader that introduces first graders to the importance of good health habits and gives God the glory for the way He has designed us. Students will learn about nutrition, exercise, proper sleep habits, good posture, safety habits, and manners. Activities and checklists help students apply good principles of health, safety, and manners.

Added Enrichment
- ▪ Hands-on learning activities in student book, Teacher Edition, and daily lesson plans (35)
- ▪ Growing Tall growth chart
- ▪ Checksheets: My Health, My Safety, My Manners
- ▪ Creative Writing (4)

➤ **RED** *indicates first introduction of content.*

Health
- ▪ Growing tall
- ➤ Forming good habits
- ▪ Eating good foods:
  - ▪ Kinds of foods
  - ➤ A good breakfast, a good snack
  - ▪ Good eating habits:
    - ➤ Eating meals same time every day
    - ▪ Washing hands before eating
    - ▪ Drinking milk every day
    - ➤ Limiting sugary drinks
    - ▪ Eating different kinds of food
    - ➤ Washing fresh fruits and vegetables before eating
    - ▪ Limiting sugar and candy
    - ➤ Taking small bites and chewing food well
- ▪ Exercising each day:
  - ➤ Fun exercises for children (8)
  - ▪ Benefits of fresh air and sunshine
  - ▪ Good exercise habits:
    - ▪ Getting exercise every day and playing outside in fresh air
    - ▪ Helping with work at home
    - ➤ Not playing hard right after a meal
    - ➤ Resting from play
- ➤ Getting right amount of rest:
  - ➤ Good sleeping habits:
    - ➤ Pre-bedtime activities
    - ➤ Wearing clean pajamas
    - ➤ Going to bed early and at same time each night; sleeping until rested; good sleeping conditions; going right to sleep
- ➤ Building good posture:
  - ➤ Benefits of good posture
  - ➤ Good posture habits:
    - ➤ How to stand straight and tall; proper way to sit in a chair
    - ➤ Well-fitting shoes; proper walking habits
- ▪ Taking care of the body:
  - ▪ Good skin and hair habits:
    - ➤ Protecting skin from the sun with sunscreen
    - ▪ Bathing often with warm water and soap to rid the skin of germs which can cause illness
    - ▪ Proper care for cuts
    - ▪ Washing hands: before eating; after using bathroom; after playing outside; after handling animals
    - ➤ How to dry off effectively
    - ▪ Shampooing dirty hair
    - ➤ Proper use and maintenance of your comb and brush
    - ➤ Keeping pets away from your face

Health cont. p. 29

➤ **RED** *indicates first introduction of content.*

Health cont.

- ➤ Keeping fingernails and toenails clean and trimmed
- Not biting fingernails
- Keeping fingers out of mouth
- Eyes:
  - Purpose; protection
  - ➤ Parts
  - ➤ Good eye-care habits:
    - ➤ Reading in a well-lighted place
    - ➤ Not rubbing your eyes
    - ➤ Not running while holding sharp things
    - ➤ Protecting eyes from sun or other bright lights
    - ➤ Getting proper rest
    - ➤ Getting eye check-ups by a doctor
    - ➤ Keeping eye glasses clean
- Ears:
  - Protection: wax, hairs; parts
  - ➤ Good ear-care habits:
    - ➤ Proper washing of ears
    - ➤ Not putting objects in ears
    - ➤ Protecting ears from getting hit; from cold and wind
    - ➤ Going to a doctor for chronic earaches
- Nose:
  - Purpose; protection from germs
  - Good health habits:
    - Protecting others from your coughing or sneezing; proper use of tissues
- Teeth:
  - ➤ Instructions for proper brushing
  - Good tooth-care habits:
    - Drinking plenty of milk every day
    - Limiting sugar
    - Not cracking nuts with teeth
    - Brushing correctly
    - ➤ Primary and permanent teeth
    - Getting regular dental checkups
- Keeping hands away from face
- ➤ Keeping pencils out of mouth
- ➤ Not eating from someone else's food

➤ Taking care of clothing:
- ➤ Good clothing-care habits:
  - ➤ Learning what to do with clothes after taking them off; clothes that need to be mended; dirty clothes
  - ➤ Putting on clean underclothes daily
  - ➤ Taking coat or raincoat off when inside

➤ Taking care of the home

Safety

- At home:
  - Ways to prevent falls
  - Good safety habits:
    - Sharp and pointed objects:
      - Walking while carrying
      - ➤ Carrying with the point down
    - Getting parents to take medicine from medicine cabinet
    - ➤ Handling electrical cords with dry hands
    - Safety with matches and fire
    - ➤ Not playing with your parent's guns
    - ➤ Not playing with cleaning supplies
    - Putting toys away to avoid an accident
- Away from home:
  - Policemen
  - ➤ Good safety habits:
    - ➤ Consulting with an adult before leaving
    - ➤ Never leave a building alone
    - ➤ Avoid:
      - ➤ Talking to strangers when you are alone; getting in a car with a stranger
      - ➤ Playing in old, empty buildings
      - ➤ Petting stray animals
      - ➤ Eating berries found outside
      - ➤ Putting flowers, leaves, or twigs in mouth
      - ➤ Playing in old refrigerators or clothes dryers
- On the street:
  - ➤ Good walking habits:
    - ➤ Where to walk when there is no sidewalk
    - ➤ Where to cross a street; how to cross a railroad track
    - ➤ Safety around trains that are stopped on the track
  - ➤ Bicycle safety habits:
    - ➤ Riding in the correct direction
    - ➤ Using a safety helmet, handlebars, and hand signals
    - ➤ Passengers
    - ➤ Keeping your bike in good working order
  - ➤ Riding to school:
    - ➤ Bus, car
    - ➤ Good riding habits:
      - ➤ Using car seat belts
      - ➤ Staying seated on the bus
      - ➤ Keeping hands inside bus and car windows
      - ➤ How to cross the street after getting off a bus
      - ➤ How to get out of a car that is parked on a street
      - ➤ Ride in the back seat of a car
- On the playground:
  - ➤ Good safety habits:
    - ➤ Staying far from swings that are being used; not standing up while swinging or jumping off while swing is in motion
    - ➤ Slide safety: at the bottom of the slide; at the top of the slide
    - ➤ Standing back from merry-go-round in motion
    - ➤ Not standing on top of monkey bars
    - ➤ Taking turns with other boys and girls
- In the water:
  - ➤ Pool safety habits:
    - ➤ Importance of taking swimming lessons
    - ➤ Avoid going swimming or wading alone
    - ➤ Not pushing others into the pool or running beside the pool
  - ➤ Boat safety habits: wearing a life jacket; not standing up
- In a storm:
  - Good safety habits:
    - Stay inside
    - ➤ Safety with telephone or electrical cords
    - ➤ Where to take refuge: if you are outside; if you are in a car
    - ➤ Stay away from windows and doors
    - ➤ Avoid taking a bath or washing hands

Health cont. p. 30

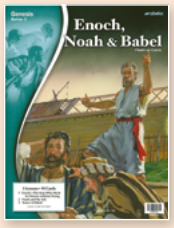
➤ **RED** *indicates first introduction of content.*

Health *cont.*

Manners

- At home:
  - Important words: *please, thank you, I'm sorry, you're welcome*
  - ➤ Having company
  - Good habits at home:
    - Coming quickly when called
    - Thanking God for your food
    - Not talking with food in your mouth; chewing with mouth closed
    - Saying "please" when you want something; remembering to say "thank you"
  - ➤ Doing your part to help your family
  - ➤ Not spilling food on the table
  - Not putting elbows on the table
  - Saying "I'm sorry" for hurting someone
- At school:
  - Say "good morning" to your teacher
  - ➤ Raise your hand
  - ➤ Good habits at school:
    - ➤ Not interrupting when someone is speaking
    - ➤ Proper response when someone makes a mistake
    - ➤ Paying attention to your teacher; how to get your teacher's attention
    - ➤ Answering when spoken to
    - ➤ Standing in line quietly
    - ➤ Posture and conduct while saying Pledge of Allegiance
- At church:
  - Purpose of church
  - ➤ Good habits at church:
    - ➤ Arriving on time
    - ➤ Singing praises to God; listening to His Word
    - ➤ Handling your money for the offering plate
    - ➤ When to leave the service
- In public:
  - ➤ Grocery store, doctor's office
  - Good habits in public:
    - ➤ Saying "ma'am" or "sir" when talking to an adult
    - ➤ Being quiet in a waiting room
    - Answering when someone speaks to you
    - ➤ Not running in a store
    - ➤ Staying close to parents
    - ➤ Covering mouth when coughing or sneezing

Bible



The Bible stories that have been taught from Preschool to K5 have laid the foundation for stories that will be taught in first grade. Students learn more about the character, strengths, and weaknesses of men and women from the Bible. By studying the lives of Bible characters, students will learn practical truths to apply to their own lives, such as our actions will bring about either rewards or consequences.



Bible Friends is correlated with the Bible concepts taught in the First Grade Bible curriculum. These 120 activities are designed to bring Bible truths to mind again during independent seatwork time.

Evaluation

- Graded memory verse passages (9)

➤ **RED** *indicates first introduction of content.*

Lessons *373 Abeka Flash-a-Cards*

- Salvation Series (5 lessons)
- Genesis Series (21): Creation, Adam, Cain; Enoch, Noah, Babel; Abraham and Isaac; Jacob; Joseph
- Life of Christ Series (36): First Christmas; Boyhood and Early Ministry of Jesus; Jesus Heals and Helps; Later Ministry of Jesus; Crucifixion and Resurrection
- ➤ Life of Paul Series 1 (5)
- The First Thanksgiving

Music *25 songs*

- Choruses, hymns of the faith, holiday songs, patriotic songs including:
  - ➤ 12 new hymns and songs; 15 new choruses

Memory Work

- ➤ New passages (9) containing 57 verses
- Review verses (6)

Doctrinal Drill *38 questions/answers*

- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation
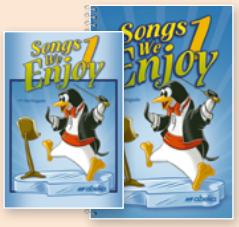
Prayer Time

- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Added Enrichment

- The *Bible Friends Activity Book* includes 120 worksheets to be completed during seatwork.

Music



Songs We Enjoy 1 includes traditional, patriotic, holiday, and fun selections that have been a part of our American heritage for generations. The sing-along CD makes song time easy for the teacher and enjoyable for the children.

➤ **RED** *indicates first introduction of content.*

Skills Development *75 songs*

- ➤ Define 11 unfamiliar words in the lyrics
- Learn to follow a song leader
- Develop ability to understand a song's message
- Exercise creativity by acting out songs with props
- Improve coordination through motions that keep time with words
- ➤ Learn about: dynamic contrasts, tempo changes, solfège pitch
- Benefit from fun activities that spark and keep interest:
  - ➤ Whistling
  - Making appropriate animal sounds
  - ➤ Singing familiar poems
  - ➤ Reviewing numbers
  - ➤ Placing their name in a song

Variety of Songs to Memorize

- Fun songs about animals, Mother Goose rhymes
- Songs about our founding fathers; songs to help build character
- Songs to act out with suggested props
- Motion songs, patriotic songs, folk songs, gospel songs, holiday songs, and seasonal songs.

Arts & Crafts



Art Projects 1 has been designed to give month-by-month variety in enjoyable art activities, to teach children elementary art techniques in many types of media, and to provide interesting seasonal projects.

➤ **RED** *indicates first introduction of content.*

Skills Development

Develop fine motor skills with increasing level of difficulty through:

- Cutting, gluing, coloring, folding
- Directed drawings, painting, paper modeling
- 3-D crafting and folding, incorporating moving parts

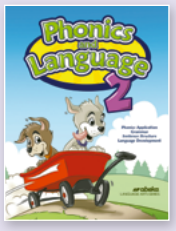
Concept Development

- ➤ Introducing color wheel
- Primary colors and secondary colors; color mixing
- ➤ Introducing patterns
- ➤ Complementary colors
- ➤ Fall colors
- ➤ Drawing from geometrical shapes and from memory to make familiar items
- Introducing line types: curved, short, long, straight, broken, zig-zag, wavy
- ➤ Introducing line types: looping
- 3-D paper crafting
- ➤ Fringe
- ➤ Silhouettes
- ➤ Mosaic
- Using basic geometrical shapes to form objects
- Light source, shading, and shadow
- ➤ Defining artistic terms
- Drawing organic shapes
- ➤ Transparent coloring (using light pressure)
- Overlay to mix colors
- ➤ Tangible texture
- ➤ Curling paper
- ➤ Analogous colors
- Perspective
- Increase listening skills through following step-by-step instructions to complete more difficult projects
- Projects include these themes:
  - Animal, seasonal, holiday, scriptural, historical, cultural

Technique Development

- ➤ Various texture
- ➤ Crayon rubbing
- ➤ Outlining
- Directional coloring
- ➤ Drawing looping lines
- ➤ Cone-shaping and cone-shaping with tabs
- ➤ Paper fringing
- ➤ Paper curling
- Sponging
- ➤ Torn paper art
- ➤ Stippling
- ➤ Cutting a fringe
- ➤ Mosaic
- ➤ Crayon resist
- ➤ String painting
- ➤ Quilling
- Folding
- ➤ Contour drawing
- ➤ Paper crafting—twisting, rolling, scrunching
- Finger and knuckle stamping
- Assembling song booklets

Language Arts: Phonics & Language





Phonics and Language 2 is used to practice concepts taught in phonics and language class. The front of each page is used as classroom practice; the back of the page is for completion during independent seatwork. Phonics instruction is the culmination of the Abeka intensive phonics program. After reviewing vowel sounds, consonant sounds, and how to blend them together, students learn consonant blends, diphthongs, digraphs, and clue words to help them remember these sounds. Students apply what they have learned on a deeper level than first grade. Language concepts learned in first grade are expanded as students learn to apply the following concepts: recognizing and correctly punctuating four kinds of sentences; identifying and correctly using nouns, verbs, adjectives, and adverbs; identifying subject and predicate of sentence; using and identifying compound words, rhyming words, antonyms, synonyms, contractions, and singular possessive words; forming plural nouns by applying spelling rules. By the end of the year, students will have a strong phonics and language foundation upon which to build.

Added Enrichment

- Review games
- Enrichment activities and suggestions
- Four themes (pond, jungles, travel, camping) to enhance lessons
- Glossary section to expand vocabulary and practice research skills
- During independent seatwork:
  - Using adjectives and adverbs to enhance writing
  - Using proofreader's marks to correct sentence errors
  - Using glossary to practice research
  - Continual review and application of previously taught material

Evaluation

- Oral and written phonics and language
- Language and phonic skills are included in weekly tests

➤ **RED** *indicates first introduction of content.*

Skills Development

- Review long and short vowel sounds, consonant sounds
- Review and master one- and two-vowel rules: When there is one vowel in a word, it usually says its short sound. When there are two vowels in a word, the first one says its long sound and the second one is silent.
- Blend consonants/special sounds with vowels:
  - Students write the blend of a given word; circle the special sound and mark the vowel
- Master 132 special sounds and clue words: special sounds include consonant blends, diphthongs, digraphs, 11 suffixes, 5 prefixes
- Demonstrate ability to provide other example words that contain special sounds

➤ List all the special sounds in a given word after it is orally dictated

➤ Identify special sounds in a given word and know why that special sound is used

➤ Choose the correct sound in a given word when there is more than one spelling for a sound:

➤ *ck* in duck/*k-e* (ex.: back—"*ck* in duck" follows a short vowel sound; bake—*k-e* follows a long vowel sound

➤ *oy* in boy/*oi* in coin (ex.: joyful—"*oy* in boy" must be chosen because it is at the end of a root word; point—"*oi* in coin" must be chosen because it is in the middle of the root word)

➤ *tch* in patch/*ch* in church (ex.: matches—"*tch* in patch" must be chosen because the sound follows a short vowel; chimes—"*ch* in church" must be chosen because "*tch* in patch" cannot be at the beginning of a word)

➤ *g* in giant, *dge* in fudge, *j* in jar (ex.: cage—"*g* in giant" must come before *e, i,* or *y;* badge—"*dge* in fudge" must follow a short vowel)

➤ *c* in city/*s* consonant (ex.: century—"c in city" comes before *e, i,* or *y*

➤ Choose the correct beginning sound:

➤ Recognize choices in the following consonant blend sounds when given blends or words to spell:

➤ *st* in stop, *pl* in plane, *tr* in train, *bl* in block, *cl* in clock, *fl* in flake, *gl* in glue, *br* in bride, *dr* in drum, *pr* in pray, *gr* in grin, *sm* in smoke, *sc* in scat, *sk* in skate, *sp* in spade, *cr* in crab, *tw* in twins, *spl* in splash, *spr* in sprain, *scr* in scream, *qu* in squeak, *sn* in snack, *sl* in sleep, *str* in stream, *sw* in swim, *thr* in three

➤ Use prefixes correctly when heard in a dictated word

➤ Recognizing silent letters in words containing *gn* in gnat, *kn* in knot, *wr* in wrinkle, *eigh* in eight

➤ Choose between *wor* in worms/*war* in warm by listening to the beginning sound

➤ Choose "*wa* in wash" when beginning with a word sounding with short *o*/"*w*" sound

➤ Choose the correct ending sound in a given word:

- Correctly use *ll, ff, ss* at end of a word
- suffix *-s* says "s" or "z"
- Recognize the following sounds at the end of short words: *e* in me, *o* in go, *y* in fly

➤ Use suffixes correctly when heard in a dictated word

➤ Adding more than one suffix to a word

➤ Choose "*ay* in pray" when a long *a* sound is at the end of a root word

➤ Choose "*y* in baby" at the end of certain words ending with a long *e* sound

➤ Choose "*le* in little" at the end of certain words ending with an "*l*" sound

➤ Choose between *-ed* in looked/*-ed* in played when a root word follows a "*t*" or "*d*" sound

➤ Choose *ought* in thought/*aught* in caught at the end of a root word with a short *o*/"*t*" sound

➤ Choose "*ture* in pasture" at the end of certain words with the same sound as "*ch* in church" along with an "*er*" sound (ex.: fracture)

➤ Recognizing silent letters when spelling words with *igh* in night, *alk* in walk, *le* in little, *-ed* in looked, *-ed* in played, *tch* in patch, *mb* in lamb, *ought* in thought, *aught* in caught, *dge* in fudge, *ould* in could, *ough* in enough

➤ Recognize choices in the spelling of special sounds having or containing the same sound:

➤ *e* in me, *y* in baby, *-y* in rainy, *-ly* in slowly, *ie* in brownie

➤ *o* in go/*ow* in bowl

➤ *ay* in pray, *ea* in steak, *ey* in obey, *eigh* in eight

➤ *sh* in ship, *tion* in nation, *sion* in missionary

➤ *th* in thick/*thr* in three

➤ *sc* in scat/*sk* in skate

➤ *or* in morning/*war* in warm

➤ *ou* in out/*ow* in owl

Phonics & Language cont. p. 33

➤ **RED** *indicates first introduction of content.*

Phonics & Language cont.

Skills Development cont.

- ➤ *ch* in church/*tch* in patch, *ture* in pasture
- ➤ *er* in verse, *ur* in nurse, *ir* in bird, *ear* in earth, *-er* in bigger, *wr* in wrinkle, *or* in sailor, *ar* in dollar
- ➤ *oo* in tooth/*ew* in flew
- ➤ *oi* in coin/*oy* in boy
- ➤ *oo* in book, *ou* in could, *u* in push
- ➤ *a* in adopt, *o* in shovel, *a* in banana, *a-* in asleep, *ough* in enough, *ou* in country
- ➤ *all* in ball, *alk* in walk, *au* in faucet, *aw* in saw, *ought* in thought, *aught* in caught
- ➤ *g* in giant/*dge* in fudge
- ➤ *air* in hair, *arr* in carry, *are* in care, *err* in cherry

➤ Spell compound words correctly by applying special sound application tips/rules

➤ Read compound words with speed and accuracy

➤ Read "challenge words" with speed and accuracy

➤ Develop listening through dictated sentences; using phonics application skills while students:

- ➤ Remember each word
- ➤ Spell each word correctly
- ➤ Spell contractions correctly
- ➤ Spell number words, days of the week, months of the year
- ➤ Capitalize correctly based on rules learned
- ➤ Choose correct ending punctuation

- Understand that syllables are parts of words
- Correctly divide words into syllables between:
  - Double consonants; root words and suffixes
  - A vowel and a consonant; two differing consonants
  - Prefixes and root words

➤ Identify the number of syllables in a given word

- Identify root words

➤ Demonstrate ability to add prefixes and suffixes to a root word while spelling the new word correctly by applying the following rules:

- When a root word ends with a single consonant and the vowel is short, the consonant is usually doubled before adding a suffix beginning with a vowel. (ex.: swim + ing = swimming)
- When a root word ends with a silent *e*, the *e* is usually dropped before adding a suffix that begins with a vowel. (ex.: hike + ed = hiked)

➤ When a root word ends with a *y* and the suffix begins with an *e*, change the *y* to an *i* before adding the suffix. (ex.: try + ed = tried)

➤ When a root word ends with a y and the suffix is -ly, change the y to an i before adding the suffix.

Grammar

- Capitalization:
  - First word in the sentence
  - Days of week and months of year

➤ Holidays and special days

- Names of people
- The word *I*
- Titles
- Punctuation:
  - Using periods to end sentences

➤ Using question marks and exclamation points to end sentences

➤ Using an apostrophe to show ownership ('s)

- Using apostrophes in contractions

➤ Using commas to separate three of more items in a series

➤ The sentence:

- ➤ Recognize complete sentences
- ➤ Recognize questions, exclamations, and commands
- ➤ Learn terms: exclamatory, declarative, interrogative, and imperative sentences
- ➤ Define and identify nouns
- ➤ Define and identify verbs
- ➤ Define and identify adjectives that tell *what kind* and *how many*
- ➤ Define and identify adverbs that tell *how*
- ➤ Identifying complete subject and predicate of sentence
- ➤ Identifying simple subject and predicate of sentence
- ➤ Diagramming simple subject and predicate of sentence

- Word study and diction:
  - Add suffixes and prefixes to root words
  - Determine number of syllables
  - Recognize and use correctly:
    - Compound words, rhyming words
    - Opposite words (antonyms), same-meaning words (synonyms), same-sounding words (homonyms)

➤ Singular and plural words; singular possessives

- Contractions
- Divide words into syllables
- Alphabetize words

➤ Correctly use words such as *sit, sat, set; learn, teach; may, can; to, too, two; right, write; blue, blew*

➤ Abbreviate days of the week, months of the year, selected English measures, selected titles such as *Dr., Mr., Mrs.*

- Correctly use a glossary (terms: guide words, entry)

➤ Correctly use a dictionary (terms: guide words, entry, definition)

Composition

- Write:
  - Complete sentences
  - Original sentence
  - Rewrite a sentence correctly
  - Answer a question in complete sentence

Added Enrichment

Extra practice available in Seatwork curriculum:

- Copy sentences
- Finish/correct sentences
- Write original sentences
- Glossary skill exercises

➤ Dictionary skill exercises

Language Arts: Reading



Students will advance their reading and comprehension skills as they reinforce the application of phonics rules. The early readers correlate with the progression of the concepts and sounds presented in the phonics curriculum. Subsequent readers include children's classics, stories from America's past, selections by famous authors, and stories with heroes that the children can emulate. One reader is a juvenile novel, another presents life in Israel in the days of Christ, and others include fables, animal tales, stories from children's classics, biographical stories, poetry, Scripture readings, and patriotic stories.

Literary Value

- 83 authors, including well-known writers such as Beatrix Potter, A. A. Milne, Robert McCloskey, Hans Christian Andersen, Robert Louis Stevenson, Nathaniel Hawthorne, Sara Cone Bryant
- Selections and adaptations from children's literature such as *Make Way for Ducklings,* "Pooh and Piglet Go Hunting and Nearly Catch a Woozle," *The Tale of Peter Rabbit, The Golden Touch*
- Character-building themes such as gratitude, responsibility, helpfulness, industry, perseverance, courage, patriotism, and integrity

Materials

- Readers (9) containing short stories (101), poems (90), plays (3), crafts (1), recipes (2)
- Christian fiction novel; biblical times/culture, and geography book; early American times/culture book, international cultures and folktales book; information book about animals
- *Primary Bible Reader* includes Scripture reading

Evaluation

- Weekly oral reading grade

➤ **RED** *indicates first introduction of content.*

Reading Skills Development

- Read and decode (sound out) words by applying phonics sounds and rules
- Read orally and silently and complete comprehension activities
- Strive for increasing vocabulary, accuracy, correct enunciation, fluency, phrasing, alertness to punctuation, good expression, comprehension, appropriate pace for grade level, volume, and poise
- Follow along as others read orally
- Receive differentiated instruction with ability grouping

➤ Comprehend a variety of reading material—maps, charts, graphs, recipes, posted signs such as instructions/guidelines

Literary Concept Development

➤ Expose students to literary terms—main character, plot, setting, moral

➤ Identify the story's title, author, main idea, main character, moral, author's intent, setting, plot

➤ Describe the main character's appearance, feelings, actions based on textual inference

➤ Describe setting (where and when the plot takes place) by identifying descriptive words

➤ Explain how characters relate to events of the story

➤ Understand cause/effect, problem/solution as they relate to the characters in the story

➤ Discern the meaning of a story

➤ Compare the same story by two different authors

➤ Predict the story's outcome

➤ Compare predictions to actual outcome

Readers

➤ *Fun with Friends*—18 stories and 9 poems, 1 song, 1 play including modern-day themes relating to animals and people and Scripture selections, introductions and story themes featuring Christian virtues and character traits; phonetic progression from one-vowel words to two-vowel words and comparing similar one- and two-vowel words, through special sounds from Basic Phonics Charts 6-8; practicing rhyming words and compound words; building vocabulary using advanced words and definitions; introduction to literary terms—title, author, main character including questions, character comparisons, character web, charting comparisons; choral reading, sequencing, illustration analysis, silent reading selections, and other enrichment activities; creative writing/drawing and storytelling for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension/discussion questions.

➤ *Quests for Adventure*—15 stories, 27 poems, 28 riddles called "Can You Guess?" including present-day themes relating to adventure and Scripture selections; building vocabulary using advanced words and definitions; introductions and story themes featuring Christian virtues and character traits; phonetic progression using special sounds from Basic Phonics Charts 9-11; reviews literary terms—title, author, main character; introduction to literary term—plot including recalling events of a story in proper sequence, and climax questions, illustration analysis, choral reading, play-acting, silent reading selections, and other enrichment activities; creative writing/drawing, for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension/discussion questions.

➤ *Across the Meadow*—15 stories, 20 poems, 1 play including classic literature, as well as a variety of other styles and Scripture selections; building vocabulary using advanced words and definitions; introductions and story themes featuring Christian virtues and character traits; phonetic progression using special sounds from Basic Phonics Charts 12-13; highlight famous authors and some of their best-known works; reviews literary terms—title, author, main character, plot; introduction to literary term—setting including, recognizing descriptive words and phrases, illustration analysis, storytelling, crafts, recipes, character webs, silent reading selections, and play-acting and other enrichment activities; creative writing/drawing, for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension/discussion questions.

➤ *Wonders of Imagination*—12 stories 11 poems, 1 play, 3 "Have You Ever Wondered?" feature pages, including classic literature and stories with fanciful themes and Scripture selections; building vocabulary using advanced words and definitions, illustration analysis; charting comparisons; introductions and story themes differentiating reality and imaginative fiction highlighting Christian virtues and character traits; practicing rhyming words; reviews literary terms—title, author, main character, plot, setting; introduction to literary term –moral including cause/effect and problem/solution questions and creative writing/drawing, word webs, and play-acting for checking comprehension; silent reading selections; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions.

➤ *Through the Skies*—12 stories and 8 poems including classic literature as well as a variety of styles and topics and Scripture selections; building vocabulary using advanced words and definitions; introductions and story themes featuring Christian virtues and character traits; illustration analysis; highlight famous authors and some of their best-known works; reviews literary terms—title, author, main character, plot, setting, moral, including character web, charting comparisons, charting

Reading cont. p. 35

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Reading cont.

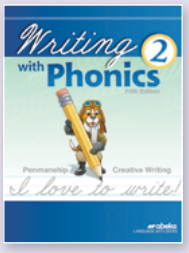
cause/effect, questions, silent reading selections, and other enrichment activities; creative writing/drawing exercises for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions.

- *Growing Up in Early America*—17 stories, 9 poems, 7 photo/character fact pages which correspond to time periods, 1 craft project with directions, 1 recipe with conversion chart, including classic literature, historical fiction and nonfiction, folk tales, legends, and articles relating to life in early America from 1620 through the early 1900s, historical fun facts, with Scripture selections; charting comparisons; character web; building vocabulary using advanced words and definitions, silent reading selections, and other enrichment activities; highlight famous authors and some of their best-known works, as well as other early American writers; reviews literary terms—title, author, main character, plot, moral, setting; creative writing/drawing exercises for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions. "What Can YOU Do?" are creative prompts that encourages students to think about others.
- *Growing Up around the World*—15 stories, 8 poems, 1 recipe, 1 lyric, world map with icons for each country, 12 photo fact pages representing each country, including classic literature, historical fiction and nonfiction, folktales, legends, favorite stories from around the world, and Scripture selections; building vocabulary using advanced words and definitions; introduction to foreign words/vocabulary including audio demonstrations for foreign pronunciations; character web, word web, charting comparisons, art/photo analysis, silent reading selections, and other enrichment activities; reviews literary terms—title, author, main character, plot, moral, setting; creative writing/drawing exercises for checking comprehension; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions.
- *Growing Up Where Jesus Lived*—a 10-chapter informational book describing ancient Israel in the days of Christ including maps and diagrams; treasure chest of Scripture selections for reference and comparison; building vocabulary using advanced words and definitions; illustration observation, interesting cultural facts, charting comparisons, Scripture songs, sample Aramaic writing, riddles, silent reading selections, and other enrichment activities; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions.
- *All Kinds of Animals*—an informational book containing 15 chapters about animals; highlight animal information facts and fun facts; observing animal tracks; discerning false information; observing animals in their habitat; Bible application highlighting intelligent design; sequencing order of events; considering charts and instructions; building vocabulary using advanced words and definitions; charting comparisons; glossary of animal profiles; silent reading selections, word webs, and other enrichment activities; reviews literary terms—character, plot, setting; creative writing/drawing exercises for checking comprehension; "Words to Practice" analyze advanced words; "Think About It!" and "What Do YOU Think?" ask factual, inferential, and interpretive comprehension and discussion questions.
- *My New Name*—a Christian fiction novel containing a character sketch, 13 chapters; Bible application; vocabulary enrichment; reviews literary terms—title, author, main character, plot, moral, setting; charting comparisons; games, storytelling, illustration analysis, silent reading selections, word webs, and other enrichment activities; creative writing/drawing exercises for checking comprehension; factual, "What Can YOU Do?", inferential, and interpretive comprehension and discussion questions.
- *Reading Comprehension 2*—a collection of advertisements, science articles, short stories, recipes, instructional pages for thinking and problem solving; index of literary application; identifying main character—appearance, feelings, actions, as well as main ideas—moral, author's intent, cause/effect, problem/solution, context, details, fact/opinion, fantasy/reality, visualization, prediction based on fact and textual inference; includes charting comparisons, character webs, puzzles, diagrams, coloring sheets; factual, inferential, and interpretive comprehension questions
- *Primary Bible Reader*—class reading selections and passages from the Old and New Testaments

Comprehension, Discussion & Analysis Skills Development

- Answer factual and interpretive questions for most stories and poems
- Answer inferential comprehension and discussion questions
- Identify main character, main idea, author's intent, setting, or moral
- Understand the parts of a story how to organize them to form a plot for creative writing
- Compare and contrast characters, events, and information; sharpen problem solving skills; relate cause to effect with character webs and Venn diagramming
- Analyze and draw conclusions from art, illustration, photos, and charted information
- Differentiate fanciful and realistic events

Language Arts: Cursive Writing/Creative Writing



Cursive Writing: Building upon each grade, the consistent step-by-step approach to good penmanship presented in *Writing with Phonics 2* emphasizes neatness and correct letter formation in daily practice. Writing habits which are polished during second grade will greatly influence students' penmanship skills throughout life.

Creative Writing: Beginning in lesson 81, penmanship class will focus primarily on creative writing skills and some penmanship review. Creative writing skills will be taught in a sequence that will prepare students to write their own stories incorporating higher level thinking skills into imaginative writing.

Added Enrichment

- Decorative journal containing 17 dated journal entries
- Creative writing ex. during:
  - Science (6)
  - History (12)
  - Health (3)

Evaluation

- Tests (31)

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Skills Development

- Achieve good writing position:
  - Sitting properly in desk
  - Holding pencil correctly
  - Slanting paper correctly
- Review correct formation for all lower and uppercase letters and numbers 1–10
- Perfect writing skills for a good, overall appearance:
  - Forming difficult letters correctly

Creative Writing cont. p. 36

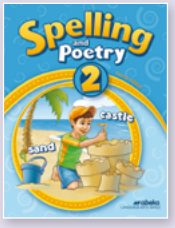
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Creative Writing cont.

Skills Development cont.

- Placing letters correctly on the lines
- Using proper spacing between letters and words
- Slanting letter properly
- Writing slowly and carefully
- Making smooth connections between letters, difficult letters, blends
- Using key strokes: trace, wave, loop, oval, mountain
- ➤ Keeping size consistent while making a connection without the help of a dotted line
- ➤ Writing without use of dotted lines
- ➤ Double-spaced writing
- Correctly write
  - Blends, words, sentences, paragraphs, and poems
- Creative writing
  - Reviewing the writing process learned in 1st grade: read and gather, think and plan, write and rewrite, check and polish, share your results
  - Use proper punctuation and capitalization; simple sentence structure; recognize difference between phrases and sentences; complete sentences, write sentences using suggested words, proper paragraph form, choose titles; develop stories using suggested themes; sequencing; writing a process summary, starting/concluding sentences; writing friendly letters; writing persuasive letters; writing original poetry; writing an acrostic; incorporating character development, plot setting, and moral into writing; dated journal entries
- Compositions include these themes:
  - Imaginative, historical, character building, Bible story, poetry, school, "how to"
- Compositions
  - During creative writing (8)
  - During seatwork (27)

Language Arts: Spelling & Poetry



In second grade, spelling is taught as an individual subject for the first time. The spelling curriculum continues to be correlated with phonics. The spelling lists in *Spelling and Poetry 2* reinforce the phonics concepts which the students are learning. By the end of the year, students will be learning vocabulary words and their definitions. Poems for memorization have been selected for their beauty of language, literary greatness, and character-building qualities.

Added Enrichment

- Spelling lists (33):
  - Spelling words (549)
  - Vocabulary words (54)
  - Organized by special sounds
- Worksheet activities (132):
  - Build on previous concepts
  - Reinforce new concepts
- Homework sheets (33) include spelling list
- Spelling games (16)

Evaluation

- Spelling tests (33)

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Spelling Skills Development

- ➤ Master spelling lists including:
  - ➤ 48 sight words and 3 contractions
  - ➤ 27 commonly misspelled words
  - ➤ 12 abbreviations
  - ➤ 54 vocabulary words and definitions
- ➤ Use vocabulary words in proper context
- Apply spelling and phonics concepts through daily:
  - Teacher-directed oral practice
  - Independent written practice
- Hear and see spelling and vocabulary words in example sentences, in order to:
  - Clearly picture each word's meaning; differentiate between sound-alike words
  - ➤ Use words correctly when speaking and writing
- Learn spelling rules:
  - Know: one- and two-vowel rules; *k* comes before *i* and *e*; *c* comes before *a*, *o*, and *u*
  - Correctly use at end of word: double consonants *ll* or *ss*; *ck* after a short vowel; *ke* after a long vowel
  - Double a consonant before adding a suffix that begins with a vowel
  - Drop the silent *e*
  - Learn how to spell words containing special sounds of similar sound with different spellings

Worksheet Activities:

- Solving crossword puzzles; thinking of homonyms and rhyming words
- Creating phrases; grouping similar words together
- Understanding the meaning of vocabulary words
- Finding misspelled words and knowing how to correct them
- Matching contractions with their words
- Combining root words with the suffixes *-y, -er, -est, -ly, -en, -es, -ed*
- Using prefixes *a-, al-, be-, en-, un-*

Poetry Skills Development

- ➤ Memorize 8 lyrical poems
- Develop appreciation of poetry
- Perform in front of an audience
- Recite in unison
- Develop appropriate expression and volume
- Improve comprehension
- ➤ Learn definitions and use of unfamiliar words
- Maintain interest and increase understanding with comprehension questions

Arithmetic



The traditional work-text *Arithmetic 2* builds a foundation for learning more abstract concepts and teaches students how to apply mathematical concepts to real-life situations. Concepts taught or reviewed in *Arithmetic 2* include counting, place value, addition and subtraction, money, time, graphs, simple geometry, multiplication and division, and Roman numerals.

Students will apply the skills and facts they have learned as they complete word problems that are based on concrete situations. New material is built on prior learning and encourages students to think through new concepts. *Arithmetic 2* and curriculum include daily reasoning questions that challenge students' thinking ability.

Added Enrichment

- Higher-level thinking activities
- Abeka games
- Thematic units: pond, travel, jungles, camping
- Review games
- Teaching tips
- Enrichment activities

Evaluation

- Daily skills-development exercises
- Written tests
- Oral tests: combinations, answers, and detailed instructions for weekly oral tests included in daily lesson plans

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Numbers

- Recognize and understand numbers:
  - 1–1,000
  - ➤ 1,001–100,000
- Counting:
  - By ones, twos, fives, and tens to 100
  - By threes to 36
  - ➤ By fours to 48
  - ➤ By twenty-fives to 300
  - Continue counting patterns
  - Tally marks
- Writing numbers:
  - By ones, twos, fives, and tens to 1,000
  - By threes to 36
  - ➤ By fours to 48
  - ➤ Dictation to hundred thousands
- Comparing before and after:
  - By ones, twos, fives, tens
  - ➤ By twenty-fives and hundreds
- Number words:
  - Use of one to twelve
  - ➤ Use of thirteen to twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred
- Place value:
  - Ones, tens, hundreds
  - ➤ Thousands, ten thousands, hundred thousands
- ➤ Money: round to nearest dollar; to nearest ten
- Roman numerals:
  - Counting and value:
    - 1–12
    - ➤ 13–30; 50; 100; 500; 1,000
  - Reading clock using Roman numerals
  - ➤ Basic rules for Roman numerals:
    - ➤ Add repeated Roman numerals
    - ➤ Add when lesser numeral follows greater one
    - ➤ Subtract when lesser numeral comes before greater one

Addition

- Addition families:
  - 1–18
  - Horizontal and vertical form
  - Add doubles
- ➤ Addition terminology
- Addition "twins" (concept of commutative principle)
- Timed mastery
- Word problems: oral, written
- Mental arithmetic:
  - ➤ Problems with up to 5 single-digit numbers
- ➤ Estimate sums
- Carrying:
  - To tens and hundreds places in 2- and 3-digit problems
  - ➤ To ten-thousands place in 3- and 4-digit problems
  - ➤ Horizontal problems with carrying
- Money: add dollars and cents

Subtraction

- Subtraction families:
  - 1–13
  - ➤ 14–18
  - Vertical and horizontal form
  - Subtract:
    - 0, 1, 2; all of a number
    - ➤ Half of a number
- ➤ Subtraction terminology
- Timed mastery
- Word problems: oral, written
- ➤ Mental arithmetic:
  - ➤ Problems with up to 5 single digit numbers combining subtraction and addition
- Subtraction with borrowing:
  - 2 and 3 digits
  - ➤ 4 digits
- Borrowing:
  - ➤ From tens place in 2-, 3-, and 4-digit problems
  - ➤ From hundreds place in 3- and 4-digit problems

Arithmetic cont. p. 38

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Subtraction *cont.*
- ➤ From thousands place in 4-digit problems
- ➤ With zeros in the minuend
- Money: subtract dollars and cents

Multiplication
- Building blocks:
  - Counting by twos, threes, fives, and tens
  - ➤ Counting by fours
- ➤ Word problems: oral, written
- ➤ Graphs to show multiplication facts
- ➤ Terms: factor, product
- Multiply:
  - ➤ By 1, 0
  - ➤ Tables, 0, 1, 2, 3, 5, 10
  - ➤ Find missing factor
- ➤ Multiple combinations
- ➤ Multiplication "twins" (concept of commutative principle)

Division
- ➤ Concept of division
- ➤ Building blocks: dividing groups of objects
- ➤ Recognize symbols: ÷ and ⟌ (division house)
- ➤ Word problems: oral, written
- ➤ Terms: dividend, divisor, quotient
- ➤ Divide:
  - ➤ By 1
  - ➤ Tables 2, 3, 5, 10
- ➤ Division combinations

Fractions
- Parts of a whole and group: one half, one third, one fourth
- Finding the fractional part of a whole number
- ➤ Comparing fractions
- ➤ Word problems: oral, written
- ➤ Mixed numbers

Decimals
- Money: use of dollar sign ($) and decimal point (.) in addition
- ➤ Align decimal points when adding and subtracting dollars and cents

Problem Solving & Applications
- Building blocks: oral word problems
- Word problems:
  - Addition, subtraction
  - ➤ Multiplication, division
  - Money
  - ➤ Fractions
  - ➤ Carrying, borrowing
  - ➤ Steps of problem-solving process
- Applications for broader and deeper understanding of concepts:
  - Time, length, temperature
  - Graphs, weight, money
  - ➤ Fractions, recipes

Time
- Clock:
  - Hour and minute hands
  - a.m. and p.m.
  - o'clock (:00); half past (:30)
  - Quarter past; quarter till; three-quarters past
  - Five-minute intervals
  - ➤ One-minute intervals
- Table of time:
  - Seconds, minutes, hours
  - Days, months, year
- Calendar:
  - Months of year, days of week
  - ➤ Days in year, weeks in year
  - Date
  - ➤ Time lapse
  - ➤ Dates as digits

Money
- Recognition and value of penny, nickel, dime, quarter, half dollar
- Counting pennies, nickels, dimes, quarters, half dollars
- ➤ Combining coins for any amount
- ➤ Converting to cents using dollar sign ($) and decimal point (.)
- Word problems: oral, written
- ➤ Recognize symbols:
  - ➤ $ (dollar)
  - ¢ (cent)
- ➤ Adding money using dollar sign ($) and decimal point (.)
- ➤ Determining change
- ➤ Rounding to nearest dollar

Measures
- Word problems: oral, written
- Temperature:
  - Degrees: reading, writing
  - ➤ Introduced to:
    - ➤ Celsius scale
    - ➤ Freezing and boiling point of water
    - ➤ Body temperature on Fahrenheit scale
- Length:
  - ➤ Quarter-inch
  - Inch, foot, yard, centimeter
  - ➤ Meter
  - ➤ Abbreviations
  - ➤ Smallest to longest
  - ➤ Comparing lengths
  - ➤ Applications: measuring, drawing
- Weight:
  - Ounce, pound, kilogram
  - ➤ Gram
  - ➤ Applications
- Dozen, half dozen
- Capacity: cup, pint, quart, gallon

Graphing, Statistics, Probability
- Bar graphs:
  - Horizontal
  - ➤ Vertical
- Pictographs
- ➤ Line graphs: plot point on line graph
- ➤ Circle graphs
- ➤ Read a grid, a map
- ➤ Comparing graphs

Arithmetic cont. p. 39

➤ **RED** *indicates first introduction of content.*

Arithmetic cont.

Geometry

- Plane figures: circle, square, rectangle, triangle
- ➤ Plane figures: oval, hexagon, trapezoid
- ➤ Solid figures: sphere, cube, pyramid
- ➤ Vertex: identify number of vertexes in plane and solid shapes
- ➤ Edge and face: identify number of edges and faces in plane and solid shapes
- ➤ Measure, draw, and compare lines
- ➤ Scale drawings
- Symmetry
- ➤ Locations on a coordinate plane
- Perimeter:
  - Rectangle
  - ➤ Square
  - ➤ Geometric Shapes

History & Geography



Our America takes students back into history to learn what life would have been like in our country's early days. Students will study the lives of groups of people who have made valuable contributions to our American heritage: the Pilgrims, Native Americans, early colonists, pioneers, cowboys, and immigrants.

In addition to maps and geographical facts, *Our America* also features information about our flag and the history behind our patriotic holidays and songs. Review questions and activities throughout the text help to check students' comprehension.

Added Enrichment

- Vocabulary boxes featuring difficult words and definitions
- Activities included in student text and teacher edition such as games, class parades, art projects, class diorama
- Songs such as "Swing Low, Sweet Chariot" and "Pawpaw Patch" passed down through history from early Americans
- Creative Writing (12)

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Sweet Land of Liberty

- Americans:
  - Unique people
  - Flag: symbol of America
- America's freedoms: freedom of speech, press, religion, and assembly, using your freedoms wisely

Early America

- ➤ Native Americans
  - ➤ First Americans
  - ➤ Regional differences: way of life varied according to location
- ➤ Separatists
  - ➤ Escaping from England to Holland
  - ➤ Leaving Holland for the New World
- Pilgrims
  - Travelling on the *Mayflower*
  - Landing in the New World
  - Meeting the Native Americans/making friendships: Samoset, Squanto
  - Learning how to survive: planting corn, fishing, hunting
- Activities
  - ➤ Weaving a mat
  - ➤ Watching maize grow
- Landmarks/symbols: Plymouth Harbor/Plymouth Rock
- American Holidays: Thanksgiving Day

Colonial America

- Colonial Life:
  - ➤ What is a colony
  - ➤ What were colonial houses like: clapboard, log cabins, stone, plantations
  - ➤ What did colonists eat: meat and vegetables, food that could be dried
- Colonial Shops:
  - What kinds of shops: silversmith, blacksmith, joiner, cobbler, apothecary, cooper, whitesmith
  - ➤ How were things bought/sold: bartering system
- Colonial Schools:
  - ➤ Most children taught at home
  - ➤ School was seasonal
  - ➤ One-room schoolhouses: teacher called schoolmaster, taught all students in same room
  - ➤ Hornbook/*New England Primer*
- Activities:
  - ➤ Making an oiled-paper window
  - ➤ Making a hornbook

A Free America

- George Washington
- ➤ French and Indian War
- The Declaration of Independence
  - ➤ Why colonies wanted to declare freedom from England
  - July 4, 1776: date of declaration
  - ➤ Philadelphia, Pennsylvania: Place where signers of Declaration met
- American War for Independence
  - George Washington leads Colonial army
  - Reason for war: freedom from England
- United States of America

History cont. p. 40

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

A Free America cont.

- 13 original colonies become 13 states
- George Washington chosen as first President
- Flag of the United States of America
  - ➤ Liberty Tree and Rattlesnake flags
  - Colors/design of flag: 13 stripes, alternating red and white, 13 white stars in field of blue
  - ➤ Betsy Ross: seamstress, possibly made 1st flag
  - Pledge of Allegiance: meaning of words
- Landmarks/Symbols:
  - Statue of Liberty
  - Liberty Bell
  - Washington Monument
- American Holidays:
  - Independence Day–July 4
  - Washington's Birthday/Presidents' Day—third Monday in February
  - ➤ Flag Day–June 14
    - ➤ Flag etiquette
- America's Songs: "Yankee Doodle"

A Growing America

- ➤ The Battle of 1812
  - Fort McHenry, Baltimore, MD
  - America's Songs: "The Star-Spangled Banner"
    - Originally was a poem
    - ➤ Became national anthem in 1931
- Landmarks/Symbols: Smithsonian Institute
- America's Songs: "My Country, 'Tis of Thee"
  - ➤ Written by Samuel Francis Smith
  - ➤ Tune is from German hymn
- ➤ America's Pioneers
  - ➤ Westward expansion—frontier
  - ➤ Daniel Boone, Wilderness Road
  - ➤ Wagon master/wagon train
  - ➤ Pioneer's possessions
  - ➤ What it was like traveling west
- America's Songs: "Pawpaw Patch," "Skip to My Lou," "America the Beautiful"
- ➤ The Underground Railroad:
  - ➤ Leaders: Harriet Tubman, William Still, Thomas Garrett, Levi Coffin
  - Landmarks/Symbols: Levi Coffin House—Underground Railroad "station"
  - America's Songs: "Swing Low, Sweet Chariot"
- ➤ Our Country Argues:
  - ➤ States' rights/slavery
  - Abraham Lincoln
  - Landmarks/Symbols: Lincoln Memorial
  - American Holidays:
    - ➤ Memorial Day—May 30
    - ➤ Veterans Day—November 11

The American West

- ➤ Railroads
  - ➤ "Iron Horse"
  - ➤ Effects of railroad on Native American way of life–treaties
  - ➤ Union Pacific/Central Pacific–transcontinental railroad finished in 1869
  - ➤ Changed what kinds of foods people ate
- ➤ Cattle Ranching
  - ➤ Brands
  - ➤ Cowboys: job, equipment needed
  - ➤ Cow towns
  - ➤ Cattle drives: chuck wagons, wranglers, stampedes
  - ➤ America's Songs: "Git Along, Little Dogies"; "Goodbye Old Paint"

A New America

- ➤ New Americans: immigrants
  - ➤ Dreams, goals: freedom of worship, finding good job, good education, enough food to eat, owning land/home
  - America's Songs: "God Bless America"
- ➤ American Free-Enterprise System
  - ➤ How businesses work: consumer/producer, supply/demand
- ➤ American Work Ethic
  - ➤ American Holidays: Labor Day–first Monday in September
- ➤ American Inventions/Inventors: sleeping car, assembly line, airplane, telephone, light bulbs, phonographs, motion pictures
- ➤ More American Inventors and Scientists:
  - ➤ Garrett Morgan: breathing mask, traffic light
  - ➤ Norman Borlaug: global hunger
  - ➤ Dr. Robert Shurney: scientist for NASA
  - ➤ Igor Sikorsky: helicopter
  - ➤ Mary Anderson: windshield wiper
  - ➤ Dr. An Wang: computer memory
- ➤ Americans of Creativity:
  - ➤ Fanny Crosby: hymns
  - ➤ John Philip Sousa: conductor/composer
  - ➤ Norman Rockwell: art, *Saturday Evening Post*
- ➤ American Athletes Who Changed the Game:
  - ➤ Jackie Robinson: baseball
  - ➤ Knute Rockne: football
  - ➤ Jim Thorpe: Olympic athlete
- ➤ Americans of Courage:
  - ➤ On the Battlefield: Sergeant Alvin York, Sergeant Silvestre Herrera, 101st Airborne, Navajo Code Talkers
- ➤ Courage in Space and Science Discovery
  - ➤ Neil Armstrong, Edwin "Buzz" Aldrin: *Apollo 11* mission
  - ➤ Crew of the *Challenger*
- ➤ Courage on the Mission Field:
  - ➤ John and Betty Stam
  - ➤ Jim and Elisabeth Elliot
- ➤ Last States Added to Union: Alaska, Hawaii added
- Territories of United States: Guam, Puerto Rico, American Samoa, U.S. Virgin Islands
- Activities
  - ➤ Writing your own code

Tomorrow's America

- Good Citizenship
- Communities: cities/urban areas, suburbs, towns, rural
- ➤ Privilege to Pray
- ➤ Privilege to Serve

Geography Study

- Globe
- Cardinal/secondary directions, compass rose
- Seven Continents and five oceans
- ➤ Hemisphere
- Equator
- ➤ Poles

History cont. p. 41

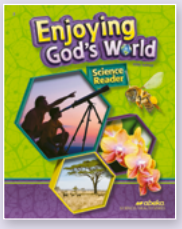
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History & Geography cont.

Geography Study cont.

- Coasts
- Home state
- Regions of United States
- 13 original colonies, 50 state locations
- Capital city (Washington, D.C.)
- Location of England, Holland (The Netherlands)
- Mississippi River, Gulf of Mexico
- Neighbors to north and south: Canada and Mexico
- Map Key
- › Landforms: hill, mountain, valley, gorge, lake, river, island, peninsula
- › Appalachian and Rocky Mountains
- Great Lakes, Great Plains
- › Volcano, Glaciers
- › Mt. Denali

Science



Enjoying God's World guides the student's study of God's plan for creation. Students will increase both their reading comprehension and their knowledge of scientific concepts while learning about the human body, plants, animals and their habitats, matter and energy, and earth and space from God's viewpoint.

Through the "how" and "why" questions that are answered in this text, children will learn about the world around them while developing their thinking skills. *Enjoying God's World* also includes hands-on activities and demonstrations that help to increase each student's comprehension of basic science concepts.

Added Enrichment

- Additional hands-on learning activities in daily lesson plans
  - Lesson activities (17)
  - Additional activities (90)
  - Experiments (7)
  - Creative Writing (6)

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Human Biology

- › Balance of living things
- Special to God: five senses and sense organs
  - Eyes: pupil, iris, lens
  - Ears: outer ear, ear canal, eardrum, vibrations, sound waves
  - Nose: nostrils, odors, molecules
  - Tongue: taste buds, works with smell
  - Skin: sweat, pores, goose bumps, epidermis, dermis, follicle, root
- › Bones: skeleton, skull, collarbone, shoulder blade, upper-arm bone, breastbone, ribs, finger bones, backbone, hipbone, thighbone, knee-cap, toe bones
- › Body Systems:
  - › Nervous System–brain, spinal cord, nerves
  - › Digestive System–teeth, stomach, intestines, waste
- › Muscles: skeletal, cardiac
- › Tendons
- › Heart: blood vessels, veins, arteries
- › Lungs: oxygen, carbon dioxide, inhale, exhale, bloodstream
- › Teeth: front-cutting, pointed-tearing, back-grinding, crown, enamel, roots

Activities & Demonstrations:

- Discovering how to block sound waves
- › Watching your pulse
- › Making a map of your teeth

Plant World

- Uses for plants: oxygen, nutrients
- Parts of a plant
  - Flowers or cones: make seeds, have pollen
    - › How honeybees help the plant world–nectar
  - Stems: vines, tree trunks
  - Leaves: veins
    - › How leaves make food in green plants–chlorophyll, sunlight, carbon dioxide, water, sugar
    - › Why green leaves change colors in the fall–decay, dormant
  - Roots: root hairs
    - › How roots help the soil–topsoil, subsoil, erosion
- › How seeds travel–wind, water, people, animals (hitchhikers)
- Reproduce after their kind

Activities & Demonstrations:

- Seeing how water rises up a stem
- Watching a plant grow

Animals and Their Habitats

- › Habitats–unique to each animal
  - › Four things each habitat must have–water, space, food, shelter
  - › Keeping habitats balanced–food chain, predator, prey
- › Ocean Habitat
  - › Examples of different animals: whales, sharks
  - › Difference between saltwater, freshwater
  - › Kelp, kelp forests, krill
  - › Equipment
  - › Migration, instinct
- › Pond Habitat
  - › Examples of different animals: beaver, turtle
  - › Freshwater habitat
  - › Space difference compared to ocean
  - › Different food available
  - › How habitat stays balanced
  - › Shelter: beaver lodge and dam
  - › Equipment: teeth–chisels, engineer–webbed feet, tail
- › Forest Habitat
  - › Examples of different animals: chipmunk, bear, owl
  - › Land habitat

Science cont. p. 42

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Science *cont.*

Animals and Their Habitats *cont.*

- Dependent on trees for food and shelter
- Predators/prey of forest maintain balance
- How habitat stays balanced
- Shelter: nests, burrows, dens
- Hibernation and lowered body temperatures

- Savanna Habitat
  - Examples of different animals: lions, giraffes, elephants, zebras, cheetahs
  - Grasslands habitat
  - Two seasons: rainy, dry
  - Animal groups: grazers, herds, prides, cubs
- Rainforest Habitat
  - Four layers: emergent, canopy, understory, forest floor
  - Examples of different animals: monkeys, sloths, butterflies, snakes, toucans, tree frogs, jaguars, leopards, fungi, termites, worms, tigers, gorillas, wild pigs, insects
  - Examples of plants: tall trees, vines, mosses, flowers, ferns
  - Thick vegetation provides plenty of food
  - Gives off oxygen
  - Medicine comes from variety of plants
- Insects and Their Habitats
  - Live in all land habitats
    - Insect legs: six legs, designed for different jobs–running, jumping, gathering pollen, grasping
    - Parts of an Insect: head, thorax, abdomen, spiracles
  - How insects grow
    - Life Cycle of a Butterfly: egg, larva, pupa, adult, chrysalis, cocoon
    - Life Cycle of Grasshopper: egg, nymph, adult, outside skeleton
  - Harmful insects: flies, termites, beetles, grasshoppers
  - Helpful insects: spiders
- Animal protection
  - God's special design: long legs, wings, ability to play dead, horns, antlers, appearance, taste
  - Examples of different animals: turtle—shell, skunk—spray, porcupine—quills, fawn—spotted coat, some butterflies—taste

Activities & Demonstrations:

- Discovering why webbed feet help the beaver swim
- Finding the three body parts of insects
- Watching a caterpillar change

Science Investigation

- How scientists work
  - Scientific method: observe and ask questions, guess and predict, experiment and gather data, study data and share it
  - Terminology: investigate, method, experiment, prediction, data, theory
- Where scientists work: lab or place of study
- Science tools: hand lens, microscope, telescope, ruler, scale, beaker, thermometer, stopwatch
- Science safety: handling materials, tools, wearing goggles

Activities & Demonstrations:

- Be a scientist! Practice the scientific method with plants.

How Things Work

- God's plan for order in the universe
- Energy
  - Makes things go
  - Forms: heat, water, wind, sound
  - Engines use fuel, electricity for energy
- Force and Movement
  - Push or pull on object
  - Types: gravity, friction, magnetism
- Magnetism:
  - Attracts or repels
  - North and South poles
  - Uses: motors, recycling, airport security, medical imaging, computer memory
- Work and Machines
  - Examples: wheel and axle, inclined plane/ramp, pulley, lever
  - Terminology: effort, load, fulcrum, effort force
- Changing Movement
  - Inertia
  - Effects of friction: wears things down, heats things up
- States of Matter
  - States: solid, liquid, gas
  - How matter changes: melting, freezing

Activities & Demonstrations:

- Using energy from wind and moving water to turn a pinwheel
- Be a scientist! Practice the scientific method with gravity.
- Be a scientist! Practice the scientific method with magnetism.
- Discovering more about how magnets pull
- Be a scientist! Practice the scientific method with machines.
- Measuring a solid
- Measuring a liquid
- Comparing volumes of air

The Air Around Us

- God's perfect design of air for people, animals, and plants
- Atmosphere
  - How atmosphere makes the sky blue
- Weather Ingredients: heat, water, wind
  - Appropriate clothing/protection: sunscreen, waterproof
  - Types of wind: breeze, gust, gale
  - What makes the wind blow: cool air–heavy, warm air–light
- Water Cycle
  - Evaporation: water vapor
  - Condensation: water droplets, make clouds
  - Precipitation:
    - Rain–drizzle
    - Sleet–rain that is frozen before it falls
    - Snow–crystals, snowflakes
    - Hail–happens during spring, summer
  - Other kinds of wet weather: humid, foggy, frost
  - Storms:
    - Hurricanes: landfall, eye
    - Tornadoes: touched down
    - Thunderstorms: lightning, static electricity, thundercloud
    - Blizzards: blowing snowstorm
  - Other Kinds of Severe Weather:
    - Floods
    - Droughts
- Predicting Weather
  - Meteorologists, forecasts, radar, satellites, weather balloons
  - What to do during bad weather

Activities & Demonstrations:

- Demonstrating that air is real
- Watching evaporation and condensation
- Be a scientist! Practice scientific method with precipitation.

Science cont. p. 43

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Science cont.

Earth and Space

- Stars:
  - What is a star–purpose, place, number, brightness
  - What is a shooting star–meteoroid, meteor, meteorite
  - What is a constellation
    - Examples of constellations: Big Dipper, Little Dipper, Orion
- Sun
  - God's plan for the sun
  - Star closest to Earth
  - How does sun's energy help Earth–light, heat, makes weather
  - How does Earth travel around Sun–spin, orbit and tilt create seasons
- Moon:
  - God's plan for moon
  - Reflects sun's light
  - Description of moon's surface: craters
  - Astronauts: need for spacesuit
  - Moon's cycle in sky: crescent
  - How moon affects Earth: high/low tide cause circulation of water
- Space Science:
  - Space travel: space shuttles, space station, spacewalk, space probes, landers, rovers
- Planets of Solar System:
  - God's plan for solar system: order and size of each planet
  - Description of each planet: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
  - Earth: Designed for Life–God's provision and plan in His design for our planet
    - Landforms: canyon, mountain chain, deserts, mountains, valleys, rainforests
- Our Responsibility:
  - Natural resources: food, water, right kind of air, energy sources, building materials
  - Stewardship: taking care of what God has given us
    - Repurposing, reusing, recycling

Activities & Demonstrations:

- Finding constellations
- Be a scientist! Practice the scientific method with day and night.
- Discovering how moonlight works
- Be a scientist! Practice the scientific method with orbital forces.

Health



The purpose of *Health, Safety, and Manners 2* is to teach the basic facts of health and safety; to teach courtesy at home, at school, and everywhere; and to instill within students a desire to take care of the body God has given them.

Added Enrichment

- Hands-on learning activities, charts, and checklists in student book, teacher edition, and daily lesson plans (28)

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Health

- My Body–My Home
  - God's plan for your body
  - How to stay Healthy
- Building Good Habits
- Building Good Nutrition
  - Energy
  - Nutrients
- Tools for Nutritious Meals: Need to eat a variety of each
  - Vegetables:
    - Contain vitamins, minerals, fiber
    - Divided into 5 groups: dark green, red and orange, starchy, beans and peas, others
    - 2–3 servings per day
  - Fruits:
    - Contain vitamins, minerals, fiber
    - Contain vitamin C
    - 2–3 servings per day
  - Protein:
    - Builds muscles
    - Helps body heal
    - Need some everyday
    - Body cannot store protein
    - Examples: meat, beans, nuts, eggs
  - Grains:
    - Contain carbohydrates, vitamins, minerals
    - Give your body energy
    - 4–5 servings per day
    - Half of grains should be whole grains
    - Fat: stored energy
  - Dairy:
    - Contains milk, yogurt, cheese, pudding, etc.
    - Contains calcium
      - Builds strong bones/teeth
      - Need some every day

Health cont. p. 44

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Health cont.

- Healthy Fats:
  - ➤ Not a food group
  - ➤ Helps heart stay healthy
  - ➤ Helps body absorb needed vitamins
  - ➤ Examples: olive oil, canola oil, nuts, olives, avocados
- Water:
  - Helps: digest food, get rid of waste, blood flow, control body temperature
  - Body does not store water
  - Drink about 5 glasses of liquids each day
  - Drink more during hot weather

- Building Healthy Meals
  - A Nutritious Breakfast
    - ➤ Most important meal of day
    - ➤ Needs to contain choices from at least 3 food groups
  - Lunch–The Middle Meal
    - ➤ Gives energy to keep going
    - Should contain several food groups
      - Protein, grain, vegetable or fruit, milk or water
  - Time for Dinner
    - ➤ Last meal of day
    - ➤ Gives body energy until breakfast
    - Helps you sleep soundly
    - Should contain several food groups
  - ➤ Snacks are needed
    - ➤ Give energy between meals
    - ➤ Avoid sugar
    - ➤ Examples: fruit, vegetables, low-fat cheese sticks, hard-boiled egg, granola bar, low-fat yogurt
  - ➤ Restaurant Choices
    - ➤ Make healthy choices
    - ➤ Examples: fruit instead of French fries; milk, water, or juice instead of soda; grilled chicken sandwich instead of hamburger or chicken nuggets
  - Activities
    - My Food for the Day
- Building Healthy Habits
  - Practicing Good Posture:
    - Way you hold your body when sitting, standing, or walking
    - ➤ Helps you have better breathing and more energy
    - Shoes that fit correctly help posture
  - Activities
    - Good posture test
  - Exercising Your Body:
    - Any activity that uses muscles of body
    - Examples: swimming, running, jumping rope, walking
    - Benefits
      - ➤ Keep healthy weight
      - Sleep better
      - ➤ Think clearly
      - Strengthen muscles
      - ➤ Feel better about yourself
    - ➤ Goal is 60 minutes per day
    - Playing outside: sunshine provides vitamin D
    - Play quietly if tired
  - Activities
    - Animal Exercises: Tiger Touchdown, Flamingo Stand, Elephant Swing, Ostrich Run, Seagull Wing Stretcher

- Getting Enough Sleep
  - Muscles rest and store up energy
  - ➤ Muscles, skin, and bones repair and grow
  - ➤ You are more alert
  - ➤ Should sleep 10–11 hours at night
  - ➤ Have a routine:
    - ➤ Go to bed at same time each night
    - ➤ Avoid eating heavy meals or exercising before bedtime
    - ➤ Turn off any screens 30 minutes before bedtime
    - Sleep in dark, comfortable, quiet room
    - ➤ Use a nightlight, if needed
- Keeping Your Body Clean
  - ➤ Outer covering of body, protects against dirt and germs
  - ➤ Use sunscreen
  - Wash cut with soap and water
  - Wash hands often to prevent spread of germs
    - Wash after using bathroom, blow nose, touching animals, or garbage
    - ➤ Wash correctly: wet hands and apply soap, rub hands, rinse and dry hands
    - Use nailbrush and keep nails trimmed
    - ➤ Avoid biting fingernails and putting fingers in mouth
  - Wash face twice a day
  - Take a shower/bath regularly
  - Wash hair regularly
  - Brush/comb hair each day
  - Wear clean clothes every day
- Taking care of your teeth
  - ➤ Purpose of teeth: chew food, speak clearly, have a great smile
  - Brushing teeth:
    - Prevents cavities
    - After meals or twice a day
    - Removes sugars and acid from teeth
    - ➤ Brush for 2–3 minutes
    - Toothbrush should have soft bristles
    - ➤ Toothpaste should have fluoride
      - ➤ Fluoride makes teeth stonger
    - Store toothbrush in clean, dry place
    - ➤ Avoid sharing toothbrush
  - Flossing teeth
    - Floss once a day
  - ➤ Visit dentist twice a year
  - Limiting sugar helps keep teeth healthy
- Taking Care of Your Eyes
  - Avoid touching/rubbing to prevent the spread of germs
  - Make sure there is enough light to see clearly
  - Avoid looking directly at sun–wear sunglasses
  - ➤ Wear eye protection when needed during sports
  - Have vision checked yearly
- Caring for Your Ears
  - ➤ Use sunscreen or wear a hat to protect from sun
  - Wear a hat in cold weather to protect from frostbite
  - Wear a helmet when playing sports
  - Wash regularly
  - Avoid putting small objects into ears
  - ➤ Use earplugs around loud noises to prevent hearing loss
  - ➤ Keep volume of music low
  - ➤ Limit use of headphones, earbuds

Health cont. p. 45

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Health cont.

- Your Nose Keeps You Healthy
  - Nose warms and moistens air you breathe
  - Tiny hairs catch/collect dust and germs
  - Cover nose and mouth when sneezing
- ➤ A Visit to the Doctor
  - ➤ Helps keep you healthy
  - ➤ Regular checkups even when not sick are important
    - ➤ Help you know if growing/developing normally
    - ➤ Time to ask questions
  - ➤ Tools used during visit:
    - ➤ Blood pressure cuff
    - ➤ Stethoscope
  - ➤ Doctor may suggest immunizations
  - ➤ Doctor may remind you of safety habits
  - ➤ Ask questions
  - Activities
    - My Health Habits Chart

Safety

- Safety Under Construction: be alert, learn safe way to do things
  - Preparing for an Emergency
    - Call 9-1-1 only if an emergency
    - ➤ Know address and phone number
  - Activities:
    - Emergency Information
- Safety in My Home
  - Avoid running inside
  - Be careful on stairs
  - ➤ Ask for help when needing to reach something too high
  - Put things away to prevent tripping
  - Carry sharp things with point facing down
  - Do not run while carrying sharp objects
  - Answer door/phone only with permission from adult
- Safety in the Kitchen
  - ➤ Have an adult present
  - ➤ Wear an apron to keep clothes neat
  - ➤ Wash hands and counters before beginning
  - ➤ Help with measuring, pouring, stirring
  - Avoid heat, sharp objects, and appliances that only adults should use
  - ➤ Help set the table
  - ➤ Help clean up after each meal
- Safety in the Bathroom
  - ➤ Turn on cold water first to avoid being burned
  - ➤ Put things away
  - Wipe up any spilled water
  - ➤ Use the things that belong to you
  - Avoid playing with anything in medicine cabinet
  - ➤ Take medicine only when parents give it to you
  - ➤ Only use cleaning supplies with an adult present
- Gun Safety
  - ➤ Only responsible adults should handle guns
  - ➤ 4 steps for safety:
    - ➤ Stop what you are doing when you see a gun
    - ➤ Do not touch the gun
    - ➤ Leave the area where you see the gun
    - ➤ Tell an adult
- Fire Safety
  - ➤ Always let an adult handle matches/lighters
  - ➤ Be careful around lamps, heaters, and candles
  - ➤ Tell parents or adults if a fire is seen
  - Have an escape plan if house is on fire
  - Crawl on floor to avoid smoke
  - ➤ Feel door for heat
  - ➤ Firefighters:
    - ➤ Equipment is for protection
    - ➤ Do not be afraid–there to help you
  - What to do when clothes catch on fire:
    - Stop, drop, cover face, and roll
    - Do not run
  - Activities:
    - Fun with safety at home–word search
- Safety Away from Home
  - ➤ Police officers are friends
  - ➤ Know parents' names, telephone numbers, and address
  - Good Safety Habits:
    - Ask permission before going anywhere
    - Tell an adult where you are going
    - ➤ When alone, do not talk to people you don't know
    - Do not ride in car with stranger
    - Do not pet stray animals
    - Do not eat anything you find without permission from adult
  - ➤ Personal Safety
  - Walking Safety
    - Pedestrians
    - Walk on sidewalk or single file on left side of road
    - Cross street at corner/use crosswalk
    - ➤ Ask permission before petting someone's animal
    - ➤ Stay still if stray animal approaches. Call out for help.
    - Look both ways before crossing railroad tracks.
    - ➤ Stand back from railroad tracks if train is going by
    - Recognize these signs:
      - ➤ Traffic lights, crosswalk, railroad crossing, road work, bike route
  - Safety on Wheels
    - Bicycle Safety:
      - Wear helmet
      - ➤ Keep both hands on handlebars unless signaling
      - Use hand signals when turning or stopping
      - Ride on right side of road
      - ➤ Walk bike across intersections
      - Don't let friends ride on bike with you
    - ➤ Skateboarding/Rollerblading:
      - ➤ Wear helmet, knee pads, elbow pads
      - ➤ Find a smooth, dry place to ride
      - ➤ Stay away from traffic
  - Car Safety:
    - Buckle seat belt
    - ➤ Talk quietly
    - Keep hands inside car
    - Use door closest to curb when exiting
  - Bus Safety:
    - ➤ Stand away from curb while waiting for bus
    - ➤ Wait until driver opens door to move
    - Wear seat belt if available
    - Stay seated

Health cont. p. 46

➤ **RED** *indicates first introduction of content.*

Health *cont.*

Safety *cont.*

- ➤ Talk quietly
- Keep hands and head inside bus
- ➤ Wait your turn when exiting
- ➤ Look left, right, and left again before crossing the street
- Winter Sports Safety:
  - ➤ Wear warm clothes
  - ➤ Use sunscreen
  - ➤ Eat and drink to stay energized and hydrated
  - ➤ Stay seated when sledding
  - ➤ Make sure all equipment fits and works correctly
- Water Safety:
  - Pools, lakes, ocean, boat:
    - Walk
    - Don't run
    - No pushing
    - Take a break
    - ➤ Use sunscreen
    - Don't swim alone
    - ➤ Obey the lifeguard
    - ➤ Play where bottom of lake is visible
    - Stay with an adult at lake/ocean
    - ➤ Ask permission before touching animals
    - ➤ Face ocean instead of beach to avoid being knocked over by waves
    - Wear life jacket when in a boat
    - ➤ Be prepared for changing weather–bring extra jacket, drinks
    - ➤ Keep hands and feet inside boat
- Storm Safety:
  - Go inside a building when see lightning or hear thunder
  - ➤ Stay away from windows
  - ➤ Wait to take a bath/shower
  - If outside, stay away from trees and water
  - ➤ Stay in car
- Activities
  - Remember: Safety First

Manners

- Courtesy
  - A Manners Journey
    - Say "please" and "thank you"
    - Speak loud enough to be heard
    - ➤ Look directly at person to whom you are speaking
    - Wait to speak unless it is an emergency
    - Say "excuse me" when interrupting or walking in front of people
    - Greet people and use their name
  - "Everyday Courtesy"
    - Manners shown by child in story:
      - Serving food to guests
      - Said "please" to brother when asking for help and "thank you" when he received help
      - Greeting Mrs. Reed, his Sunday School teacher
      - ➤ When introduced to Dad's boss, he looked at him and spoke loud enough to be heard
      - Said "excuse me" when he had to walk in front of a guest
- Kindness
  - "Jimmy Tries Kindness"
    - Manners shown by child in story:
      - ➤ Child was kind to pet and took care of it
      - Child said kind words to others
      - ➤ Child was helpful and kind to a new student
      - ➤ When child was unkind to someone, he asked God to forgive him
      - Child went to the person to whom he had been unkind and told him he was sorry and asked for forgiveness
    - ➤ Say and do things to show others they are special to you and to God
    - ➤ Be friendly and helpful to others when they need help
    - ➤ Try to understand how others feel
    - When you do something wrong to others, say you are sorry and mean it
    - Forgive others as God forgives you
- Cheerfulness
  - ➤ Everyone enjoys being around a happy, cheerful person
  - The Bible says our good words and smile start in our heart
  - ➤ We can ask God to change our heart from sad to glad
  - ➤ The joy and gladness God gives will show in our words and countenance
  - "Making Changes"
    - Manners shown by child in story:
      - ➤ Child does his brother's chores
      - ➤ Child becomes upset but asks God to forgive him and help him have a joyful heart
      - ➤ When child wants to say unkind words, he asks God to help him say right, cheerful words
- Respect
  - "Honoring Mr. Miller"
    - Manners shown by child in story:
      - Child and his family invite an older man at their church to join them at a banquet
      - ➤ Child helps older man by taking his plate to the table
      - ➤ Child listens and does not interrupt as older man talks
  - ➤ Giving respect to someone shows that you understand that the person is important
  - ➤ You should respect your parents, teacher, pastor, and principal
  - ➤ You should show a special respect or honor to older adults
  - Greeting adults you know by name and listening to them shows respect
- Thoughtfulness
  - "Jimmy Learns to Help"
    - Manners shown by child in story:
      - Child realizes his cousin is blind but the same person he has always known
      - Child learns that his cousin uses his other senses and cane for guidance
      - Child and brother forget to help their cousin at the ice cream shop
      - Mom corrects child and brother and they apologize to cousin
  - ➤ A thoughtful person thinks of others and looks for ways to help and encourage them
  - God wants us to treat others like we want to be treated
  - A thoughtful person looks for ways to be thoughtful to others at home and school
- Thankfulness
  - "Saying Thank You with Words and Deeds"
    - Manners shown by child in story:
      - Child thanks friend's mom for inviting him
      - Child and friend thank friend's mom for snack
      - Child helps pick up toys before he leaves

Health cont. p. 47

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Health *cont.*

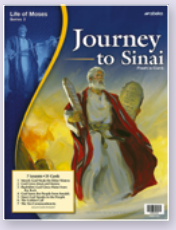
Manners *cont.*

- Before leaving, child thanks friend's mom for inviting him and for the snack
- Child writes a thank you letter
- Thank others when they are kind to you
- ➤ Thank God in prayer for the things He does for you

- Patience
  - "Being Patient Can Do Many Things—Have You Tried It?"
    - Manners shown by child in story:
      - Child has to wait for breakfast
      - Child waits to answer questions
      - Child has to wait to take his turn on the slide
      - When child interrupts parents he must give a definition of patience and an apology
  - Being patient means waiting without getting angry
  - ➤ You should be patient with everyone
  - ➤ You can ask God to help you be patient with others

- Manners for Meals
  - Meal times are important times for families
  - Meals are a time to enjoy food and family
  - ➤ Good manners and pleasant conversation make any meal better
  - "It's Time to Eat!"
    - Manners shown by child in story:
      - ➤ Child sets the table correctly
      - ➤ Child learns to pass food correctly around the table
      - ➤ Child realizes he must chew with his mouth closed
      - ➤ Child sees his parents act kindly to servers in busy restaurant
      - ➤ Child at fast food restaurant does not take too many napkins or silverware

Bible



Second graders will enjoy learning about a variety of Bible characters including Joshua, Judges, Ruth, Jonah, and Moses. The Abeka Flash-a-Cards help students visualize events as they study the life of Moses and his journey from Egypt to the Promised Land. Students will learn about Moses' decision to suffer with God's people rather than live in luxury; they will also learn that even though Moses chose to follow God, he still faced many trials. By studying Bible characters such as Moses, students will learn how to respond to real-life joys and struggles.

Evaluation

- Graded memory verse passages (8)

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Lessons *355 Abeka Flash-a-Cards*

- Salvation Series (5 lessons)
- ➤ Life of Moses Series (20): Moses in Egypt; Journey to Sinai; Journey through the Wilderness
- First Christmas (5)
- ➤ Joshua (7); Judges (6); Ruth (3)
- Crucifixion and Resurrection (9)
- ➤ Jonah (2); Favorite Bible Stories 1 and 2 (10)
- The First Thanksgiving

Music *62 songs*

- Choruses, hymns of the faith, holiday songs, patriotic songs including:
  - ➤ 10 new hymns and songs; 8 new choruses

Memory Work

- ➤ New passages (8) containing 54 verses
- Review verses (31)
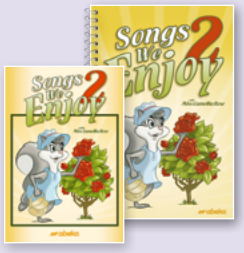
Doctrinal Truths *39 questions/answers*

- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation

Prayer Time

- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Music



The traditional, patriotic, holiday, and fun selections in *Songs We Enjoy 2* have delighted children for many years. Enrichment ideas for teaching new songs and ideas for motions and props are included throughout the book. The sing-along CD makes song time enjoyable for the students and easy for the teacher.

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Skills Development *68 songs*

- ➤ Define 32 unfamiliar words in the lyrics
- Exercise creativity by acting out songs with props
- ➤ Improve coordination by tapping or clapping with leader to steady beat
- Learn to:
  - Follow a song leader while staying together with class or CD
  - ➤ Sing in a round while staying together with group and staying on pitch
- ➤ Discover historical information contributing to songs origin
- ➤ Reinforce Bible stories through fun Bible songs
- Benefit from fun activities that spark and keep interest:
  - Play acting; singing in a round; answering riddles
  - ➤ Humming; enunciating silly words; echo singing; drumming sounds
  - Using dynamic contrast

Variety of Songs to Memorize

- Fun, folk, holiday, spirituals and gospel, patriotic

Arts & Crafts



Art Projects 2 is a full-color book designed to expand each student's creativity and imagination. The month-by-month seasonal, patriotic, academic, and keepsake projects teach students not only to appreciate the beauty of art but also to express themselves in a way that is pure, lovely, and of good report. Studying the color wheel helps students build a foundational understanding of art concepts and techniques, while exploring the new medium of chalk. Includes glossary of Art terminology.

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Arts and Crafts *38 projects*

Concept and Technique Development

- Media and Art Types
  - Crayon, paper, pencil, glitter, painting, glow-in-the-dark painting, fibers and mixed media, chalk, marker, colored pencils, felt
  - Illustrating: color wheel, story, song, Scripture, poem, historical culture/story, measures, temperature, constellations
  - Cutting from template, cutting out centers, creative cutting, poking, fringe cutting, cutting strips, layered cutting
  - Tracing, drawing, drawing step-by-step, geometric shapes, outlining, overlay, directional coloring, stippling, shading, folding, detailing, animated expressions, coloring skin, coloring from observing photo, texturizing, hatching, cross-hatching, ruler rubbing, printing/stamping, blotting, dabbing/sponging, fork rocking, dragging, pressing, drawing using symmetry
  - Mosaic, landscape, collage, embossing, weaving, lacing, salt painting, glue color channel, architecture: bridge types, snowscape, monoprint, agamograph, monogram, creating musical instrument, ink transfer, master copy
  - ➤ using loose grip, swab rubbing, using side of chalk to shade, side and pressure strokes, lengthwise stroke
  - ➤ curved, swirled, looped, broken (dashed, dotted) lines, drooping lines
- Color
  - Color wheel; primary, secondary, intermediate colors; color mixing visually
  - Primary, secondary, intermediate color mixing, color coding
  - ➤ Color family, tints, shades
  - Complementary colors, analogous colors, neutral colors, monochromatic colors, warm and cool colors
  - Color scheme: fall, Christmas, patriotic, sunset, masculine
  - ➤ Varying pressure for light/dark colors
  - ➤ Overlay, blending, swab blending, swab rubbing, blending: skin, hair, eyes, lips
  - ➤ Observing color moods: exciting, peaceful, playful, serious; observing colors in nature
  - ➤ Moods: joyful, happy, sad, peaceful, fearful–color symbolism
- 3D Forms
  - Movable parts, turning parts, paper sculpture, 3D crafting, structures, kirigami, template
  - Using geometric shapes to create objects, 5-sided box shaping, 6-sided box shaping, cone shaping, cylinder shaping, layering
  - Paper curling, paper rounding, chenille stem curling, twisting, tissue paper twisting, scoring
  - ➤ Accordion fold, Z fold
  - ➤ Pop up art, boardgame and pieces
  - ➤ Raised surface, symmetry

Arts & Crafts cont. p. 49

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Arts & Crafts cont.

- Design
  - ➤ Template, using template for alignment, designing buildings, building with pattern; decorating with pattern, designing with geometric shapes, using geometric shapes to create animals; landscape
  - Observing pattern, details pattern/design/movement/balance/colors in nature, creating patterns, decorating, observing cake texture
  - Horizon; orientation: horizontal, vertical, diagonal; symmetry, double symmetry
  - ➤ Texture: wispy lines for fur, zig-zag lines for grass, curved/wiggly lines for bark and wood, cross-hatching for acorn cap; texture observation of variety: yarn, paper, button, organic, soft and fuzzy, woodgrain; crumpling for wrinkled texture, pulled cotton for wool, dabbing/sponging for spots
  - ➤ Composition, subject; spatial relationships, foreground, background; overlap; focal point, using odd-numbered items, varying sizes, balance, proportions, rule of thirds
  - ➤ Creating icons; using stylus, using a key; alignment, creating a monogram
  - ➤ Line direction: diagonal, horizontal; swirled lines, observing line moods: exciting, peaceful, playful, serious, using varied line types, using line to create exciting, joyful, happy, sad, peaceful, fearful moods, jagged lines for rock, wavy lines for wavy hair, short, curved lines/wiggly lines for curly hair, circular lines for fleece
- Value/Contrast
  - Value; value: making tint with white, varying pressure for light/dark, silhouette
  - ➤ Shading, shades, highlight, core shadow, cast shadow, contrast, contrast in size/value/color
- Appreciation and Creative Expression:
  - Creating familiar items from memory; creating from experience, imagination: detailing, self-observation detailing, practicing and experimenting; collaborating a display, creating an exhibit, giving projects as gifts, practice & create animated expressions, self-critique, brainstorm, creative design, creatively solving problems
  - ➤ Making choices/making choices from experience
  - Appreciation: God's design (leaves), (constellations), (human anatomy), (Northern Lights), (bridges and architecture); fine art: historical & cultural (Brian Jekel's *Thanksgiving Feast*); textures, mosaic tiles, quilt block; creative expression; sculpture (Iwo Jima Memorial)
- Skills Development
  - Cutting, gluing, coloring, folding
  - Directed drawings, painting, paper modeling
  - 3D crafting and folding, incorporating moving parts
- Concept Development
  - 3D Papercrafting:
    - Bag shaping, kirigami, paper curling, paper sculpture, fringe, accordion fold, 5-sided box shaping
  - Art Types:
    - Embossing, wearing, mosaic, ink transfer, pop-up art, architecture, salt painting, glue color channel, pinprick, monoprint, agamograph, collage
  - Color Theory:
    - Color wheel, primary, secondary, complementary, analogous, fall colors
      - ➤ Intermediate, neutral, monochromatic, Christmas, warm/cool, patriotic, sunset, masculine colors
    - ➤ Color family and tints, color schemes
    - ➤ Mood—exciting, peaceful, playful, serious, joyful, happy, sad, fearful
  - Color Mixing/Blending
  - Design:
    - Collaborating a display, pattern, design, alignment, monogram
  - Drawing
    - Symmetry, double symmetry, using a stylus, illustration, animated expressions, icons, tracing, step-by-step drawing
  - Chalking:
    - ➤ Swab rubbing, swab blending, chalk blending
  - Geometric Shapes:
    - Using geometric shapes to form objects, drawing from geometric shapes, forming paper into geometric shapes, using geometric shapes to form animals, forming paper into cylinder
  - Composition:
    - Horizon, horizontal and vertical orientation, spatial relationship, foreground, background, overlap, subject, diagonal, landscape, snowscape, using odd-numbered items, focal point, proportions, balance, balance from nature, rule of thirds
  - Self-Expression:
    - ➤ Creating familiar items from memory, detailing, drawing from experience, using imagination
  - Value/Contrast:
    - Varying pressure for light/dark, contrast, value, shading, silhouette
  - Miscellaneous
    - ➤ Brainstorm, critique, experiment, fractions, color coding, key, displaying and exhibit
  - Increase listening skills through following step-by-step instructions to complete more difficult projects
  - Projects include these themes:
    - Animal, seasonal, holiday, scriptural, historical, cultural, subject matter correlation, songs
- Technique Development
  - Coloring
    - Overlay, varying pressure for light/dark values, directional coloring, outlining, shading, highlight, core and cast shadow, stippling, coloring from observing a photograph
  - Chalking:
    - ➤ Swab rubbing, swab blending, shading with side of chalk stick, side stroke, pressure side stroke, chalk rubbing, chalk blending
  - Cutting:
    - Cutting fringe, layered cutting
  - Drawing:
    - Wispy lines for fur texture, zig-zag lines for grass texture, curved, wiggly lines for bark texture, cross-hatching for acorn cap, diagonal lines, swirled lines, looping lines, broken lines, jagged lines, drooping lines
  - Modeling:
    - Using a template, paper modeling, chenile stem curling, twisting, accordion fold, modeling
  - Painting:
    - ➤ Painting with analogous colors, using glow-in-the-dark paint, salt painting, swirl lines, loose grip, creative design, stamping
  - Texture:
    - Wispy lines for fur texture, zig-zap lines for grass texture, curved, wiggly lines for bark texture, visual woodgrain texture, cross-hatching for acorn cap, crumpling paper for wrinkled texture, soft texture, hair texture, shaping with cotton

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Language Arts: Reading



Students will develop an enjoyment for reading and advance in comprehension of literary concepts through a variety of literature including children's classics, biographies, realistic fiction, fantasy, poetry, Scripture, and much more. Students will read four novels (modern day Christian fiction, historical fiction, historical Christian fiction, adventure fiction, Christian classic allegory) and deepen their comprehension of the written word through character analysis, setting and plot recognition, cause/effect and problem/solution charting, summarization and creative writing, and other enrichment activities.

Literary Value

- 105 authors, including well-known writers such as Robert Louis Stevenson, Patricia MacLachlan, Lewis Carroll, Laura Ingalls Wilder, A. A. Milne, Margery Williams, Ralph Waldo Emerson, Michael Bond, Christina Rossetti, Anna Sewell, Richard and Florence Atwater, Beverly Cleary, Rudyard Kipling, Hugh Lofting, Robert McCloskey, Gertrude Chandler Warner, Donald J. Sobol, C.W. Anderson, E.B. White, Isaac Watts
- Selections and adaptations from children's literature such as "My Bed is a Boat," "Our Dune" from *Sarah Plain and Tall, The Velveteen Rabbit,* "Alice and The Tea Party," "County Fair," "When Ma Slapped a Bear," "Pooh Goes Visiting and Gets Into a Tight Place," "Eeyore Loses a Tail and Pooh Finds One," "Please look after this Bear" from *A Bear Called Paddington, Black Beauty,* excerpt from *Mr. Poppers Penguins,* excerpt from *Ralph S. Mouse,* "Rikki-Tikki-Tavi," from *The Jungle Book,* "Doctor Dolittle," *Swiss Family Robinson, Pilgrim's Progress: Christian's Journey*
- Character-building themes such as gratitude, kindness, helpfulness, honesty, and diligence

Materials

- Readers (7) containing stories (88), poems (52), plays (2), recipe (1), craft (1)
- Novels (modern day Christian fiction, historical fiction, historical Christian fiction, adventure fiction, Christian classic allegory)
- *Reading Comprehension 3* skill sheets
- Bible for Scripture reading

Evaluation

- Weekly oral reading grade
- Book Review (1); Book Reports (2)

Reading Skills Development

- Read and decode (sound out) words by applying phonics sounds and rules
- Strive for increasing: accuracy, enunciation, fluency, phrasing, alertness to punctuation, expression, comprehension, appropriate speed, volume, poise
- Ability to follow along and comprehend as others read orally
- Ability to read silently with comprehension
- Vocabulary development through words and definitions
- Development of understanding of literary types, terms, and concepts

Literary Concept Development

- Identify the story's title, author, main idea, main character, moral, author's intent, setting, plot
- Describe the main character's appearance, feelings, actions based on textual inference
- Describe setting (where and when the plot takes place) by identifying descriptive words
- Explain how characters relate to events of the story
- Understand cause/effect, problem/solution as they relate to the characters in the story
- Discern the meaning of a story
- Compare the same story by two different authors
- Predict the story's outcome
- Compare predictions to actual outcome
- Distinguishing fantasy from reality
- Identifying statements of fact/opinion

➤ Comparing and identifying literary types—fiction, nonfiction, biography, autobiography
➤ Summarizing main idea/events of a story
➤ Comparing different stories by same author
➤ Journaling from main character's point of view
➤ Understanding acts/scenes within a play
➤ Identifying stanzas within a play
➤ Discerning/writing figurative language
➤ Understanding symbolism
➤ Recognizing climax within a plot
➤ Comparing biography/autobiography
➤ Determining text structure
➤ Comparing selections with similar themes
➤ Recognizing similes
➤ Comparing points of view
➤ Distinguishing own point of view from that of the author of the text
➤ Analyzing, making inferences, and drawing conclusions about persuasive text
➤ Providing evidence from text to support analysis
➤ Recognizing dialogue within the text
➤ Discerning author's purpose
➤ Differentiating words with similar meanings

Readers

- *From Shore to Shore*—17 stories, 6 poems, in a variety of styles and literary types with a nautical theme including well-known classic and Scripture selections; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" highlighting literary terms—title, author, main character including character comparison, graphic organizers, compare/contrast similar stories written by different authors, introducing literary term—summary; "Dig Deeper" review activities including summarizing, character analysis, creative drawing; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author and historical background information prompts, as well as literary types prompts for explanation of terms; story and Christian character themes; silent reading selections; interesting informational facts; additional enrichment activities including visual aids, choral reading, creative drawing, creative writing
- *My New Song*—a 13-chapter modern-day Christian fiction novel; continues with the well-loved character Ella from the second grade novel *My New Name* emphasizing the joy found in new life in Christ; reviews literary terms—title, author, main character, summary; focusing on summarization/creative writing skills in preparation for book review; journaling from the main characters point of view; includes character sketch, Bible application; story and Christian character themes; factual, inferential, and interpretive comprehension/discussion questions; additional enrichment activities including play acting, singing
- *Through the Seasons*—14 stories, 15 poems, 1 craft, containing a variety of selections and literary types with seasonal themes including well-known classic and Scripture selections; highlighting famous authors Laura Ingalls Wilder and A. A. Milne; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" highlighting literary term—setting, including activity for

Reading cont. p. 51

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Reading cont.

setting analysis; reviewing literary concepts title, author, main character, summary; character comparison, graphic organizers, comparing settings of stories written by the same author, introducing term—simile including activities for recognition; Bible application; story and Christian character themes; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author and historical background information; silent reading selections; interesting informational facts; additional enrichment activities including sensory demonstration, audio demonstration, sequencing, visual aids, choral reading, creative drawing, creative writing, photo/illustration observation, comparison, and analysis

- *Among the Animals*—12 stories, 8 poems, 1 play containing animal themes including animal tales, fictional stories, as well as well-known classic selections; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" highlighting literary term—plot, including activities for sequencing and recognizing plot changes; reviewing literary concepts title, author, main character, summary; setting, simile; graphic organizers for summarizing and analyzing main character, creative writing and creative drawing; introducing literary term—act, scene, stanza including practice in recognizing scene changes, and assessing comprehension of stanzas; Bible application; story and Christian character themes; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author and historical background information; silent reading selections; interesting informational facts; additional enrichment activities including audio/video demonstration, sequencing, visual aids, creative drawing, creative writing, photo/illustration observation, comparison, and analysis
- *Pilgrim Boy*—a 16-chapter historical fiction novel following a Separatist boy and his family as they travel to the New World onboard the *Mayflower*; includes advanced vocabulary words and definitions for vocabulary enrichment; reviews literary terms—title, author, main character, summary, setting, and plot; review activities for character description and chapter summarization skills in preparation for book report; Bible application; story and Christian character themes; factual, inferential, and interpretive comprehension/discussion questions; additional enrichment activities including sequencing, recipe, graphic organizers for actions/results, problem/solution, illustration observations including photos of modern-day Leiden, Holland, a reproduction of the *Mayflower*, and a recreation of Plymouth, compare/contrast two similar plots
- *Treats and Treasures*—12 stories, 7 poems, 1 invitation, and 1 recipe containing a variety of selections and literary types with the theme of value, including well-known classic and Scripture selections; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" highlighting literary term—moral, including activities for determining authors intent, problem/solution, cause/effect; reviewing literary concepts title, author, main character, summary; setting, simile, plot, act, scene, stanza; graphic organizers for summarizing and analyzing main character, creative writing and creative drawing; introducing term symbolism—including activities for understanding figurative language; Bible application; story and Christian character themes; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author and historical background information; silent reading selections; interesting informational facts; additional enrichment activities include sequencing, visual aids, creative drawing, creative writing, photo/illustration observation, comparison, and analysis
- *Heroes and Helpers*—containing 19 stories, 7 poems, in a variety of styles and literary types themed after those who rescue or help including well-known classic and Scripture selections; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" reviewing literary terms—title, author, main character, summary, setting, simile, plot, act, scene, stanza, symbolism including character comparison, graphic organizers introducing terms—climax, biography/autobiography including practice in recognition and comparison, compare/contrast similar stories written by different authors; "Dig Deeper" review activities including creative writing; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author/historical background information and literary types including prompts for explanation of terms; silent reading selections; interesting informational facts; additional enrichment activities including sequencing
- *Secret in the Maple Tree*—a 19-chapter Christian fiction novel based on an immigrant family growing up in Minnesota; includes advanced vocabulary words and definitions for vocabulary enrichment; reviews literary terms—title, author, main character, summary, setting, plot, and moral; review activities for character description and chapter summarization skills in preparation for book report; Bible application; story and Christian character themes; chapter reviews including factual, inferential, and interpretive comprehension/discussion questions; additional enrichment activities including, graphic organizers for cause effect, character analysis
- *On the Bright Side*—12 stories, 7 poems, 1 play, 1 recipe, and 3 songs including well-known classic and Scripture selections containing a variety of literary types with a theme of optimism; 2 "Light the Way" Scripture features; "Words to Watch For" including advanced words and definitions for vocabulary enrichment; "Dig Deeper" highlighting literary terms—fiction/nonfiction, including activities for creative writing fictional and nonfictional stories; reviewing literary concepts—title, author, main character, summary, setting, simile, plot, act, scene, stanza, climax, biography/autobiography, symbolism; "Dig Deeper" review activities including summarizing the plot in sequence, graphic organizers for character description, cause/effect, symbolism, creative writing, and creative drawing; Bible application; story and Christian character themes; "Think about It!" and "What Do YOU Think?"—factual, inferential, and interpretive comprehension/discussion questions; "What Can You Do?" including creative ideas for helping others; author/historical background information; silent reading selections; interesting informational facts; additional enrichment activities
- *Swiss Family Robinson*—an 11-chapter adaptation of a classic story; includes character sketch, advanced vocabulary words and definitions for vocabulary enrichment; Bible application; story and Christian character themes; chapter reviews including factual, inferential, and interpretive comprehension/discussion questions; additional enrichment activities creative writing, problem/solution, point of view, sequencing, fact/opinion, fun facts, visual demonstration
- *Pilgrim's Progress: Christian's Journey*—a 20-chapter adaptation of part one of the timeless classic; contains an introduction to the life of John Bunyan; includes advanced vocabulary words and definitions for vocabulary enrichment; Bible application; reviews symbolism practicing understanding figurative language and author's intent; a map of Pilgrim's journey as well as other conceptual illustrations to help students understand the meaning of this allegory.
- *Reading Comprehension 3*—collection of advertisements, science articles, short stories, recipes, instructional pages for thinking and problem solving; including Index of Literary Application of concepts: author's purpose, application, cause/effect, character description, compare/contrast, context, details, dialogue, fact versus opinion, fantasy versus reality, figurative language, inference, main character, main idea, moral, organization, prediction, point of view, problem/solution, rhyme, sequence, setting, text structure, visualization; activities including charting comparisons, character webs, puzzles, diagrams, coloring sheets; factual, inferential, and interpretive comprehension questions; fiction vs. nonfiction; comparing selections with similar themes

Comprehension, Discussion & Analysis Skills Development

- Answer factual and interpretive for most stories and poems
- Answer inferential comprehension and discussion questions for most stories and poems
- Summarize selected readings
- Apply understanding of literary types, terms, and concepts

Language Arts: Language



The work-text *Language 3* provides a variety of practice exercises for students as they continue their study of English, building on the foundational language concepts learned in second grade. Third graders will expand their understanding and knowledge of English as they apply the following concepts: recognizing, writing, and correctly punctuating four kinds of sentences; identifying and correctly using nouns, verbs, adjectives, adverbs, pronouns, and conjunctions; identifying subject and predicate of sentences, including compound subjects and verbs; subject-verb agreement including simple and compound subjects and verbs, contractions, and irregular verbs; using and identifying compound words, rhyming words, antonyms, synonyms, homonyms, contractions, and singular possessive words; and forming plural nouns and singular verbs by applying spelling rules.

Correlating with both *Writing with Purpose 3* and the Reading 3 program, *Language 3* provides instruction and application of writing, including the following: writing topic and concluding sentences, using graphic organizers to record researched data; paragraph development; summarizing a variety of literary genres; writing book reports; and using proofreader's marks to edit writing.

Added Enrichment

- Review games
- Four themes (nocturnal creatures, U.S. travel, zoos of world, space)
- Glossary section of language terms to practice research skills
- Applying concepts such as time-order words, cause and effect, fact and opinion to enhance writing skills
- Continual spiral review and application of previously taught material

Evaluation

- Bi-weekly quizzes (16)
- Bi-weekly tests (17)
- All quizzes and tests are included in *Language 3 Quizzes and Tests*

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Grammar

- Capitalization
  - First word in every sentence
  - Proper nouns
    - Particular people
    - Particular places and things
  - Days of the week and months of the year
  - ➤ Seasons should not be capitalized
  - Holidays and special days
  - Names referring to God and the Bible
  - Titles of respect
  - The word *I*
  - ➤ Initials
  - ➤ First word and every important word in titles of books, songs, poems
- Punctuation
  - Periods
    - At end of declarative/imperative sentences
    - ➤ After initials
    - After abbreviations
  - Question marks at end of interrogative sentences
  - Exclamation points at end of exclamatory sentences
  - ➤ Quotation marks before and after a direct quotation
  - ➤ Commas
    - ➤ After *yes* or *no* at beginning of sentence
    - ➤ After names of people you are speaking to (direct address)
    - ➤ Separate town or city from state
    - Separate words or groups of words in a series
    - ➤ Separate parts of a date
    - ➤ After the greeting and closing of a friendly letter
  - Apostrophes
    - In contractions
    - With *s* to make a singular possessive
- Sentences
  - Recognize
    - Complete sentences
    - Kinds of sentences: declarative, interrogative, exclamatory, imperative
    - ➤ Run-on sentences
    - Complete subject and predicate
    - Simple subject and verb
    - ➤ Subject-verb agreement
- Contractions
  - ➤ Subject-verb agreement within contractions
- Parts of Speech
  - Nouns
    - Singular/Plural
      - Plural spelling rules
      - Irregular plural nouns
    - Common/Proper
    - Compound
    - Possessive
    - Diagram subjects
  - Verbs
    - Past, present, future tense
    - Action/non-action
    - ➤ Helping
    - ➤ Irregular verbs
    - Word usage
      - may/can, teach/learn, sit/sat/set
      - lie/lay
    - Singular/Plural
      - Plural spelling rules
    - Diagram
  - ➤ Pronouns
    - ➤ Define and identify
    - ➤ Identify noun(s) pronouns stands for (antecedents)
  - Adjectives
    - Answer *What kind* and *How many*
    - ➤ Answer *Which one* and *Whose*
    - ➤ Diagram
  - Adverbs
    - Answer *How*
    - ➤ Answer *When* and *How often*
    - ➤ Diagram
  - ➤ Conjunctions
    - ➤ Define and identify
    - ➤ *and, or, but*
    - ➤ Diagram in compound subjects/verbs

Language cont. p. 53

➤ **RED** *indicates first introduction of content.*

Language cont.

Grammar cont.

- Word study and diction:
  - Contractions (34)
    - Correct usage: *There/Their/They're, Your/You're, Its/It's*
  - Homonyms
  - Antonyms
  - Dictionary skills
    - Alphabetical order
    - Guide words, pronunciation, meaning, spelling, part of speech
  - Glossary skills
  - Thesaurus skills
    - Synonyms

Composition

- Writing sentences using an assigned word or topic
- Completing a sentence
- Answering an interrogative sentence with a declarative sentence
- ➤ Correcting run-on sentences
  - ➤ Compound sentences
- Correcting choppy style by combining short sentences
- Using proofreader's marks to correct errors in capitalization, punctuation, spelling, extra words
- Writing
  - Using graphic organizers to identify/organize main points
    - In given paragraph/story/article
    - In researched/original topic to write paragraph
    - Comparison/Contrast
  - ➤ Book reports (3)
  - ➤ Facts and opinions
  - ➤ Topic/Concluding sentences
  - ➤ Cause and effect
  - ➤ Time-order words
  - ➤ Parts of a friendly letter, including addressing envelope
  - ➤ Summarizing
    - ➤ Non-fiction, informational writing
    - ➤ Poems
    - ➤ Fictional writing

Language Arts: Penmanship/Creative Writing



Penmanship *Writing with Purpose 3* contains a variety of interesting exercises designed to give third graders continued instruction and practice in developing their penmanship skills. Emphasis is placed on neatness and correct letter formation of daily practice. The many activities in the book allow students to improve writing skills as well as expanding practical application. Activities include the following: birthday invitations, grocery list, weekly planner, and dinner menu.

Creative Writing. Beginning in lesson 86, writing class will focus primarily on creative writing skills with penmanship review. Creative Writing skills will be taught in a sequence that will prepare students to write their own stories.

Added Enrichment

- Decorative writing collection
- Additional writing exercises included in Health, History, Reading, and Science

Evaluation

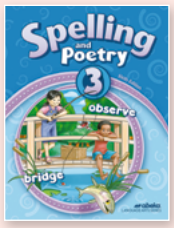
- Tests (33)

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Skills Development

- Handwriting
  - Achieve good writing position:
    - Sitting properly in desk
    - Holding pencil correctly
    - Slanting paper correctly
  - Reviewing correct formation of all lower and uppercase letters and numbers 1-10
  - Perfect writing skills for a good overall appearance:
    - Forming difficult letters correctly
    - Placing letters correctly on lines
    - Using proper spacing between letters and words
    - Slanting letters properly
    - Writing slowly and carefully
    - Making smooth connections between letters, difficult letters, blends
    - Using key strokes: wave, loop, oval, mountain
    - ➤ Writing letters ¾ space high, using single space
    - Keeping size consistent while making a connection without the help of a dotted line
    - Writing without use of dotted lines
    - ➤ Observing margins
  - ➤ Demonstrate ability to copy from print to cursive
- Creative Writing
  - Reviewing and enhancing the writing process: read and gather, think and plan, write and rewrite, check and polish, share your results
  - Use proper punctuation and capitalization
  - proper paragraph form
  - choose titles
  - organize thoughts into graphic organizers
  - develop stories using suggested topics
  - write a process summary, topic/concluding sentences
  - write a persuasive letter
  - write original poetry
  - ➤ writing an original play
  - character development
  - creative writing collection
  - ➤ summary exercises
  - ➤ guided research reports
  - ➤ picture writing prompts
  - ➤ story starters
  - ➤ Compositions include these topics:
    - Imaginative pieces
    - Historical reports
    - "how to" step-by-step process
    - ➤ Play: setting, narration, and dialogue
    - poetry
    - ➤ science reports correlating with Science project *My Animal Notebook*
    - ➤ Literary emphasis lessons correlating with *Swiss Family Robinson*
  - ➤ Total of 29 compositions with 8 additional supplementary projects

Language Arts: Spelling & Poetry



Third graders will develop their spelling and vocabulary skills as they study the words found in *Spelling and Poetry 3*. Each list contains words from everyday life and "content words" from other academic areas. Lists are organized according to spelling rules and patterns to help students recall and apply their learning. Vocabulary words and definitions are included with each list along with vocabulary activity. Students will also build spelling and vocabulary skills by completing a variety of practice exercises.

The poetry section acquaints students with a wide variety of good poetry through classroom recitation and memorization. By discussing the meaning and purpose of each poem, students will develop their comprehension skills. Poems for memorization have been selected for their beauty of language, literary greatness, and character-building qualities.

Added Enrichment

- Spelling lists (34):
  - Spelling words (562)
  - Vocabulary words and definitions (118)
  - Practice exercises (171)
  - Spelling games
  - Character-building quotations
  - Organized by spelling patterns
  - Build on previous concepts
  - Reinforce new concepts
- Teacher resources:
  - Spelling Focus
  - Sentence banks
  - Practical spelling tips and suggestions
  - Multi-sensory enrichment ideas
- Poetry:
  - Poem introductions include:
    - Discussion and application ideas, historical content
    - Suggested motions, enrichment activities
    - Comprehension Questions

Evaluation

- Spelling tests (33)

➤ **RED** *indicates first introduction of content.*

Spelling Skills Development

➤ Master spelling lists including:
- Words arranged according to patterns
- Commonly misspelled words
- Compound words
- Capitalized words
- Contractions
- Double consonants
- Plurals
- Prefixes
- Suffixes
- Vocabulary words and definitions

➤ Four review lists
- Use vocabulary words in proper context

➤ Memorize vocabulary definitions
- Applying spelling and vocabulary words correctly to complete sentences
- Creating original sentences with spelling words
- Applying spelling pattern concepts through daily:
  - Teacher-directed oral practice
  - Independent written practice
  - Exercises that reinforce spelling skills
- Hearing spelling and vocabulary words in example sentence, in order to:
  - Clearly picture each word's meaning; differentiate between sound-alike words

➤ Use words correctly when speaking and writing

➤ Learn spelling rules :
- ➤ Use *ai* in the middle of a word, *ay* at the end.
- ➤ Use *oi* in the middle of a word, *oy* at the end.
- ➤ English words do not end in *i;* add silent *e.*
- ➤ English words do not end in *u;* add silent *e.*
- ➤ To form the plural of a word ending in *f* or *fe,* change the *f* or *fe* to *ves.*
- ➤ English words do not end in *j.* Write *ge* or *dge* for the *j* sound at the end of a word.
- ➤ The letter *q* is followed by *u.*
- ➤ To make a word plural, which ends in a vowel followed by a *y,* add *s;* if the word ends in a consonant followed by a *y,* change the y to *i* and add *es.*
- ➤ Use *ck* after a short vowel sound; use *k* after a vowel combination or a consonant.
- ➤ Use *ch* after a consonant or 2-vowel combination. Use *tch* after a one-letter vowel.
- ➤ Change *full* to the suffix *-ful* when adding to a root word.
- ➤ Double the final consonant before adding the suffixes *-ed, -er, -est, -ing.*
- ➤ An apostrophe must go where there once was an *o.*
- ➤ Place the apostrophe where the missing letters used to be.
- ➤ *I* before *e* except after *c,* or when sounded like *ā* as in *neighbor* and *weigh.*
- ➤ When making a word that ends in *s, sh, ch, x,* or *z* plural, add *es.*

Worksheet Activities

- Identifying words that rhyme
- Using spelling words to complete sentences
- Working with compound words
- Matching contractions with their words
- Creating original sentences
- Solving puzzles with spelling words
- Defining vocabulary words
- Alphabetizing words to the second and third letter
- Recognizing misspelled words
- Working with root words, prefixes and suffixes
- Identifying homonyms, synonyms, antonyms
- Using words in biblical context

Poetry Skills Development

➤ Memorize 8 lyrical poems
- Develop appreciation of poetry
- Perform in front of an audience
- Recite in unison
- Develop appropriate expression and volume
- Learn definitions and use unfamiliar words
- Learn terms such as *setting* and *illustrator*
- Improve comprehension through discussion, application, thinking questions

➤ Discuss meaning and purpose of poems

➤ Proper observation of punctuation

Arithmetic



Building on the solid foundation of *Arithmetic 1* and *2*, students are well prepared for the new material in *Arithmetic 3*. Extensive work is provided in multiplication, long division, and multi-step story problems. Students will tackle fractions, equations, measurement conversions, graphs, and simple geometry. Practical problems on the daily work pages reinforce new concepts, and ample review problems promote student success. Supplementary problems are designed to meet individual needs.

Added Enrichment

- "Brain Booster" higher level thinking activities
- Thematic units: nocturnal creatures, U.S. travel, zoos of the world, space
- Review games
- Teaching tips
- Enrichment activities

Evaluation

- Skills development exercises in each lesson (136)
- Biweekly tests (16)
- Biweekly quizzes (16)
- Oral evaluations (12)

➤ **RED** *indicates first introduction of content.*

Numbers

- Place value: 1–100,000; money
- ➤ Place value: to 100,000,000
- Writing numbers:
  - From dictation to 100,000s place
  - From number words
- Roman numerals:
  - Value of I, V, X, L, C, D, M
  - Reading and building numerals 1–30
  - Basic rules:
  - ➤ More complex rules for forming Roman numerals
    - ➤ V may not be repeated or subtracted
    - ➤ I cannot be placed in front of L, C, D, M
  - >, <, =
- Number sentences:
  - With unknowns
  - Greater/less than
  - ➤ Order of operations (parentheses)
- ➤ Number sequences

Addition

- Addition families 1–18: mixed order
- Timed mastery
- Terms: addend, sum
- Missing number
- Missing sign
- Word problems:
  - Clue words: in all, altogether, how many (much) more (in a statement)
  - Problem set up
- Money:
  - Adding:
    - Dimes and pennies
    - Nickels and pennies
    - Dimes, nickels, pennies
    - Any combination of half dollars, quarters, dimes, nickels, and/or pennies by converting to cents
    - $1, $5, $10, $20 bills
- Properties
  - Commutative
  - ➤ Associative
  - ➤ Inverse operation
- ➤ Mental arithmetic: problems combining addition, subtraction, multiplication, and division up to 6 numbers
- ➤ Carrying to any place value
- ➤ Checking by addition
- Addends: column addition
- ➤ Averaging
- ➤ Fractions
- ➤ Measures
- Number sentences:
  - With unknowns
  - With greater/less than
  - ➤ Order of operations (parentheses)

Subtraction

- Subtraction families 1–18: mixed order
- Timed mastery
- Missing number
- Missing sign
- ➤ Mental arithmetic: problems combining subtraction, addition, multiplication, and division up to 6 numbers
- Subtracting with any number of digits, money
- Word problems:
  - Clue words: how many (much) more, have left, less, fewer, how much change
- Terms: minuend, subtrahend, difference
- Borrowing:
  - From any whole number in any position
  - With any number of zeros in the minuend
- Checking by addition
- ➤ Fractions
- ➤ Measures
- Number sentences:
  - With unknowns
  - With greater/less than
  - ➤ Order of operations (parentheses)
- ➤ Properties–inverse operation

Multiplication

- Multiplication tables:
  - 0, 1, 2, 3, 5, 10
  - ➤ 4, 6–9, 11–12
- ➤ Word problems:
  - ➤ Clue words: twice, times as many, per
- Properties
  - Commutative
  - ➤ Associative

Arithmetic cont. p. 56

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Multiplication *cont.*

- Timed mastery
- Terms: factor, product, partial product
- ➤ Missing number
- ➤ Missing sign
- ➤ Mental arithmetic: problems combining multiplication, division, addition, and subtraction up to 5 numbers
- ➤ Multiplying:
  - ➤ With any number of digits in first factor
  - ➤ With up to 2 digits in second factor
- ➤ Relating multiplication facts to the corresponding addition and division facts
- ➤ Properties
  - ➤ Commutative
  - ➤ Associative
  - ➤ Inverse property
  - ➤ Identity property
- ➤ Carrying:
  - ➤ To the tens, hundreds, and thousands places
  - ➤ In problems with 2-digit multiplier
- ➤ Checking by reversing factors
- ➤ Number sentences:
  - ➤ With unknowns
  - ➤ With greater/less than
  - ➤ Order of operations (parentheses)

Division

- Recognize symbols: ÷ and $\overline{)}$
- Division tables:
  - 2, 3, 5, 10
  - ➤ 1, 4, 6–9, 11–12
- ➤ Word problems:
  - ➤ Clue words: divided equally, shared equally, per
- ➤ Steps of division
- Terms: dividend, divisor, quotient
- ➤ Short division
- ➤ Missing number
- ➤ Mental arithmetic: problems combining division, multiplication, subtraction, and addition up to 6 numbers
- ➤ Divisors: 1 and 2 digits
- ➤ Dividends: any number of digits, money
- ➤ Remainders: writing as a fraction
- ➤ Checking by multiplication
- ➤ Money
- ➤ Averaging
- ➤ Number sentences:
  - ➤ With unknowns
  - ➤ With greater/less than
  - ➤ Order of operations (parentheses)
- ➤ Properties
  - ➤ Inverse property
  - ➤ Identity property

Fractions

- Parts of a whole:
  - Halves, thirds, fourths
  - Fifths, sixths, sevenths, eighths, ninths, tenths
  - ➤ Any fractional part
- Parts of a group: any fractional part
- Finding the fractional part of a whole number:
  - ➤ With a mixed number as the answer
- ➤ Word problems
- ➤ Timed mastery
- Reading and writing fractions
- ➤ Types: equivalent, mixed, for a whole number, for zero
- ➤ Reducing to lowest terms
- ➤ Adding:
  - ➤ With a common denominator
  - ➤ Mixed numbers with a common denominator
- ➤ Subtracting:
  - ➤ With a common denominator
  - ➤ Mixed numbers with a common denominator
  - Comparing fractions

Decimals

- Money:
  - Use of dollar sign and decimal point in addition
  - ➤ Use of dollar sign and decimal point in subtraction, multiplication, division

Problem Solving & Applications

- Word problems:
  - Steps of problem-solving process
  - Addition, subtraction, multiplication
  - ➤ Division
  - Fractions, money
  - ➤ Measures:
    - ➤ Dry measures of capacity
    - ➤ Feet and yards in a mile
    - Liter
    - ➤ Converting measures
    - ➤ Measurement problems
  - Clue words
  - ➤ Up to 4 steps
  - Mixed operations
- Applications:
  - Puzzles
  - ➤ Multiple combinations
  - Time, length, money, weight, fractions
- Oral story problems

Time

- Clock: face, hour/minute hands
- a.m. and p.m.
- Reading and writing time
- Table of time:
  - Seconds, minutes, hours
  - Days, months
  - Calendar, year
  - ➤ Leap year
- Determining elapsed time

Money

- Recognition and value of all coins
- Counting and combining all coins
- Recognize symbols: $ (dollar sign) and . (decimal point)
- Word problems, making change

Arithmetic cont. p. 57

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Money *cont.*

- Addition
- Subtraction, multiplication, division; equations
- ➤ Money equations

Measures

- Temperature:
  - Reading and writing
  - Terms: degrees
  - Fahrenheit:
    - Freezing and boiling points of water; normal body temperature
  - Celsius:
    - Freezing and boiling points of water
    - ➤ Normal body temperature
- Length:
  - English system: inch, foot, yard
  - ➤ Mile
  - Metric system: centimeter, meter
- Weight:
  - English system: ounce, pound
  - ➤ Ton
  - Metric system: gram, kilogram
- Capacity:
  - English liquid measures: cup, pint, quart, gallon
  - ➤ English dry measures: pint, quart, peck, bushel
  - Metric system: liter
- ➤ Ordering measures least to greatest
- ➤ Converting from one measure to another within same system
- ➤ Adding unlike measures within same system
- ➤ Subtracting unlike measures within same system

Graphing, Statistics, Probability

- Constructing and interpreting graphs
  - Pictographs
  - Bar graphs
  - Line graphs
- ➤ Statistics: averaging

Geometry

- Plane figures: circle, square, rectangle, trapezoid, hexagon
- ➤ Plane figures: rhombus, kite, pentagon
- Solid figures: sphere, cube, pyramid, cone, cylinder
- ➤ Solid figures: rectangular prism
- Terms: vertex, edge, face
- ➤ Right angle
- ➤ Parallel lines
- ➤ Perpendicular lines
- ➤ Quadrilaterals: Recognize and classify by their attributes
- Perimeter: Find perimeter of any polygon by adding side lengths
  - ➤ Given the perimeter, find the side length of a square
- ➤ Area: Find the area of rectilinear figures by counting square units
- ➤ Transformations: Slide, flip, turn

Pre-Algebra

- ➤ Finding the unknown number in an equation

History & Geography



Our American Heritage is a full-year biographical study of over fifty people who made an impact on American history through their character, contributions, and courage. Students will be inspired as they learn about the lives and accomplishments of these great Americans. This chronologically arranged introduction to American history makes it easier for students to remember important events and provides them with valuable, diverse heroes and role models.

Added Enrichment

- Important words, names, and places boxes
- Timeline for each chapter to clearly show time period relating to the historical figure studied
- Comprehension checks throughout each chapter
- Stop and Think presents ideas for thoughtful discussion and application
- Character traits of each historical figure highlighted and discussed
- Modern Marvels compares modern-day life to earlier times of America
- Added information boxes share interesting facts relating to the historical figure being studied
- Enrichment Activities offer fun and variety in enhancing learning and creativity through games, creative writing, art, visual aids, etc.
- Teaching maps and timeline of United States history
- Geography worksheets (31) with additional activities to use as enrichment
- Creative writing activities

Evaluation

- Quizzes (15)
- Tests (11)

➤ **RED** *indicates first introduction of content.*

Study of Our American Heritage through the Biographies of Great People

Founding of America

- Christopher Columbus: discovery of America
- ➤ John Smith: founding of Jamestown
- Pocahontas: helped save Jamestown
- ➤ Myles Standish: Pilgrim leader, founding of Plymouth Colony
- Squanto: an instrument of God, Pilgrims
- ➤ William Penn: Quaker, founder of Pennsylvania
- ➤ David Brainerd: missionary to Native Americans
- Benjamin Franklin: writer, inventor, ambassador, Constitutional Convention
- Paul Revere: Sons of Liberty, warned colonists of British invasion

History & Geography cont. p. 58

History & Geography cont.

Founding of America cont.

- Patrick Henry: statesman who encouraged freedom from English rule
- James Armistead: hero and spy during American War for Independence
- George Washington: general during the War for Independence, first president, Mount Vernon
- Thomas Jefferson: Declaration of Independence, third president, Monticello, Jefferson Memorial
- Benjamin Banneker: African-American inventor, surveyor of Washington, D.C.
- John Adams: second president
- Dolley Madison: first lady who saved portrait of George Washington during War of 1812

Expanding of America

- Daniel Boone: French and Indian War, pioneer, Wilderness Road
- Peter Cartwright: circuit-riding preacher during expansion of America
- Lewis and Clark: explorers of the Louisiana Purchase
- Sacagawea: guide and interpreter for Lewis and Clark expedition
- Noah Webster: *The Blue-Backed Speller,* an American dictionary
- John Greenleaf Whittier/Louisa May Alcott: well-loved American authors during expansion of America
- Davy Crockett/Sam Houston: pioneering soldiers and leaders, Alamo
- Harriet Tubman: Underground Railroad
- Abraham Lincoln: 16th president, Civil War, ended slavery, assassinated, Lincoln Memorial
- Robert E. Lee/Ulysses S. Grant: generals during Civil War
- Clara Barton: "Angel of the Battlefield," American Red Cross Society
- D. L. Moody: preacher, evangelist

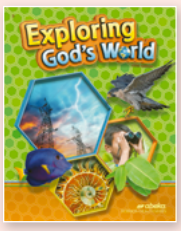
Modernization of America

- Emily Roebling: Brooklyn Bridge
- Alexander Graham Bell: inventor, telephone
- Thomas Edison: inventor, battery, light bulb
- Booker T. Washington: teacher, founder of Tuskegee Institute
- Theodore Roosevelt: soldier and 26th president
- Billy Sunday: baseball player, evangelist
- Laura Ingalls Wilder: author of stories about pioneer life in the Midwest
- Orville/Wilbur Wright: inventors of airplane
- George Washington Carver: inventor, director of agriculture at Tuskegee Institute
- Jim Thorpe/Jesse Owens: Olympic athletes
- Jim/Elisabeth Elliot: missionaries to the Quechua
- Dwight D. Eisenhower: general and 34th president
- Amelia Earhart: pilot, first woman to fly across Atlantic Ocean
- Martin Luther King, Jr.: segregation ends, Rosa Parks, "I Have a Dream" speech
- John Glenn/Neil Armstrong: pioneering astronauts
- Ronald Reagan: governor and 40th president, "Tear Down This Wall"
- Chappie James: pilot during World War II, Korean War, Vietnam War, 4-Star General
- George W. Bush: president during 9/11, War on Terror, new technology
- Barack Obama: first African-American president, Patient Protection and Affordable Care Act, appointed first Hispanic Supreme Court Justice
- Donald J. Trump: "Make America Great Again," immigration reform

Geography Study

- Globe
- Cardinal/secondary directions, compass rose
- Map key, map grid, distance scale
- Seven continents and five oceans
- Hemispheres, poles, equator
- Home state
- Regions of the United States
- 50 state locations
- Capital city (Washington, D.C.)
- Mississippi River, Gulf of Mexico, Ohio River, Rio Grande, Missouri River, Niagara Falls
- Neighbors to north and south: Canada, Mexico
- Landforms: hill, mountain, valley, gorge, lake, river, island, peninsula, plain, volcano, oasis, desert, waterfall, marsh
- Appalachian and Rocky Mountains
- Great Lakes, Great Plains
- Everglades, coral reef, Redwood Forest, Grand Canyon, Painted Desert, Old Faithful, Great Basin, Yosemite National Park
- U.S. Territories: U.S. Virgin Islands, Puerto Rico, American Samoa, Guam, Northern Mariana Island
- Location of famous American landmarks: Liberty Bell; Mount Rushmore; White House; Alamo; Golden Gate Bridge; Brooklyn Bridge; Jamestown; Cape Canaveral; Tuskegee Institute; Hoover Dam; U.S.S. *Arizona*; Fort Clatsop; Transcontinental Railroad; Gateway Arch; Boonesborough; Kitty Hawk, North Carolina
- Inviting, fun review sheets

Science



Exploring God's World guides the student's study of God's plan for creation. Students will increase both their reading comprehension and their knowledge of scientific concepts while learning about matter and energy, the earth's atmosphere and surface, the plant world, the solar system, animals and their habitats, and the human body from God's viewpoint.

Through the "how" and "why" questions that are answered in this text, children will learn about the world around them while developing their thinking skills. *Exploring God's World* also includes hands-on activities and demonstrations that help to increase each student's comprehension of basic science concepts. Begin the year by teaching this 120 lesson course followed by 50 lessons of Health.

Added Enrichment

- Hands-on learning activities in daily lessons
- Worksheets
- Creative Writing activities

Evaluation

- Quizzes (17)
- Tests (7)

➤ **RED** *indicates first introduction of content.*

Science cont. p. 59

➤ **RED** *indicates first introduction of content.*

Science *cont.*

What Is Science?

- ➤ What is a scientist?
  - ➤ According to field of study
- How scientists work
  - Scientific method: observe and ask questions, guess and predict, experiment and gather data, study data and share it
  - Terminology: investigate, method, experiment, prediction, data, theory
- Where scientists work: lab or place of study
- Science tools: hand lens, microscope, telescope, ruler, scale, beaker, thermometer, stopwatch, graphs
- ➤ Graphing data: circle/pie graph, bar graphs, line graphs
- Science safety: handling materials, tools, wearing goggles
- ➤ How do scientists design experiments? fairness, consistency, use of variables

Activities & Demonstrations

- ➤ Line graphs

God's Creation at Work (First Day of Creation)

- God's plan for order in the universe
- What is energy
  - Ability to do work
  - Energy sources: wind, water, solar, fuel, electrical, sound
  - ➤ Energy forms: waiting, working
  - Engines use fuel, electricity for energy
  - ➤ Houses use electricity for energy: cables, conductors, insulators, currents, complete circuits
- Force and movement
  - Push or pull on object
  - ➤ Work, balance of forces
  - Types: gravity, friction, magnetism
- Changing movement
  - Effects of friction: wears things down, heats things up
  - Inertia
- Overcoming forces: machines
  - Simple machines: wheel and axle, inclined plane/ramp, pulley, lever, gears
  - ➤ Compound machines: bicycle, vehicles, electronic devices
  - Terminology: revolve, effort, load, fulcrum, effort force, grooves, teeth, efficient
- Gravity:
  - ➤ Effects of weight, laws of nature
- ➤ Building strong structures:
  - ➤ Strong foundation: "roots" of building
  - ➤ Strong supports: pyramids, columns, arches
- Magnetism:
  - Magnetite, artificial magnets, electromagnets
  - ➤ Magnetic fields
  - Attracts or repels
  - Polarity: North and South Poles
- Matter
  - ➤ Made up of molecules
  - States: solid, liquid, gas
  - How energy changes matter: melting, freezing, boiling
  - ➤ Effects of heat energy on different states
  - ➤ Terminology: properties, volume, metric units
  - ➤ Density
  - ➤ Matter mixtures

Activities & Demonstrations

- ➤ Be a scientist! How can we use stored energy to make a toy car move without pushing it?
- ➤ Push and pull
- ➤ Use sandpaper to make friction.
- ➤ Be a scientist! How does surface affect the motion of a toy car?
- ➤ Build a strong structure.
- ➤ Observe a magnetic field.
- ➤ Sort solid matter by similar property.
- ➤ Be a scientist! If sugar and salt seem to be able to be poured out, but feel like liquid, are they solid or liquid matter?
- ➤ Use liquid to fill different shapes.
- ➤ Determine that air has weight.
- ➤ Change a liquid into a gas.
- ➤ Discover which has greater density—oil or water.
- ➤ Make a mixture.
- ➤ Measuring a solid
- ➤ Measuring a liquid
- ➤ Comparing volumes of air

The Earth's Atmosphere (Second Day of Creation)

- God's perfect design of air for people, animals, and plants
- Atmosphere
  - ➤ Mixture of oxygen, nitrogen, carbon dioxide, and other gases
- Weather: heat, water, wind
  - ➤ How does heat happen on earth? absorb, radiate, greenhouse effect
  - ➤ How does water get into air? water vapor
  - ➤ What makes the wind? air pressure, cool air—heavy, warm air—light
- Meteorology
  - Meteorologists, forecasts, Doppler radar
  - ➤ Graphing weather data
- Water cycle
  - Evaporation: water vapor
  - Condensation: water droplets, loss of heat energy
  - Precipitation:
    - Rain
    - Snow—crystals, snowflakes, crystallize
    - Sleet—rain that is frozen before it falls
    - Hail—hailstones; happens during spring, summer; during some thunderstorms
  - Storms:
    - Thunderstorms: humid, lightning, static electricity, thundercloud, thunder
    - Hurricanes: landfall, eye
    - Tornadoes: touched down, twister
  - ➤ Climates:
    - ➤ Frigid: always cold
    - ➤ Temperate: four seasons, experience both warm and cold weather
    - ➤ Tropical: two seasons—rainy and dry, very warm weather

Activities & Demonstrations

- ➤ Record daily temperature.
- ➤ Graph temperature trends.
- ➤ Observe air pressure.
- ➤ Graph weather types.
- ➤ Be a scientist! Does the water evaporate more quickly in a warm or cool place?
- ➤ Observe condensation and precipitation.
- ➤ Observe static electricity.

Science cont. p. 60

➤ **RED** *indicates first introduction of content.*

Science *cont.*

The Earth's Surface (Third Day of Creation)

- ➤ Shape of earth: sphere; North and South Poles at top/bottom; equator in middle
- ➤ Structure of earth:
  - ➤ Crust: bedrock
  - ➤ Mantle: rock and magma
  - ➤ Core: very hot; center of earth
- ➤ Seas and dry land
  - ▪ 5 oceans: 70% of earth covered in water
  - ▪ 7 continents
- ➤ Soil
  - ➤ Made up of minerals and humus
  - ➤ Types: sandy, humus, clay
  - ➤ Fertile soil: mixture
  - ➤ Layers: topsoil, subsoil, bedrock
  - ▪ Conservation: crop rotation; fertilization
  - ▪ Erosion: gullies, plowing methods for prevention
- ▪ Landforms
  - ➤ Formation of river: source, mouth, delta
  - ➤ Causes of formations: water runoff; silt
  - ➤ Examples: Mississippi River Delta, Nile River Delta
- ➤ Weathering
  - ➤ Caused by water or wind
- ➤ Surface changes
  - ➤ Volcanoes: erupt, lava
  - ➤ Earthquakes: plates, fault
  - ➤ Landslides: can be caused by flooding, earthquakes, volcanic eruptions
- ➤ Kinds of rock
  - ➤ Variety of types
  - ➤ Some made by heat, sediment, pressure
  - ➤ Examples: lava, marble
- ▪ Stewardship: taking wise care of what God has given us
  - ▪ Conserve resources
  - ▪ Use resources wisely
  - ▪ Recycle, repurpose, reuse

Activities & Demonstrations

- ➤ Make a compass.
- ➤ Observe soil with a hand lens.
- ➤ Observe water expansion.
- ➤ Start a rock collection.
- ➤ Be a scientist! Where can you find sediment in a body of water?

Plant World (Third Day of Creation)

- ▪ Reproduce after their kind
- ▪ Replenish the earth
- ▪ All living things are dependent on plants
- ▪ Seeds:
  - ➤ Three parts: seed coat, baby plant, stored food
  - ➤ How does a seed sprout?
    - ➤ 4 things needed: water, right temperature, air, light
- ▪ Plant structures:
  - ▪ Roots: root hairs
    - ▪ How roots help the soil—topsoil, subsoil, erosion
    - ▪ Absorbs water and minerals
  - ➤ Stems: carries water/minerals up; carries food down to roots for storage
  - ▪ Leaves:
    - ▪ How do plants make their own food?—process of photosynthesis
    - ▪ How do plants use and help our air?—give off oxygen; use carbon dioxide
  - ▪ Flowers or cones
    - ▪ Make seeds, have pollen
    - ▪ Pollination
    - ▪ Pollinators: honeybee, wind, birds, other insects
  - ➤ Fruit: holds and protects seeds
  - ➤ Other ways plants can sprout
    - ➤ Examples: strawberries, sweet potato, white potato
- ➤ Forest
  - ➤ Three kinds
    - ➤ Conifer: made from trees with cones, needles; found in colder climates
    - ➤ Temperate: found in climates with four seasons
    - ➤ Tropical: found in tropical climates with much rain and vegetation
  - ➤ Trees:
    - ➤ Parts: crown, trunk, roots
    - ➤ How old is a tree? annual rings
    - ➤ Layers of tree: heartwood, sapwood, bark
    - ▪ Why some tree leaves change colors in autumn—decay, dormant
  - ➤ Decomposers:
    - ➤ Fungi and bacteria: grow from spores
  - ➤ Green plants that grow from spores: ferns, mosses
  - ➤ Fungi "plants" that grow from spores: mushrooms, toadstools

Activities & Demonstrations:

- ➤ Observe a baby plant.
- ➤ Observe a stem drawing water upward.
- ➤ Examine a flower.
- ➤ Be a scientist! How can you determine which kinds of produce are fruit?
- ➤ Examine types of tree leaves.
- ➤ Observe tiny decomposers.
- ➤ Study a piece of moss.
- ➤ Make a spore print.

The Solar System (Fourth Day of Creation)

- ▪ Sun: at center of solar system
  - ▪ Star closest to earth
  - ▪ Sun's energy helps earth—light, heat, makes weather
  - ▪ Planets travel around sun—orbit
- ▪ God's plan for solar system: order and size of each planet
- ▪ Eight planets: orbit the sun
  - ➤ Inner planets: Mercury, Venus, Earth, Mars
  - ➤ Outer planets: Jupiter, Saturn, Uranus, Neptune
- ▪ Stars:
  - ▪ What is a star—glowing gas
  - ➤ Our galaxy—Milky Way
  - ▪ Constellations: Big Dipper, Little Dipper, Orion
- ▪ Moon:
  - ➤ Orbits a planet
  - ➤ Natural satellite
  - ▪ Reflects sun's light
  - ▪ Moon's surface: craters, asteroids, meteoroids
  - ▪ Moon's phases: new, crescent, quarter, full
  - ▪ Moon's gravity: high/low tide cause circulation of water
- ➤ Measures of time
  - ➤ Year: days it takes earth to orbit sun; leap year
  - ▪ Seasons: caused by earth's tilt toward/away from sun

Science cont. p. 61

➤ **RED** *indicates first introduction of content.*

Science *cont.*

The Solar System *cont.*

- Month: moon phases
- Day/Night: sunrise, sunset, sundial
- Space science:
  - Astronauts: need for spacesuit; space station
  - Space travel: spacecraft, space station, tether, space probes, landers, rovers
- Earth: Our Home—God's provision and plan in His design for our planet

Activities & Demonstrations

- ➤ Demonstrate the planets' orbit around the sun.
- ➤ See how craters happen on the moon's surface.
- ➤ Track the moon's phases.
- ➤ Be a scientist! How does distance affect a planet's orbit?
- ➤ See how the earth's rotation makes day and night.

The Animal Kingdom (Fifth and Sixth Days of Creation)

- ➤ Variety of species
- ➤ Differences between plants/animals
- ➤ Animal classification:
  - ➤ Vertebrates: backbone, inside skeleton, five classes
    - ➤ Mammals: characteristics, carnivores, herbivores, omnivores
    - ➤ Fish: characteristics, gills, scales, predators
    - ➤ Amphibians: characteristics, instincts, camouflage, burrows
    - ➤ Reptiles: characteristics, venomous
    - ➤ Birds: characteristics, prey
  - ➤ Invertebrates: no backbone, weak muscles, small animals with soft bodies, outside skeletons if they have them, cold-blooded
    - Insects: largest group of invertebrates
      - Body design: head, thorax, abdomen
      - Outside skeleton
    - Complete metamorphosis: egg, larva, pupa, adult
    - Incomplete metamorphosis: egg, nymph, adult
    - Mimicry
    - Spiders: not insects, two body parts

Activities & Demonstrations

- ➤ Find your normal body temperature.
- ➤ Use a filter to find out how a fish breathes.
- ➤ Watch an amphibian grow.
- ➤ Collect earthworms.
- ➤ Make an insect-collecting jar.

Animal Habitats (Fifth and Sixth Days of Creation)

- ➤ Habitats—natural home of plant or animal; unique to each animal
  - Four things each habitat must have
    - Space: instincts/equipment; migration
    - Shelter: herds; hibernation
    - Water: dew; freshwater; saltwater
    - Food:
      - ➤ Food chains: sunlight energy, predator, prey, producer, consumer, top predator, decomposer
- ➤ Land habitats
  - ➤ Prairie:
    - ➤ Examples of different animals: bison, prairie chicken, prairie dogs, locusts, king snake
    - Grazers, rodents, pollinators
    - ➤ Fresh water source: rivers, streams, lakes, ponds
  - ➤ Desert:
    - ➤ Examples of different animals: desert toad, gila monster, scorpion, elf owl
    - ➤ Crevices, dew, nocturnal
  - Rainforest
    - Four layers: emergent, canopy, understory, forest floor
    - Examples of different animals: monkeys, sloths, butterflies, snakes, toucans, tree frogs, jaguars, leopards, fungi, termites, worms, tigers, gorillas, wild pigs, insects
    - ➤ Examples of plants: pineapple family
    - Thick vegetation provides plenty of food
  - ➤ Arctic
    - ➤ Two seasons: summer and winter
    - ➤ Examples of different animals: caribou, snow geese, reindeer, walruses, polar bear, arctic fox, cod
- ➤ Water habitats
  - ➤ Coral reef
    - ➤ Examples of different animals: tiger sharks, barracudas, sea anemone, seahorse, manatee
    - Saltwater, schools of fish, algae, zooplankton
  - ➤ Stream
    - ➤ Examples of different animals: river otter, osprey, snails, bears, bass
    - Freshwater, current, surface film, animal tracks

Activities & Demonstrations

- Prepare an insect habitat.
- ➤ Grow a succulent garden.
- ➤ Be a scientist! What leaves can collect the most water?
- ➤ Find out how blubber keeps animals warm.
- ➤ Observe surface film.
- ➤ Identify animal tracks.

Human Biology (Sixth Day of Creation)

- Special to God: cells, tissue, organs, systems
  - Nervous system: brain, nerves, spinal cord
  - Sense organs/Sense:
    - Eyes/Sight:
      - Parts: pupil, iris, lens, optic nerve, retina
      - Use light energy to see
      - Protection: eyelids, eyelashes, tears, skull
    - Ears/Hearing:
      - ➤ Parts: outer ear (auditory canal, eardrum), middle ear (hammer, anvil, stirrup), inner ear (cochlea, auditory nerve)
      - Use sound energy to hear: vibrations, sound waves
      - Protection: skull, hairs/glands, wax
    - Nose/Smelling:
      - Parts: nostrils
      - Odors, molecules
      - Detect warnings through scents
      - Protection: mucus
    - Tongue/Taste:
      - Parts: taste buds
      - Works with smell; different tastes (sweet, salty, bitter, sour)
      - Saliva dissolves
    - Skin/Touch:
      - Parts: epidermis, follicles, dermis, sweat glands, oil glands
      - Protection: nerves to feel pain, fingernails, toenails, scab
      - Regulates temperature: sweat, pores, goose bumps
  - Heart and circulatory system
    - Blood: red cells, white cells, platelets
    - Circulation: blood vessels, heart, chambers, veins, arteries, pulse
  - Lungs and respiratory system
    - Inhale oxygen/exhale carbon dioxide, respiration
    - Parts: windpipe, diaphragm

Science cont. p. 62

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Human Biology *cont.*

- Teeth:
  - Where digestion begins
  - Parts: crown and root
  - ➤ Layers of tooth: enamel, dentin, pulp
- Digestive system:
  - Parts: mouth, esophagus, stomach, intestines
- Skeletal system:
  - Framework of body
  - ➤ 206 bones: skull, clavicle, scapula, humerus, sternum, ribs, vertebra, phalanges, pelvis, femur, patella
  - ➤ joints, ligaments
- ➤ Muscular system
  - ➤ Over 600 muscles
  - Voluntary/Involuntary muscles
  - Skeletal muscles: biceps, triceps
  - Tendons
  - ➤ Cardiac muscle

Activities & Demonstrations:

- ➤ Make a model of the spinal cord.
- Watch the pupil change in size.
- ➤ Make a tin-can telephone.
- ➤ Determine how long it takes for odor molecules to travel.
- ➤ Dissolve sugar in water.
- ➤ Determine that nerves help protect skin.
- ➤ Examine skin with a hand lens.
- ➤ Make a model of a drop of blood.
- ➤ Make a model of the respiratory system.
- ➤ Be a scientist! Does a person's breathing become faster when exercising?
- ➤ Demonstrate that digestive juices break down food for digestion.
- ➤ Make a model of the vertebrae.
- ➤ Demonstrate that a bone's design makes it stronger.

Health



The purpose of *Health, Safety, and Manners 3* is to teach students about the body God has given them and to encourage them to practice good health, safety, and manners habits each day. Third-grade students enjoy learning about good posture, healthy habits, exercise, nutrition, first aid, personal health, public safety, recreational safety, home safety, manners, and courtesy.

Added Enrichment

- Comprehension Checks (45)
- Think About It (42)
- Technology Tips (3)
- The Bible Says (21)
- Terms to Remember (14)
- Heath the Health Bee
- Review worksheets for specific topics (12)

Evaluation

- Quizzes (5)
- Tests (3)

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Health

- Good posture habits
  - Sitting correctly
  - Standing correctly
  - Walking correctly
  - ➤ Bending correctly
  - ➤ Pulling correctly
  - ➤ Pushing correctly
  - ➤ Lifting correctly
- Exercise
  - The importance of exercise
  - The importance of rest
- A healthy diet
  - Nutritional benefits of vegetables
  - Nutritional benefits of fruits
  - Nutritional benefits of grains
  - Nutritional benefits of protein
  - Nutritional benefits of dairy
  - Nutritional benefits of water
- A balanced diet
  - A good breakfast
  - A good lunch
  - A good dinner
- Nutrients
  - ➤ Sources and benefits of protein.
  - ➤ Sources and benefits of vitamins A, B, C, D, E, and K
  - ➤ Sources and benefits of the minerals—calcium, potassium, sodium, iron, and iodine
  - ➤ Sources and benefits of carbohydrates
  - ➤ Sources and benefits of fiber
  - ➤ Sources and benefits of fats and oils
  - ➤ How to prevent malnutrition
  - ➤ Reading food labels
- Healthy habits
  - ➤ Food storage
  - ➤ Food preparation
  - ➤ How sickness can be spread
  - How sickness can be prevented
  - ➤ How sickness can be treated
  - When to seek health care
- Everyday health habits
  - Taking care of your body
  - Taking care of your hair
  - Taking care of your teeth
  - Taking care of your eyes
  - Taking care of your ears
  - ➤ Health habits in public
- First aid
  - ➤ Minor injuries
    - ➤ Treating bumps and twists
    - ➤ Treating scrapes and cuts

Health cont. p. 63

➤ **RED** *indicates first introduction of content.*

Health *cont.*

- ➤ Emergency procedures
  - ➤ Head or neck injury
  - ➤ Seizures
  - ➤ Choking
  - ➤ Electrical shock
  - ➤ Unconscious and breathing
  - ➤ Unconscious and not breathing
- ➤ Personal health
  - ➤ Knowing and loving God
  - ➤ Thinking clearly
    - ➤ Exercising your mind
    - ➤ Thinking right thoughts
    - ➤ Choosing joy
  - ➤ Loving others
    - ➤ Showing courtesy
    - ➤ Helping others
    - ➤ Showing respect
    - ➤ Showing sportsmanship

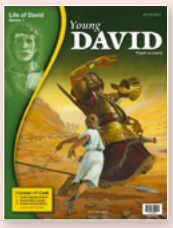
Safety

- Public safety
  - ➤ In-public safety rules
    - ➤ Never go to a public place alone.
    - ➤ Be aware of what is around you.
    - ➤ Stay in well-lit areas
    - ➤ Call for help
  - Parking lot safety
  - Street safety
  - Personal safety
- Recreational safety
  - ➤ Recognizing appropriate play areas
  - ➤ Safety around animals
  - ➤ Safety around plants
  - Bicycle safety
  - Water safety
- Home safety
  - How to prevent falls
  - Weather safety
  - Fire safety
  - ➤ Internet safety
  - Gun safety
  - ➤ Home security

Manners

- Politeness
  - ➤ How to greet guests
  - ➤ Proper introductions
- Kindness
- Helpfulness
  - ➤ How to handle bullying
- Obedience
  - ➤ How to refuse wrongdoing
- Respect
- Gratitude
- ➤ Phone etiquette
- Putting others first

Bible



As students embark on their third-grade Bible studies, they will be excited about the new Bible stories they will be learning. These stories include Old Testament Bible characters such as Samuel, David, Elijah, Elisha, Daniel, Esther, Ezra, and Nehemiah. As children listen to the events leading up to King David's rule, they will see the contrast between King Saul and David. Students will hear examples of David's heart toward God and that true obedience comes from the heart. Bible review and application sheets challenge students to examine their own hearts in their walk with God as they develop a biblical worldview.

Evaluation

- Graded memory verse passages (9)

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Lessons *393 Abeka Flash-a-Cards*

- Salvation Series (5 lessons)
- ➤ Life of Samuel (4); Young David (3); David in Hiding (4)
- ➤ Elijah (6); Elisha (8)
- The First Thanksgiving
- First Christmas (5)
- ➤ Daniel (6); Ezra and Nehemiah (7); Esther (5)
- Crucifixion and Resurrection (9)
- ➤ Parables of Jesus, Series 1 and 2 (12)

Music *69 songs*

- Hymns of the faith, patriotic songs, holiday songs, choruses including:
  - ➤ 7 new hymns and songs; 7 new choruses

Memory Work

- ➤ New passages (9) containing 34 verses
- Review verses (54)

Doctrinal Truths *61 questions/answers*

- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation

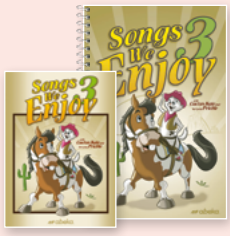
Prayer Time

- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Sword Drill

- ➤ Learn books of New and Old Testaments
- ➤ 72 New and Old Testament references to find

Music



Songs We Enjoy 3 brings together many of the traditional, patriotic, holiday, and fun songs that American children have enjoyed singing for generations. Today's children still love these songs. The sing-along CD makes song time easy for the teacher and delightful for the students.

➤ **RED** *indicates first introduction of content.*

Skills Development *64 songs*

- ➤ Explain meaning of 22 unfamiliar phrases or words in lyrics
- ➤ Sing rounds in two or more parts
- Follow a song leader while singing together with class or CD
- Benefit from fun activities that spark and keep interest:
  - Echo parts, whistling, using props
  - ➤ Group parts
- ➤ Learn patriotism through patriotic music and folk songs
- ➤ Learn to keep time musically with rhythm instruments
- Discover historical information contributing to song's origin
- Reinforce Bible application

Variety of Songs to Memorize

- Folk, fun songs, spirituals and gospels, patriotic, holiday, Americana

Arts & Crafts



Adding to the knowledge of the color wheel, *Art Projects 3* encourages students to express their own creativity and find beauty in the world around them. Students will enjoy working with new media such as clay, charcoal, and watercolors while continuing to learn foundational art and design concepts and techniques. Includes glossary of art terminology.

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Concept & Technique Development

- Media & Art Types:
  - Crayon, colored pencils, paper, pencil, glitter, painting, glow-in-the-dark painting, fibers and mixed media, chalk, marker, tissue paper, scissor-edge cutting, charcoal, watercolors, clay/ceramics, metallic paints, kneaded eraser, sequins, needlework/embroidery, metal bending
  - Illustrating: color wheel, story, song, Scripture, poem
  - Cutting from template, cutting out centers, creative cutting, poking, fringe cutting, cutting strips, layered cutting
  - Tracing, drawing, drawing step-by-step, geometric shapes, organic shapes, outlining, overlay, directional coloring, stippling, shading, folding, detailing, drawing/painting animated expressions, steps of artistic process, painting from observing illustration, texturizing, hatching, cross-hatching, blotting, dabbing/sponging, drawing using symmetry, kneading, embossing, rounding, imprinting, sponging, lettering, downstroke, double line, serif, script, swash, flourish, wash, wet layering, graduated wash, wet-on-wet, dry-on-dry, scumbling, sponge swiping, masking with tape/rubber cement, scoring, score and slip, salt resist, poster/mural, pop-up, hinge, V fold, box fold, sculpting (rolling, pinching, flattening, poking, scraping, etching), hard/soft edge watercolor painting, brush control, paint by number, quilling, scroll shapes (round, v, s), border shapes (teardrop, petal)
  - ➤ Op Art, landscape, snowscape, still life, mosaic, collage, seascape, indenting, stitchery, weaving, salt painting, creating musical instrument
  - Using loose grip, swab/finger rubbing/smudging; using side of charcoal to shade, side and pressure strokes, lengthwise stroke, squiggles, highlighting
  - Curved, swirled, looped, broken (dashed, dotted), lines, drooping lines, contour lines, scalloped lines
- Color:
  - 12-color color wheel; primary, secondary, intermediate colors, hue, tones
  - Primary, secondary, intermediate color mixing, visual color mixing, using natural colors, blending, color matching, energized colors, pink, transparent, metallic colors, color intensity and muting, gradient, winter colors, using white, pastels, spring colors, muddy colors, creating off-white colors
  - Color family, tints, shades
  - Complementary colors, analogous colors, neutral colors, warm and cool colors, color temperature, color study
  - Color scheme: fall, Christmas, patriotic, sunset, masculine, feminine, Valentine colors, Easter colors, Jewish festival colors,
  - Varying pressure for light/dark colors
  - Overlay, blending, swab blending, swab rubbing
  - Observing color moods: exciting, peaceful, playful, serious, hopeful; observing colors in nature
  - Moods: happy, joyful, sad, peaceful, fearful
  - Color symbolism
- Form, Value, Contrast:
  - Shading, tint, shadow, value, varying pressure for value
  - ➤ Sphere forming, 3D texture
  - Cylinder, cone, vary pressure for gradual light/dark shading
  - Tint, making tints with watercolors
  - ➤ 3D Concept, 3D Forming
  - Value, contrast, shading, fade, cast shadow
  - Blending, highlighting

Arts & Crafts cont. p. 65

➤ **RED** *indicates first introduction of content.*

Art & Crafts cont.

Concept & Technique Development cont.

- Making a rectangular bag
- ➤ Graduated, gradient, aerial perspective, depth, triarama
- Varied box-forming, contrast in pattern, form, contours, horn forming
- ➤ Hard edge and soft edge, scroll, egg shape
- Movable parts, paper sculpture, 3D crafting, structures, kirigami, template

- Design and Organization:
  - ➤ Color-determining process: block, observe; color-matching process: experiment, compare, determine, correct
  - ➤ Slipknot process, watercolor process
  - Outlining, needlework stitches (running, back, cross-, overcast, feather, French knot), initials, making-needle process, template
  - Orientation: horizontal, vertical, diagonal, radial (pattern), spiral, symmetry, pattern, using line shapes (curved, jagged, straight, looping, zig-zag)
  - Pattern (calico, gingham)
  - ➤ Imprint
  - Line type (dashed, dotted), visual texture (wiggly, jagged, zig-zag lines for wood grain), short curved for rope; brand
  - ➤ One-point perspective (horizon line, vanishing point), lettering (manuscript, stroke, block letter, block-lettering process), trace, space, paper stretching
  - ➤ Braiding
  - Stroke, downstroke, weighted, double line, lettering process, lettering styles, serif, script, flourish, swash, sponging layers
  - Symmetry, balance, proportion, observation, texture (hair, clothing), detailing
  - ➤ Glue spreading, scissor-edge cutting
  - Subject
  - ➤ Art Process: quick inspiration, careful planning, quick analysis & correction, careful execution: brainstorm; thumbnail; value sketch; color study; texture (foliage)
  - ➤ Transparent, plaid, opaque, pattern (geometric—striped, shadow stripe, plaid, gingham, polka dot, chevron, check/checkered, argyle; organic—flower, scroll, leaf, splat, calico, paisley)
  - Odd-numbered items, unity, grid, poster, mural
  - Composition, foreground
  - Line types (scallop)
  - ➤ Horizon line, perspective, ellipse
  - Stylus, forming, indent
  - ➤ Coloring over cardboard for horn texture
  - ➤ Paint-by-number process, simplifying, brush control
  - ➤ Coil (coil tightening, coil loosening)
  - Texture: wispy lines for fur, zig-zag lines for grass, curved/wiggly lines for bark and wood, cross-hatching for fur; texture observation of variety: yarn, paper, button, organic, soft and fuzzy, woodgrain; crumpling for wrinkled texture, pulled cotton for wool, dabbing/sponging for spots, toothbrush spatter, fling spatter
- Communication and Creativity:
  - Making choices, using resources
  - Communicating through order
  - ➤ Creating movement, creating expression
  - Creating animated expressions based on evaluation
  - Communicating through printing and form
  - ➤ Creating brand
  - Mood, self-expression
  - Creating pattern
  - ➤ Emphasis, practice and create lettering style
  - Communicating through sponging
  - Creating an original likeness, autograph
  - Choosing subject, communicating through visual textures
  - Collaborative
  - Solving problems
  - Communicating through creative sculpting techniques
  - Unique patterns and colors
  - Communicating through simplifying
  - ➤ Creating maze
- Appreciation & Evaluation:
  - Observing color
  - Appreciation: God's Earth
  - ➤ Observing quality craftmanship
  - Studying animated expressions: thrilled, worried, mad, dizzy, afraid
  - Calico, gingham
  - Observing nature, evaluating quality and worth, give as gift
  - ➤ Culture of American West, display
  - ➤ Kumihimo, Japanese culture, lettering examples
  - Self-observation from life, comparing family features
  - Problem solving, analyze, critique, emotion (joy, awe, excitement), exhibit, collaborate
  - ➤ Jessie Willcox Smith (*Little Bo Peep, Little Women*) Brian Jekel (*Crucifixion, Resurrection, Christian Soldier*)
  - ➤ Jewish culture, colors, and pattern
  - ➤ Predicting color combinations

Language Arts: Reading



An outstanding variety of children's literature from famous classics to modern selections encourages young readers to come back for more. These beautiful new readers with colorful art and designs will entertain students while deepening their understanding of the written word. With an emphasis on literary elements and concepts, students will grow in their ability to think critically while establishing and developing the foundation for a biblical worldview.

Fourth graders will grow in their ability to read for learning and gain independence through the use of character analysis, setting and plot charting, text structure analysis, and many other activities including creative writing.

Literary Value

- 86 authors, including such well-known writers as Lewis Carroll, Robert Louis Stevenson, Robert Lawson, Robert Frost, Aileen Fisher, Arleta Richardson, A. A. Milne, Hans Christian Anderson, E. B. White, Laura Ingalls Wilder
- Selections and adaptations from children's literature such as "A Narrow Escape" from *Stuart Little*, "Down the Rabbit Hole" from *Alice's Adventures in Wonderland*, "Keeping House" from *On the Banks of Plum Creek*, "When God Knew Best" from *Grandma's Attic*, "Wilbur Meets Charlotte" from *Charlotte's Web*, "Captain Cook" from *Mr. Popper's Penguins*
- Character-building themes such as contentment, optimism, generosity, forgiveness, honesty, kindness, perseverance and service

Materials

- Readers (6) compilations containing stories (97), poems (57), plays (3), recipes (3), crafts (2), science demonstrations (2)
- Novels (Christian historical fiction and Christian classic allegory)
- *Reading Comprehension 4* Skill Sheets
- *Adventures in Other Lands* Speed and Comprehension Reader
- Bible for Scripture reading

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Reading Skills Development

- Read orally and silently with comprehension
- Strive for increasing: accuracy, fluency, phrasing, alertness to punctuation, expression, appropriate speed, comprehension, volume, poise
- Vocabulary Development through words and definitions
- Development of understanding literary types, terms, and concepts
- Exercise critical thinking through inference, evaluation, analyzation, and personal application—using fact and reasoning in the development of a biblical worldview

Literary Concept Development

- Understanding and applying literary concepts: title, author, character, main character, plot, setting, moral, main idea, stanza, summary, symbolism, climax, autobiography, biography, fiction, nonfiction, act, scene, simile
- Summarizing plot
- Comparing works of the same author
- Comparing similar works from different authors
- Predicting endings
- Discerning fact from opinion
- Introducing and utilizing literary concepts—dialogue, excerpt, inference, point of view, idiom, narrator, rhyme scheme, meter, repetition, dialect, metaphor, drama, cast, and stage directions
- Recognizing and analyzing text structures—narrative, informative, sequential, descriptive, problem/solution, compare/contrast, cause/effect
- Determining point of view—first and third person
- Analyzing characters and setting
- Recognizing genres: realistic fiction, historical fiction, fantasy, biographical stories including autobiographies, folktales, fables, legends, fairy tales, parables, Scripture
- Distinguishing fantasy from reality
- Charting information: word webs, Venn diagrams, compare/contrast, predict possible outcomes
- ➤ Creative collaboration activities for developing critical thinking
- Analyzing illustration and photo
- Interpreting figurative language
- Prompts for creative writing
- ➤ Understanding acts/scenes within a play
- Comparing biography/autobiography
- ➤ Analyzing, making inferences and drawing conclusions from descriptive and persuasive text
- ➤ Providing evidence from text to support analysis
- Discerning author's intent
- ➤ Writing narrative, descriptive, compare/contrast, problem/solution, cause/effect informative selections
- ➤ Recognizing themes in literature
- ➤ Recognizing and implementing good creative writing techniques

Readers

- *Once Upon a Story*—14 stories, 12 poems, 1 hymn, with a fanciful theme including BUILD ON IT concepts, reviewing title, author, main character, setting, plot, moral, main idea, fiction/nonfiction, simile, symbolism, summary, introducing literary concept—narrative text structure, point of view; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities; What Would YOU Do? activities including creative ideas for helping others; author/background information prompts, as well as literary type prompts for explanation of terms; story and Christian character themes; silent reading selections; illustration and photo observations; additional enrichment activities include predicting an ending, audio/video demonstrations, creative drawing and writing, charting comparisons, Venn diagrams, charting cause/effect, visual aids, creative collaboration; biblical worldview discussions noted by icons, critical thinking discussions and activities noted by icon, challenging vocabulary and definitions listed at bottom pages of stories; BUILD ON IT literary concept activities: drawing the setting, creative collaboration, writing from different points of view, identifying narrative text structures; graphic organizers challenging character analysis, comparing and contrasting with Venn Diagrams
- *In His Hands*—20 stories, 9 poems, 2 crafts, 1 hymn, Scripture reading, 1 recipe, missionary moment highlights in a variety of styles and literature types with an around the world theme including descriptive/persuasive selections and Scripture selections; BUILD ON IT concepts reviewing skills in recognizing problem solution and cause/

Reading cont. p. 67

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Reading cont.

effect in narrative text; challenging vocabulary and definitions listed at bottom pages of stories; introducing literary concept—Descriptive and Sequential text structure; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities, What Would YOU Do? activities including creative ideas for helping others; author and historical background information prompts, as well as literary type prompts for explanation of terms; story and Christian character themes; silent reading selections; interesting informational facts; illustration and photo observations; A World of Words introduces international words/phrases and their meanings with free audio download; additional enrichment activities include bulletin board project, game, creative writing; biblical worldview discussions noted by icons, critical thinking discussions and activities noted by icon; BUILD ON IT literary concept activities: writing a narrative, writing a descriptive paragraph; creative collaboration, character analysis, graphic organizers including charting plot and climax, comparing and contrasting with Venn Diagrams

- *Song of the Brook*—a 15-chapter Christian historical fiction novel, the sequel to *Secret in the Maple Tree*; reconnect with Hilda and her family as they adjust to life in their new home in Washington state; with the overall theme, "The Best Is Yet to Come"; includes advanced vocabulary words and definitions for vocabulary enrichment; reviews literary concepts—main character, plot, moral, summary, setting, title, author; review activities for character analysis and chapter summarization skills in preparation for book report; Bible application, biblical worldview application and critical thinking discussions; story and Christian character themes; chapter reviews including factual inferential and interpretive comprehension/discussion questions; additional enrichment activities; graphic organizers including cause/effect charting, character descriptions, predict an ending
- *Road Trip East*—21 stories, 11 poems, 1 recipe, 1 hymn, 1 newspaper article, 2 author highlight pages, 1 Scripture reading, highlighting a variety of styles and literature types with a road trip theme traveling the eastern United States featuring a fictional family named the Jacksons; challenging vocabulary and definitions listed in stories at bottom of pages, BUILD ON IT concepts reviewing descriptive/sequential text structure, biography, introducing poetry elements, repetition, rhyme scheme, meter, and compare/contrast text structure; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities, What Would YOU Do? activities including creative ideas for helping others; author and historical background information prompts, as well as literary type prompts for explanation of terms; introducing The Author's Pen to highlight creative writing techniques; story and Christian character themes; silent reading selections; interesting informational facts; illustration and photo observations; Track My Trip for added geographical information; additional enrichment activities include map, game, creative writing, biblical worldview discussions noted by icons, critical thinking discussions and activities noted by icon; BUILD ON IT literary concept activities: writing a rhyming poem, writing a compare/contrast informative story, creative collaboration, graphic organizers including charting cause/effect and problem/solution, comparing and contrasting topics from informative texts, character analysis
- *Fables and Folktales*—17 stories, 12 poems, 2 plays, 2 Scripture readings, highlighting a variety of folk literature including fairy tales, fables, legends retold through poetry and riddle; challenging vocabulary and definitions listed in stories at bottom of pages, as well as expanding knowledge of literary concepts including imagery, idiom, fable, folktale, parable, legend; BUILD ON IT concepts reviewing act and scene, introducing metaphor, meter, cast, and stage directions; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities, What Would YOU Do? activities; The Author's Pen to highlight creative writing techniques; story and Christian character themes; silent reading selections; interesting informational facts; illustration and photo observations; additional enrichment activities; biblical worldview discussions noted by icons, critical thinking discussions and activities noted by icon; BUILD ON IT literary concepts activities; story map, identifying/explaining metaphors, create your own cast, creative writing using imagery, Venn diagram
- *Pilgrim's Progress: Christiana's Journey*—a 14-chapter simplified allegory, the sequel to *Pilgrim's Progress: Christian's Journey*; follows Christiana, Christian's wife as she journeys with her family and friend to the Celestial City; includes advanced vocabulary words and definitions for vocabulary enrichment, map, the Pilgrim's Journey, Background Information from *Christian's Journey*, book report preparation activities; Bible application; story and Christian character themes; factual, inferential, and interpretive comprehension/discussion questions; additional enrichment activities; Bible application, biblical worldview application and critical thinking discussions; Journal to record locations of events, characters, and lessons Christiana learned with correlating scriptural evidence
- *Gifts and Gadgets*—17 stories, 12 poems, 2 newspaper articles, 2 science demonstrations, highlighting a variety of styles and literature types with a scientific theme of inventions and innovative ideas to help improve everyday life, including a focus on the greatest Creator, highlighting some unusual creatures within His creation; Flash Forward modern invention feature; challenging vocabulary and definitions listed in stories at bottom of pages; BUILD ON IT literary concepts highlighting biography and autobiography; introducing first- and third-person point of view and problem and solution text structure; The Author's Pen to highlight creative writing techniques; story and Christian character themes; silent reading selections; interesting informational facts; illustration and photo observations; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities; What Would YOU Do? activities including creative ideas for helping others; author and historical background information prompts, as well as literary type prompts for explanation of terms; additional enrichment activities include map, game, creative writing, biblical worldview discussions noted by icons, critical thinking discussions and activities noted by icon; BUILD ON IT literary concept activities: problem/solution creative writing, problem/solution graphic organizers for creative collaboration
- *Road Trip West*—25 stories, 13 poems, 1 recipe, 1 author highlight page, 1 Scripture reading, highlighting a variety of styles and literature types with a road trip theme traveling the western United States featuring a fictional family named the Daniels; challenging vocabulary and definitions listed in stories at bottom of pages; BUILD ON IT literary concepts introducing dialect and cause/effect text structure; Track My Trip for added geographical information; Think About It, What DO YOU Think?, Think It Through—factual, inferential, and interpretive comprehension/discussion questions; What Can YOU Do? activities, What Would YOU Do? activities including creative ideas for helping others; author and historical background information prompts, as well as literary type prompts for explanation of terms; The Author's Pen to highlight creative writing techniques, story and Christian character themes; silent reading selections; interesting informational facts; illustration and photo observations; additional enrichment activities; BUILD ON IT literary concepts include: creative collaboration, charting cause/effect and problem/solution, comparing and contrasting topics from informative texts, writing a cause/effect informative story

Reading cont. p. 68

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Reading cont.

- *Reading Comprehension 4*—collection of 43 selections including science articles, short stories, historical informative selections, assessment pages for recall, application, evaluation, and analysis for thinking and problem solving; including index of Literary Application of Concepts: main idea, details, character analysis, author purpose, mood, theme, moral, point of view, visualization, setting, prediction, text evidence, sequence, inference, fact/opinion, foreshadow, context clues, text structure, idiom, dialect, hyperbole, story elements, dialogue, shades of meaning
- *Adventures in Other Lands*—28 timed narrative and informative selections with an international theme; 28 quizzes to assess comprehension and speed; 1 game to chart personal progress (while analyzing scores, students can determine their best reading rate to achieve optimal accuracy in comprehension); quiz key

Comprehension, Discussion & Analysis Skills Development

- Answer factual and interpretive for most stories, poems, and other selections
- Answer inferential comprehension and discussion questions for most stories and poems
- Summarize selected readings
- Apply understanding of literary types, terms, and concepts

Language Arts: Language



The work-text *God's Gift of Language 4* gives students the tools necessary to become effective communicators. Through a variety of practice exercises in both grammar and writing, students continue building on the foundational language concepts learned in third grade. Fourth graders will expand their understanding and knowledge of English as they apply the following concepts: sentence structure and writing style; identifying and correctly using all eight parts of speech including action, helping, being, and linking verbs; identifying sentence patterns; subject-verb agreement including contractions and irregular verbs; punctuation rules including commas, periods, colons, quotation marks, and underlining; capitalization rules; and proofreader's marks.

Correlating with both *Writing with Purpose 4* and the Reading 4 program, *God's Gift of Language 4* allows students to translate grammar and mechanics skills into effective communication through writing applications appropriately spaced throughout the year. Students learn paragraph structure, summarization skills, cause/effect, inference, and persuasive writing (fact/opinion), as well as complete book reports (4), and a five-paragraph historical essay.

Added Enrichment

- Four themes (how things work, unusual animals, countries of the world, fine arts)
- Glossary section of language terms
- Writing section including graphic organizers for historical essay, book report forms
- Dedicated homework section
- Take 5! review mini-quizzes
- Continual spiral review and application of previously taught material

Evaluation

- Book reports (4)
- Historical essay
- Weekly quizzes (33)
- Biweekly tests (17)
- All quizzes and tests are included in *God's Gift of Language 4 Quizzes and Tests*

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Grammar

- Capitalization
  - First word in every sentence
  - Days of the week and months of the year (not seasons)
  - Holidays/special days
  - Names referring to God and the Bible
  - Names, titles of respect, the word *I*, family titles used as names
  - Cities, countries, rivers, oceans, map locations
  - First word and every important word in titles
  - ➤ First word of direct quotations
- Punctuation
  - Periods
    - At end of most sentences
    - After initials/titles of respect
    - After abbreviations
  - Question marks at end of interrogative sentences
  - Exclamation points at end of exclamatory sentences
  - Quotation marks
    - Before and after a direct quotation
    - ➤ Around titles of short stories, poems, songs, articles
  - Commas
    - After *yes* or *no* at beginning of sentence
    - After names of people you are speaking to (direct address)
    - Separate town or city from state
    - Separate words or groups of words in a series
    - Separate parts of a date
    - After the greeting and closing of a friendly letter
  - Apostrophes
    - In contractions
    - With *s* to make a singular possessive
    - ➤ With *s* or single apostrophe to make a plural possessive
  - ➤ Colon
    - ➤ Between chapter/verse of Scripture reference
    - Between hour/minute of written time
  - ➤ Underline
    - ➤ Titles of books, newspapers, magazines, plays, works of art
    - ➤ Names of ships, planes, trains
- Sentences
  - Recognize
    - Complete sentences
    - Kinds of sentences: declarative, interrogative, exclamatory, imperative
    - Run-on sentences
    - ➤ Run-together sentences (corrected using introductory words/commas)

Language cont. p. 69

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Language cont.

Grammar cont.

- Complete subject and predicate
- Simple subject and verb (including within contractions, imperative/interrogative sentences)
- Subject-verb agreement (including compound subjects, helping verbs/contractions)

- Diagramming
  - Subject/verb (including compound)
  - Adjectives
  - Adverbs
  - Conjunctions
  - ➤ Sentence patterns (S, AV, DO) (S, LV, PA) (S, LV, PN)
  - ➤ Compound sentences
- Contractions
  - Subject-verb agreement within contractions
  - ➤ Avoiding double negatives
- Parts of Speech
  - Verbs
    - Past, present, future tense
    - Action (with direct objects)
    - Compound verbs/verb phrases
    - ➤ State of being
    - Helping
    - Irregular verbs (past, present, need helping verbs)
    - ➤ Linking verbs (predicate adjective/predicate nominative)
    - Word usage
      - *may/can, teach/learn, take/bring*
      - *lie/lay, sit/set*
      - ➤ *should/would/could*
    - Singular/Plural
      - Plural spelling rules
    - Diagram
  - Nouns
    - Singular/Plural
      - Plural spelling rules
      - Irregular plural nouns
    - Common/Proper
    - Compound
    - Possessive (plural possessives)
    - Diagram (subjects, predicate nominatives, direct objects)
  - Pronouns
    - Define and identify
    - Identify antecedents
    - ➤ Pronoun-antecedent agreement (number/person)
    - ➤ Case: subjective/objective/possessive
    - ➤ Compound
  - Adjectives
    - Answer *What kind, How many, Which one, Whose,* and *How much*
    - Possessive adjectives (nouns/pronouns)
    - Articles
    - ➤ Proper adjectives
    - ➤ Degrees of comparison
    - ➤ Predicate adjectives
    - ➤ Differentiating *good/well*
    - Diagram (modify subject/other nouns, compound, predicate adjectives)
  - Adverbs
    - Modify verbs
    - Answer *How, When, How often, Where*
    - ➤ Avoiding double negatives
    - ➤ Degrees of comparison
    - ➤ Differentiating *good/well*
    - Diagram
  - Conjunctions
    - Define and identify
    - *and, or, but, for, yet*
    - Diagram in compound subjects/verbs,
    - ➤ Diagram in compound modifiers/compliments
  - ➤ Prepositions
    - ➤ Identify 30
    - ➤ Prepositional phrase
    - ➤ Object of preposition
    - ➤ Differentiating preposition/adverb
    - ➤ Interjections
    - ➤ Correct usage
    - ➤ Punctuation rules (exclamation point, comma)
    - ➤ Related capitalization
- Word study and diction:
  - Contractions (34)
  - Troublesome words
    - Correct usage: *There/Their/They're, Your/You're, Its/It's*
    - ➤ *accept/except, affect/effect, beside/besides, between/among, burst/bust, have/of, less/fewer, off of/off, to/and, wait on/wait for*
    - ➤ Use negatives correctly
  - Homonyms/Antonyms
  - Transition words/Introductory words
  - Dictionary skills
    - Alphabetical order
    - Guide words, pronunciation, meaning, spelling, part of speech
  - Thesaurus skills
    - Synonyms

Composition

- Writing sentences using an assigned word or topic
- Correcting fragments
- Correcting run-on/run-together sentences
  - Compound sentences
  - ➤ Complex sentences
- Correcting choppy style by combining short sentences
- ➤ Correcting stringy style by dividing long sentences
- Using proofreader's marks for insert, capitalize, lowercase, delete, spelling error
- Writing
  - Using graphic organizers to identify/organize topics and main points
    - In given paragraph/story/article
    - In researched/original topic to write paragraph
    - Comparison/Contrast
    - Cause/Effect
    - Fact/Opinion
    - Word/Character
  - Book reports (4)
    - Allegory
    - Christian fiction
    - Biography (choice)
    - Fiction (choice)
    - Non-fiction (choice)

Language cont. p. 70

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Language *cont.*

Composition *cont.*

- Facts/Opinions (persuasive paragraph)
- Topic/Concluding sentences
- Cause/Effect
- Time order words
- Parts of a friendly letter, including addressing envelope
- Summarizing
  - Historical text (non-climactic)
  - Informative text (science)
  - Narrative text
- › Historical Essay (5 paragraphs): Using the Writing Process
  - › Research/organize using graphic organizer for each paragraph
  - › Introductory/Concluding paragraphs
  - › Write rough drafts; check/polish, compile, rewrite

Language Arts: Penmanship/Creative Writing



Penmanship: Writing with Purpose 4 contains exercises designed to give fourth graders daily instruction and practice in developing their penmanship skills. Emphasis is placed on neatness and correct letter formation through daily practice. Students will benefit from character building themes and thought-provoking questions through historical biographies and weekly Word Craft activities. Each activity is designed to promote thinking skills, creativity, and class discussion. Activities include the following: name acrostic, idioms, creating a party menu, and completing a boarding pass and passport information.

Creative Writing: Beginning in lesson 87, students apply effective communication skills as writing class focuses primarily on creative writing. A variety of creative writing topics will challenge students' thinking skills, enhance imagination, and prepare students to be skilled writers.

Added Enrichment

- Correlates with Writing Process taught in Language 4
- Decorative writing collection
- Optional collaborative projects
- Extra practice for penmanship review during creative writing focus
- Optional activities for additional creative writing opportunities
- Word Craft activities
- Additional writing exercises included in Language, Reading, History, Science, and Health

Evaluation

- Tests (33)
- Creative Writing selections (5-optional)

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Skills Development

- Handwriting
  - Achieve good writing position:
    - Sitting properly in desk
    - Holding pencil correctly
    - Slanting paper correctly
  - Reviewing correct formation of all lower- and uppercase letters and numbers
  - Writing skills for a good overall appearance:
    - Forming difficult letters correctly
    - Placing letter correctly on lines
    - Writing with consistent spacing between letter and words
    - Slanting letters properly
    - Making smooth connections between letters and difficult letters
    - Using key strokes: wave, loop, oval, mountain
    - Writing using ¾ spacing on wide ruled paper
    - Writing using consistent letter size
    - Demonstrate ability to copy from print to cursive
  - › Historical biographies with inspirational/character building quotes

Creative Writing

- Reviewing and enhancing the writing process: read and gather, think and plan, write and rewrite, check and polish, share your results
- Use proper punctuation and capitalization
- Organize main ideas into graphic organizers
- Writing topic/concluding sentences
- Constructing paragraphs
- › State history reports correlating with History project *My State Notebook*:
  - › State symbol
  - › Cultural heritage
  - › Vacation spot
  - › Interesting facts
- Developing stories using suggested topics
- Writing a process summary using time-order words
- › Multi-paragraph research reports
- Writing a persuasive letter
- Writing an original play
- › Collaborative project: The Island of __
  - › Design island symbols (map, flag, seal).
  - › Characteristics of citizenship, laws
  - › Acceptance speech
  - › Island website
  - › Travel brochure

Penmanship/Creative Writing cont. p. 71

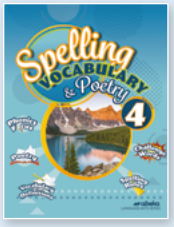
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Penmanship/Creative Writing cont.

Creative Writing cont.

- Creative writing collection
- Guided research reports
- Picture writing prompts
- Story starters
- Stories with alternate endings
- Demonstrating comprehension by engaging in class discussion
- Compositions include these topics:
  - Imaginative pieces
  - ➤ State history research paragraphs
  - ➤ Biographical historical report on state figure
  - ➤ Biographical scientist report
  - "How to" step-by-step process
  - Play: setting, narration, and dialogue
  - ➤ Shape poems
  - ➤ Literary emphasis lessons correlating with *Charlotte's Web*
  - ➤ Compare/Contrast of two and three items

Language Arts: Spelling, Vocabulary & Poetry



Spelling, Vocabulary, and Poetry 4 applies the skills of effective communication by teaching how spelling "works," examining words while applying spelling patterns and phonics. Lists integrate words from everyday life and words from other academic subjects. Words are arranged into four sections: Spelling Rule, Phonics Focus, Vocabulary Words, and Challenge Words. Students will build spelling and vocabulary skills by completing a variety of activities as well as expand spelling knowledge beyond the spelling list. Opportunities to develop a biblical worldview are provided as each list begins with A Word to Live By: a Bible verse and character trait related to a spelling or vocabulary word.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (34) including 4 review lists
  - Total words (836)
  - Vocabulary words and definitions (136)
  - Practice Activities (139)
  - Spelling Bridges Applications (34)
  - Spelling Games (19)
  - Character-building Bible verses
  - Quick-reference spelling rules in text
  - Organized by spelling and phonetic patterns
  - Build on previous concepts
  - Reinforce new concepts
- Teacher Resources:
  - Scope and sequence
  - Sentence banks
  - Teaching Tips
  - Spelling Hints
  - Discussion Starters
  - DTAs available for spelling practice and review
- Poetry
  - Poetry section includes:
    - Introduction to each poem
    - Vocabulary words to know
    - Comprehension questions and critical thinking questions
    - Discussion Starters
    - Enrichment ideas
    - Literary terms
    - Biblical worldview
    - DTAs available to enrich interpretation and appreciation

Evaluation

- Spelling tests (34)

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Spelling and Vocabulary Skills Development

- Master spelling lists including:
  - Words arranged according to patterns
  - Compound words
  - Capitalized words
  - Abbreviations
  - Prefixes
  - Suffixes
  - Root words
  - Double consonants
  - Applying spelling and vocabulary words correctly to complete sentences and paragraphs
  - ➤ Memorize vocabulary definitions
  - Commonly misspelled words
  - Syllable rules
  - Four review lists
  - Applying spelling pattern concepts through daily:
    - Teacher-directed oral practice
    - Independent written practice
    - Exercises and games that reinforce spelling skills
    - ➤ Exercises that reinforce learning
    - ➤ Spelling Bridges to make application of acquired spelling skills
  - Hearing spelling and vocabulary words in example sentence, in order to clearly understand each word's meaning; differentiate between sound-alike words

Learn Spelling Rules:

- *i* before *e* except after *c*
- ➤ *i* before *e* except after *c* or when sounded like *a* as in *neighbor* and *weigh*
- Exceptions to the "*i* before *e* except after *c* rule"
- ➤ Double the final consonant before a suffix beginning with a vowel if (1) the word has only one syllable or is accented on the last syllable and (2) the word ends in a single consonant preceded by a vowel.
- When a root word ends in a consonant and a *y*, change the *y* to *i* before adding a suffix unless it begins with an *i*.
- When a root word ends in a consonant and a *y*, change the *y* to *i* before adding a suffix unless it begins with an *i*.

Spelling, Vocabulary & Poetry cont. p. 72

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Spelling, Vocabulary & Poetry cont.

Learn Spelling Rules: cont.

- When a root word ends in a vowel and a *y*, add the suffix.
- ➤ Double the final consonant in a one-syllable word only if the word ends in one vowel and one consonant. Double the final consonant in a word of two or more syllables if the word ends in one vowel and one consonant and the final syllable is accented.
- ➤ Use a *t* for the *ch* sound when followed by *u-r-e*.
- ➤ If a word has two or more syllables use *c* for the final *k* sound.
- ➤ The letter *q* is followed by *u* and at least one more vowel.
- When a root word ends in a silent *e*, keep the *e* if the suffix begins with a consonant.
- When a root word ends in a silent *e*, drop the *e* if the suffix begins with a vowel.
- ➤ The *f* sound can be spelled *p-h*, *g-h*, or *f*.
- The singular and plural forms of some nouns are spelled the same.
- The plural form of nouns ending in *s*, *x*, *z*, *ch*, or *sh* is formed by adding *-es*.
- The plural form of some nouns ending in *f* or *fe* is formed by changing *f* or *fe* to *v* and adding *-es*.
- ➤ The suffixes *-able* and *-ible* say the same sound.
- ➤ The *sh* sound is sometimes spelled *c-i* at the beginning of any syllable except the first.
- ➤ When *ks* sound is in the middle of a word, it is usually spelled with an *x*.
- ➤ When the long *e* sound comes before a final syllable beginning with a vowel, it is usually spelled with *i*.
- ➤ Some words contain unusual spellings.

Learn Phonics Focus:

- ➤ The long *a* sound can be spelled *a*, *a-i*, *e-a*.
- ➤ The long *e* sound can be spelled *e*, *e-e*, *e-a*, *e-o*.
- ➤ When *y* comes at the end of a word, it usually says the long *e* sound.
- ➤ The long *o* sound can be spelled, *o*, *o-u-g-h*, and *o-a*.
- ➤ The long *i* sound can be spelled with a *y*.
- The sound *aw* in *saw* can be spelled *a-u, a-u-g-h*, and *a-l*.
- The sound *oo* in *tooth* can also be spelled *u*.
- The sound *ow* in *owl* can also be spelled *o-u*.
- Words containing silent consonants
- ➤ The short sound of *i* can be spelled with a *y*.
- The sound *sion* in *missionary* is spelled *sion* even as a suffix.
- The sound *ar* in *stars* can be spelled *a-r*.
- ➤ When *c* comes before *e*, *i*, or *y*, it says the *s* sound.
- ➤ When *g* comes before *e*, *i*, or *y*, it says *j*.
- The sound *tion* in *nation* is spelled *t-i-o-n*.
- The spelling *o-u-g-h* represents many sounds.
- The letters *a-r* at the end of words with two or more syllables says *er*.
- ➤ The sound *er* at the end of words can be spelled *e-r*, *a-r*, or *o-r*.
- The syllable *p-r-e* can be pronounced *prĕ* or *prē*. The syllable *p-e-r* can be pronounced *pur* or *per*.
- ➤ The short *o* sound can be spelled *a-u*.
- The letters *g-h* can be silent or say the *f* sound.
- ➤ The letters *d-e* and *d-i* at the beginning of a word can sound alike.
- ➤ In French words, the final *t* is silent.
- ➤ Long *u* can be spelled *u-e*, *e-w*, *u_e*, and *u*.

Worksheet Activities

- Identifying root words
- Dividing words according to syllables
- Alphabetizing to the third and fourth letter
- Identifying rhyming words
- Proofreading and using proofreader's marks
- Finding the correct antonym and synonym
- Solving puzzles using spelling words
- Using spelling and vocabulary words to complete sentences
- Identifying variant spellings of the same sound
- Defining vocabulary words
- Identifying homonyms
- Applying spelling rules to complete words
- Creative writing with spelling and vocabulary words
- Adding suffixes correctly
- Using words in biblical context

Poetry Skills Development

- ➤ Memorize 8 lyrical poems
- Develop appreciation of poetry
- ➤ Introduce personification, rhyme scheme, imagery, onomatopoeia, and other literary terms.
- Perform before an audience.
- Recite in unison.
- Develop appropriate expression and volume.
- Learn the meanings of new and unfamiliar words.
- Improve comprehension through discussion.
- ➤ Critical thinking questions to stimulate reasoning
- ➤ Discussion Starters to facilitate biblical application
- ➤ Enrichment ideas to generate interest in the message of the poem

Arithmetic



The colorful daily worksheets in *Arithmetic 4* provide practice over familiar concepts and new material. Building on a solid foundation of the base ten system and the four basic processes, students expand arithmetic skills including multiplying and dividing by multi-digit numbers, estimation, interpreting graphed data, writing decimals as fractions, and simple geometry. A major emphasis is on working with proper and improper fractions; adding, subtracting, and multiplying fractions; and finding the least common denominator. Students will continue to solve multi-step word problems which encourage the practical application of concepts being learned.

Added Enrichment

- "Clever Cranium" higher-level thinking activities
- Thematic units: how things work, unusual animals, tiny countries, state fairs
- Review games
- Teaching Tips
- Enrichment activities

Evaluation

- Skills development exercises in each lesson (136)
- Biweekly tests (17)
- Biweekly quizzes (34)

➤ **RED** *indicates first introduction of content.*

Numbers

- Base ten: Place value to 100,000,000; money
- ➤ Decimals to thousandths place
- Writing numbers:
  - From dictation to 100,000,000 place
  - From number words
  - From expanded form
- Even/odd numbers
- Roman numerals:
  - Value of I, V, X, L, C, D, M
  - ➤ Reading and building numerals 1–3,000
  - ➤ More complex rules for forming Roman numerals
- >, <, =, ≠
- Number sentences:
  - With unknowns
  - Greater than/less than
  - Order of operations (parentheses)
- Number sequences
- Rounding to nearest ten/hundred
- Rounding to nearest dollar
- ➤ Prime/composite numbers
- ➤ Mixed numbers
- ➤ Squared numbers/square root
- ➤ Annexing zeros to add/subtract decimals

Addition

- Addition families 1–18: mixed order
- Timed mastery
- Terms: addend, sum
- Horizontal
- Missing addend/sign
- Rounding addends to estimate sums
- Word problems
- Money
- Properties: commutative/associative
- Inverse operation of addition/subtraction
  - Related facts
  - Check by addition
- ➤ Mental arithmetic: problems combining addition, subtraction, multiplication, and division up to 7 numbers
- Carrying to any place value
- Addends: column addition
- Averaging
- Number sentences: with unknown
- Fractions
  - With common denominators
  - ➤ With uncommon denominators
- Measures
  - Customary
  - ➤ Metric
- Order of Operations (parentheses)
- ➤ Decimals

Subtraction

- Subtraction families 1–18: mixed order
- Timed mastery
- Terms: minuend, subtrahend, difference
- Horizontal
- Missing minuend, subtrahend/sign
- Rounding minuend/subtrahend to estimate difference
- Word problems
- Money
- Inverse operation of addition/subtraction
  - Related facts
  - Check by addition
- ➤ Mental arithmetic: problems combining addition, subtraction, multiplication, and division up to 7 numbers
- Subtracting with any number of digits, money
- Borrowing from any number in any position
- Fractions
  - With common denominators
  - ➤ With uncommon denominators
  - ➤ With borrowing from ones place
- Number sentences: with unknown
- Measures
  - Customary
  - ➤ Metric
- Order of operations (parentheses)
- ➤ Decimals
  - ➤ Annexing zeros

Multiplication

- Multiplication facts: 0–12 tables
- Timed mastery
- Terms: factor, partial factor, product
  - ➤ Rounding factors to estimate product
- Word problems
- Money
- Properties: commutative/associative
  - Related facts (addition, subtraction, multiplication, division)
  - Check by multiplication
- Inverse operation of multiplication/division
- ➤ Identity/zero properties
- ➤ Mental arithmetic: problems combining multiplication, division, addition, and subtraction up to 7 numbers

Arithmetic cont. p. 74

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Multiplication *cont.*

- Multiplying:
  - With any number of digits in first factor
  - With carrying
  - ➤ With up to 3 digits in second factor
- Number sentences: with unknown
- Order of Operations (parentheses)

➤ Fractions
- ➤ With common denominators
- ➤ With uncommon denominators
- ➤ Use cross multiplication to check equivalent fractions
- ➤ Using cancellation
- ➤ With mixed/whole numbers

➤ Factors
- ➤ Factoring
- ➤ Common factors, greatest common factor (GCF)

➤ Multiples
- ➤ Identify multiples
- ➤ Common multiples, least common multiple (LCM)

Division

- Division facts: 0–12
- Timed mastery
- Terms: dividend, divisor, quotient
- Missing numbers
- Averaging

➤ Rounding dividend to estimate quotient
- Word problems
- Money
- Inverse operation of multiplication/division
  - Related facts
  - Check by multiplication

➤ Mental arithmetic: problems combining division, multiplication, subtraction, and addition up to 7 numbers
- Dividends: any number of digits, money
- Divisors: 1 and 2 digits
  - ➤ Two-digit divisors with 5–9 in ones place
  - 5 steps of division

➤ 6 steps of division
- ➤ Estimating quotients/divisors
- Remainder written as fraction

➤ Divisibility rules: 2, 3, 4, 5, 9, 10
- Number sentences: with unknown
- Order of Operations (parentheses)

Fractions

- Parts of a whole
- Parts of a group
- Terms: numerator, denominator

➤ Unit fractions: identify/compare
- Word problems
- Number words
- Reading and writing fractions

➤ Decomposing fractions
- Types:
  - Proper, mixed, improper
  - ➤ Write as a whole or mixed number
- Reducing:
  - ➤ Finding least common denominator
  - ➤ Answers to lowest terms using greatest common factor
- Addition:
  - With common denominators
  - ➤ With uncommon denominators
- Subtraction:
  - With common denominators
  - ➤ With uncommon denominators
  - ➤ With borrowing

➤ Multiplication
- ➤ Using cancellation
- ➤ With whole or mixed numbers
- Equivalent fractions
  - ➤ Using cross multiplication to check

Decimals

- Money
  - Use of a dollar sign/decimal point in addition, subtraction, multiplication, division of money

➤ Decimal point

➤ Reading and writing: writing a decimal as a fraction

➤ Place value to tenths, hundredths, thousandths places

➤ Addition and subtraction
- ➤ Annexing zeros for addition/subtraction

Problem Solving & Applications

- Word Problems:
  - ➤ Solving strategies based on context
  - ➤ Numberless word problems
  - Missing/unnecessary information
  - Addition, subtraction, multiplication, division
  - Fractions, money, measures
  - Finding averages
  - ➤ Decimals
  - ➤ Geometry: area, perimeter using formulas
  - Graphs
  - Multi-step problems
  - Estimating answers

➤ Applications for more comprehensive understanding of concepts: fractions, measures, geometry, spatial awareness, analogies, deductive puzzles, logic puzzles

Time

- Table of time:
  - Second, minute, hour, day
  - Week, year, leap year
  - ➤ Decade, score, century, millennium
- Elapsed time

Money

- Value of all coins, bills, combinations of coins/bills
- Symbols: dollar sign, decimal point
- Word problems with mixed operations
- Addition, subtraction, multiplication, division
- Making change

➤ Counting back change

Measures

- Temperature:
  - Reading and writing
  - Term: degrees
  - Celsius and Fahrenheit
  - Reference temperatures: Freezing and boiling points of water; normal body temperature

Arithmetic cont. p. 75

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Measures *cont.*

- Linear:
  - Customary units: inch, foot, yard, mile
  - Metric system: meter, kilometer, hectometer, decameter, decimeter, centimeter, millimeter
  - ➤ Measure to nearest eighth inch/centimeter
- Mass:
  - Customary units: ounce, pound, ton
  - Metric system: gram, kilogram, hectogram, decagram, decigram, centigram, milligram, metric ton
- Capacity:
  - Customary liquid units: teaspoon, tablespoon, fluid ounce, cup, pint, quart, gallon
  - Customary dry units: pint, quart, peck, bushel
  - Metric system: liter, kiloliter, hectoliter, decaliter, deciliter, centiliter, milliliter
- Order measures from least to greatest
- Convert customary/metric measures within same system
- Measurement equations with converted customary/metric measures within same system
- Multi-step measurement word problems

Graphing, Statistics & Probability

- Interpret, compare, and construct graphs
  - Horizontal/vertical bar graphs
  - Pictographs
  - Line graphs
  - ➤ Circle graph (no constructions)
  - ➤ Dot plots
- Tally marks
- Scale drawing/maps
- Statistics
  - ➤ Mean, mode, median, range

Geometry

- Plane figures, closed figures, polygons:
  - Quadrilaterals:
    - Parallelogram: rectangle, square, rhombus
    - Trapezoid, kite
  - Pentagon, hexagon, octagon, decagon
- Triangles
  - ➤ Right, isosceles, equilateral
  - ➤ Similar, congruent figures
  - Symmetry
  - ➤ Transformations: slide, flip, turn
  - Terms: vertex, side
  - Symbols: hash marks
- Solid figures: sphere, cube, pyramid, cone, cylinder, rectangular prism
  - Terms: face, edge, vertex, height, width, length
- Perimeter/area
  - ➤ Perimeter of square/rectangle using formulas
  - Perimeter of polygon, adding length of sides
  - ➤ Area of square/rectangle using formulas
- Circle
  - ➤ Arc, radius, diameter, center
  - ➤ 360°
- Lines
  - ➤ Naming lines using points/letters
  - Parallel lines
  - Perpendicular lines
  - ➤ Intersecting lines
  - ➤ Line segment
  - ➤ Point
  - ➤ Ray
- Angles
  - ➤ Naming angles using points, vertex, letters
  - ➤ Obtuse, right, acute
  - ➤ Measure to nearest degree using protractor

Pre-Algebra

- Missing addend, minuend, subtrahend
- Word problems
- Order of Operations (parentheses)
- Solve for the unknown number in an equation

History & Geography



The History of Our United States is an interesting, narrative approach to an age-appropriate study of American history. Beginning with the settlement of the thirteen colonies, students explore how the United States became a free nation, formed a government, and grew to be a powerful world leader. Twenty chapters walk students through America's timeline of successes and struggles that shaped our nation. Important people and events in America's story will inspire students to stand for right, respect their country and its people, and love their native land.

Added Enrichment

- Chapters include:
  - Important terms: names, places, events, dates
  - Maps illustrating locations of early colonization to recent historical events
  - Timelines: at the beginning of each chapter
  - Comprehension Checks: at the end of each lesson, including questions that evoke critical thinking skills
  - Chapter Checkups: at the end of each chapter
- Special feature boxes include presidential homes and libraries, fascinating people, and interesting facts.
- An introduction to each amendment to the Constitution
- An introduction to economics in the United States
- Geography Mastery including geographic terms, U.S. geographic study, five regions of the United States, her territories, and coordinating maps
- Geography Skills worksheets
- World Geography study (2 weeks) in preparation for Old World Geography
- *My State Notebook* for individual state study (6 weeks)

Evaluation

- Quizzes (24)
- Tests (9)
- 9-weeks exam (4)

➤ **RED** *indicates first introduction of content.*

U.S. History Study

- ➤ Reasons for exploration of New World: need for natural resources; overcrowded and polluted cities of Europe; search for riches
- ➤ First Americans probably reached New World by land bridge between Asia and North America
- Christopher Columbus claimed New World for Spain
- ➤ New World called America to honor Amerigo Vespucci
- ➤ England, France, and Spain raced for control of New World
- ➤ John Cabot: claimed East Coast of North America for England
- ➤ Hernando Cortes: claimed Mexico for Spain
- ➤ Jacques Cartier: claimed Canada for France
- ➤ Explorers brought disease to America, but also introduced horses that improved Native American way of life
- ➤ St. Augustine, FL: first permanent settlement in America
- ➤ Roanoke Island: failed English colony led by John White
- Jamestown: first permanent English settlement
- Pilgrims founded Plymouth Colony in 1620
- ➤ Puritan Work Ethic: encouraged man to serve God by doing his best at his work
- ➤ Thirteen original colonies: Virginia, Massachusetts, Rhode Island, New Hampshire, New York, Connecticut, Maryland, Delaware, New Jersey, Pennsylvania, North Carolina, South Carolina, Georgia
- ➤ Three divisions of first thirteen colonies: New England, Middle, Southern
- ➤ Roger Williams: founder of Rhode Island, first colony to offer complete religious freedom
- ➤ Captain John Mason: founded New Hampshire
- ➤ John Winthrop: founder of Connecticut
- ➤ Thomas Hooker's Fundamental Orders of Connecticut became a pattern for the U.S. Constitution
- ➤ New York colony claimed by Holland, France, England
- ➤ Delaware settled by Dutch; New Sweden first successful settlement
- Pennsylvania settled by William Penn; Penn's Charter of Privileges was its plan of government
- ➤ New Jersey colony claimed by England, offered religious and political freedom
- ➤ Virginia government called House of Burgesses
- ➤ Slavery in colonies: began in Virginia in 1619
- ➤ The Carolinas became North and South Carolina; first permanent settlement was Charles Town
- ➤ Maryland founded by George Calvert; offered religious freedom to Catholics
- ➤ Georgia founded by James Oglethorpe to help English debtors; first permanent settlement was Savannah
- Everyday life in the colonies: homes, work, worship
- Colonial school: hornbook, *New England Primer,* dame school, old field school, Harvard College
- ➤ Colonial industries: fishing, farming, hunting, forestry
- ➤ The Great Awakening: spiritual revival in colonies; preachers included Jonathan Edwards and George Whitefield
- ➤ Isaac Watts: hymnwriter during Great Awakening
- French and Indian War: fought between France and England over land in America
- ➤ Colonist George Washington: became guide and adviser to English General Edward Braddock during French and Indian War
- King George III: created Stamp Act to tax only American colonists
- Boston Massacre: resulted in England dropping all taxes except tea tax
- Boston Tea Party: carried out by Sons of Liberty
- ➤ Intolerable Acts: created to punish citizens of Boston
- ➤ First Continental Congress: met to declare rights of colonists
- ➤ Patriots: colonists who stood against England
- ➤ Loyalists: colonists who remained loyal to England
- Patrick Henry: "Give Me Liberty or Give Me Death" speech
- Paul Revere: rode to warn Lexington and Concord of British troops
- ➤ 1775: Beginning of American War for Independence, "shot heard 'round the world"
- Second Continental Congress: decisions made to prepare the colonies for the war to come
- ➤ Ethan Allen, Green Mountain Boys: capture of Fort Ticonderoga
- ➤ Battle of Bunker Hill: showed British that colonies were ready to fight
- ➤ Olive Branch Petition: offered by colonies to create peaceful agreement with England
- ➤ Hessians: hired by British to fight against colonists
- Thomas Jefferson: main author of Declaration of Independence
- July 4, 1776: Declaration signed by John Hancock
- Famous war battles: Brooklyn, Saratoga, Valley Forge, crossing of the Delaware at Trenton, Yorktown

History & Geography cont. p. 77

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

U.S. History Study cont.

- Patriot spies: James Armistead, Culper Spy Ring, Nathan Hale
- Creation of American flag
- George Rogers Clark: won control of northwest frontier during War for Independence
- John Paul Jones: captain of *Bonhomme Richard*; called "Father of the American Navy"
- General Lord Charles Cornwallis: British army leader
- Nathanael Greene: Colonial general who led troops in Southern colonies in the Battle of Kings Mountain
- Battle of Yorktown: last major battle in War for Independence
- 1781: end of American War for Independence
- Treaty of Paris: treaty in which England gave up her thirteen colonies
- Articles of Confederation: first plan of government for United States
- Constitutional Convention: George Washington (president of convention)
- James Madison: known as Father of the Constitution
- 1787: Constitution adopted
- Three branches of U.S. government: Legislative, Executive, Judicial
- Bill of Rights: first 10 amendments to the Constitution
- Constitutional republic: United States' form of government
- President George Washington: first U.S. president; served two terms
- Three capitals of the United States: New York City; Philadelphia; Washington, D.C.
- Daniel Boone: built Wilderness Road, Kentucky; Boonesborough named in his honor; "great pathfinder"
- Settling the Northwest Territory, Land Ordinance of 1785, Northwest Ordinance of 1787
- Ohio Territory: first area settled in Northwest Territory
- Louisiana Purchase: President Thomas Jefferson's purchase of land from France
- Lewis and Clark: explored Louisiana Territory with Corps of Discovery, Sacagawea
- Zebulon Pike: explored upper Mississippi River area
- War of 1812: 1812–1815; war between United States and Britain over shipping rights
- Battle of Lake Erie: Captain Oliver Hazard Perry led U.S. Navy to victory
- Battle of Fort McHenry: Francis Scott Key, "The Star-Spangled Banner"
- Battle of New Orleans: General Andrew Jackson, nicknamed "Old Hickory," defeated British
- Cumberland Road: first federally funded highway
- Erie Canal: connected Great Lakes to New York City and Atlantic Ocean; improved shipping
- Purchase of Florida: President James Monroe
- Missouri Compromise: made slavery illegal in some areas of U.S. territories
- Monroe Doctrine: President Monroe's policy stating the Western Hemisphere was not open to more colonization; U.S. would not interfere with governments of European countries
- Peter Cartwright: circuit riding preacher who helped start the Second Great Awakening
- Charles Finney: best-known evangelist during Second Great Awakening
- Richard Allen: former slave who founded African Methodist Episcopal Church
- Adoniram Judson: Father of American Missions
- Lott Carey, Colin Teague: American missionaries to Africa
- President Andrew Jackson: first president from Democratic party
- Indian Removal Act, Trail of Tears: relocated Cherokee nation to Oklahoma
- Battle of the Alamo: Davy Crockett, Santa Anna
- Battle of San Jacinto followed Battle of the Alamo; led by Sam Houston and won by Texas army
- Mexican War: fought over land that Texas and Mexico both claimed
- Mexican Cession: agreement ended Mexican War and gave United States a large area of western land
- Gadsden Purchase: land from Mexico completed the continental United States
- Webster-Ashburton Treaty: established a northeastern border between the United States and Canada from Maine to Minnesota
- Oregon Territory settled; Oregon Treaty created the United States-Canadian border
- Oregon Trail started in Missouri; led settlers to the West
- Marcus and Narcissa Whitman: medical missionaries to Native Americans
- California Gold Rush, forty-niners, ghost towns
- American textbook writers: Noah Webster and William H. McGuffey
- Inventors of tools and machines: Eli Whitney, John Deere, Cyrus McCormick, Samuel Slater, James Watt
- Transatlantic Slave Trade Act: put a stop to bringing enslaved people to America, but did not end slavery
- Abolitionist Frederick Douglass; Harriet Beecher Stowe wrote *Uncle Tom's Cabin*
- Underground Railroad led to free northern states; Harriet Tubman led over seventy people to freedom
- Compromise of 1850: set of bills to balance power in the Senate; included Fugitive Slave Act
- Dred Scott Decision: declared slavery legal in new territories
- Kansas-Nebraska Act: admitted Kansas as a slave state and Nebraska as a free state
- President Abraham Lincoln: first president from Republican party
- Secession/formation of Confederate States of America
- Jefferson Davis: president of Confederate States of America
- American Civil War: 1861–1865
- Union generals: General George McClellan, General Ulysses S. Grant
- Confederate general: Robert E. Lee
- Fort Sumter, Charleston, South Carolina: American Civil War began
- Richmond, Virginia: permanent capital of Confederacy
- Famous Civil War Battles: Bull Run, Antietam, Gettysburg, Vicksburg
- Battle of ironclad ships: *Monitor* and *Merrimack*
- Lincoln's Emancipation Proclamation: freed slaves in states that had seceded from the Union
- Gettysburg Address: Lincoln's speech to honor fallen at Gettysburg battlefield
- Sherman's march to the sea
- Appomattox Court House: location where Lee surrendered to Grant, ending Civil War, 1865
- Thirteenth Amendment: constitutional amendment outlawing slavery in the United States
- Lincoln's assassination
- Reconstruction: a period of rebuilding Southern states after the Civil War
- Freedmen's Bureau: formed to provide help for freed slaves and poor Southern families after the Civil War
- Republican party split into Radicals/Conservatives
- Civil Rights Act of 1866: declared all persons born in the United States, except for Native Americans, to be citizens
- Reconstruction Act of 1867: divided former Confederate states into five military districts
- Fourteenth Amendment: declared freedmen were citizens of the United States

History & Geography cont. p. 78

History & Geography cont.

U.S. History Study cont.

- Discrimination: unjust treatment of another person because of a category such as race or skin color
- Impeachment of President Andrew Johnson; found not guilty
- Carpetbaggers and scalawags: often took advantage of poor Southerners
- Fifteenth Amendment: declared that no man could be kept from voting because of "race, color, or previous condition of servitude"
- President U. S. Grant: created Yellowstone National Park, National Weather Bureau, Department of Justice
- Sharecroppers: worked for a land owner and shared in the profits
- Compromise of 1877: ended Reconstruction
- Booker T. Washington: Tuskegee Institute
- Segregation and Black Codes: caused more struggles for freedmen
- Black Americans in government: Hiram Rhodes Revels, Joseph Rainey
- Homestead Act: passed by Lincoln during Civil War to encourage Americans to move West
- Great Plains: area in central United States where many went under Homestead Act
- Pony Express: mail delivery between Missouri and California using horses and riders
- Samuel Morse: inventor of telegraph
- Transcontinental railroad: built by Union Pacific Company and Central Pacific Company; railroad that connected the continent from coast to coast
- Promontory Summit, Utah: location of the golden spike driven into the last rail of transcontinental railroad
- Battle of Little Bighorn (Custer's Last Stand): battle between Sioux led by Chief Crazy Horse and U.S. soldiers led by General George Custer in which all U.S. soldiers were killed
- Dawes Act: broke up tribal lands and offered them to U.S. citizens or Native American families who would take up farming or ranching
- Wounded Knee Massacre: event in which over 200 members of the Lakota tribe were killed by U.S. army
- Indian Reservation: U.S. government set aside areas of land for Native Americans
- Indian Citizenship Act: declared that Native Americans were citizens of the United States
- Indian Reorganization Act: made large areas of land available to Native Americans
- American cowboys: cared for cattle owned by ranchers
- Cattle drive: herded cattle to cow towns by way of the Chisholm Trail
- Range wars: disagreements between ranchers and farmers over grazing rights
- Oklahoma Land Rush: event that allowed settlers to claim Unassigned land in Oklahoma territory
- International Meridian Conference: established time zones around the world
- U.S. Immigration stations: Ellis Island, east coast; Angel Island, west coast; coastal cities
- Chinese Exclusion Act: written to prevent Asian laborers from entering United States
- Dwight L. Moody: started Sunday school movement in Chicago
- Billy Sunday: famous baseball player, evangelist
- Spanish-American War: fought between Spain and the United States to set Cuba free from Spain; began after sinking of USS *Maine*
- Admiral George Dewey: led U.S. naval fleet that destroyed Spain's Pacific fleet
- Theodore Roosevelt: led Rough Riders to victory at Battle of San Juan Hill
- Philippines, Guam, Puerto Rico became territories of the U.S. after Spanish-American war
- Panama Canal: Isthmus of Panama, canal started by France, finished by U.S.; connects Atlantic and Pacific Oceans
- Deadly U.S. disasters in the early 1900s: Johnstown Flood, Galveston Hurricane, San Francisco Earthquake
- *Titanic*: sunk after hitting iceberg, over 1,500 lives lost
- American pastimes: New York's Coney Island called a Poor Man's Paradise; football; baseball
- Industrial Age: time of great progress in the way goods were made
- American inventors: Robert Fulton, Alexander Graham Bell, Thomas Edison, Henry Ford, Garrett Morgan, Orville and Wilbur Wright, Robert Goddard
- Andrew Carnegie and John D. Rockefeller: oil and steel millionaires who gave away much of their wealth
- Chicago, Illinois: first center of skyscraper architecture
- Child labor laws: put an end to children working long hours in dangerous jobs
- First U.S. subway system: built in Boston, Massachusetts
- Progressive Movement: a time between 1900 and 1920 when government focused on being more efficient, meeting the needs of voters
- Theory of evolution: began to be taught in some schools and colleges during Progressive Movement
- The Great War, later called World War I: 1914–1918
- Kaiser Wilhelm II: ruler in Germany who wanted more power; strengthened his army and navy
- Austria's Archduke Franz Ferdinand and wife assassinated; World War I began when Austria declared war on Serbia
- Central Powers: Germany, Austria-Hungary, Turkey, Bulgaria
- Allied Powers: Great Britain, France, Belgium, Russia, (United States later)
- Neutral nations: countries that did not participate in war
- German U-boats: submarines sank *Lusitania* passenger ship
- Zimmermann Note: Germany asked Mexico to help if United States entered the war
- President Woodrow Wilson asked Congress to declare war in 1917
- Selective Service Act: instituted the draft of men 21–30 years of age
- General John Pershing: general of the U.S. armies
- Women's role in war: munitions, factory assembly lines, nurses, ambulance drivers, etc.
- Children's role in war: scrap metal drives, raise pigs or sheep, help with gardens, gather wood, knit, help at home
- United States Food Administration: formed to provide food for troops, allies, citizens
- Bolshevik Revolution took Russia out of war; Vladimir Lenin and Communism; formation of Soviet Union (USSR)
- Eddie Rickenbacker: famous American flying ace
- Battle of Argonne Forest: deadliest battle in U.S. history
- 1918 Flu Pandemic: took more American lives than those lost in WWI
- Treaty of Versailles: officially ended WWI
- Roaring Twenties: decade after WWI
- National Broadcasting Company (NBC): first public radio station
- 1920s Americans began buying on credit
- Babe Ruth: most popular baseball player of 1920s
- Women's Suffrage: gained right to vote (19th Amendment) through efforts of Elizabeth Cady Stanton, Susan B. Anthony
- NAACP: formed to encourage racial equality
- The Great Migration: time when many Black Americans moved to less segregated north
- Harlem Renaissance encouraged Black culture and equality in arts, literature, music
- American Civil Liberties Union (ACLU) and the Scopes Monkey Trial
- Great Depression: occurred after the stock market crash of 1929

History & Geography cont. p. 79

History & Geography cont.

U.S. History Study cont.

- Stocks: company shares of ownership traded through the stock market
- Public works program: started by President Herbert Hoover to provide jobs; built Boulder Dam
- Dust Bowl: area of the Great Plains that experienced severe drought during time of Great Depression
- Walt Disney: created animated cartoons of Mickey Mouse
- New Deal: President Theodore Roosevelt's recovery program for Americans during Great Depression; created jobs through Tennessee Valley Authority, Works Progress Administration, Civilian Conservation Corps
- Social Security Act: passed by Congress during Great Depression, creating fund for employees to contribute to in preparation for retirement
- American Economics: special section that teaches basic principles of economics, differences between capitalism and socialism, introduces economic terms; includes biblical money wisdom
- World War II: 1939–1945
- Communism: built on ideas of Karl Marx
- Russia: Communism under Joseph Stalin
- Italy: Fascism under Benito Mussolini
- Germany: National Socialism, Nazi government under Adolph Hitler
- Japan: Militarism under Emperor Hirohito, Tojo
- German concentration camps; Holocaust took millions of Jewish and other lives
- Axis Powers: Italy, Germany, Soviet Union, Japan
- Allied Powers: France, Great Britain (also United States and Canada)
- Battle of Britain: German air raids over London
- Winston Churchill: British prime minister during World War II
- Germany's attack on the Soviet Union: led Russia to join Allies
- World War II involved three continents: Europe, Africa, and Asia
- Japanese attack on Pearl Harbor: brought United States into the war
- Women join military: World War II
- War effort at home: victory gardens, ration books, scrap drives
- General Dwight D. Eisenhower, Allied commander in Europe
- Douglas MacArthur: Allied commander in the Pacific
- Colonel Jimmy Doolittle: led air attack over Japan in the Doolittle Raid
- General George S. Patton: led Allied forces in Italy
- D-Day: Allied troops landed on the beaches of Normandy, France
- Fighting Red Tails: Black American squadron led by Colonel Benjamin O. Davis
- Battle of the Bulge: one of the greatest battles of World War II
- Battle of the Coral Sea, Battle of Midway, Iwo Jima: important battles in the Pacific
- Atomic bomb: President Harry S. Truman ordered bomb dropped on Japanese cities Hiroshima and Nagasaki to end World War II
- United Nations: peace-keeping association formed after World War II
- Cold War between United States and USSR: threat to use nuclear weapons
- Iron Curtain: term that describes Communist border
- Truman Doctrine: stated the United States would use its power to stop the Communist overthrow of a free country
- East and West Germany, East and West Berlin, Berlin Wall: Communist and free areas in Germany; led to Berlin Airlift to provide food to West Berlin
- National Security Act: created the Central Intelligence Agency (CIA)
- Marshall Plan: helped European countries recover from World War II
- North Atlantic Treaty Organization (NATO) formed to defend member countries against a Communist invasion
- Korean War: United Nations sent army to defend South Korea against Communism
- General Chappie James: Korean War hero and first Black four-star general in U.S. Air Force
- Formation of National Aeronautics and Space Administration (NASA)
- Civil Rights Act of 1957: protected Black Americans' right to vote
- Cuban Missile Crisis: Monroe Doctrine allowed President John F. Kennedy to succeed in removing Soviet weapons from Cuba
- Peace Corps: established by President Kennedy
- John Glenn: first American astronaut to orbit Earth
- Kennedy assassination: by Lee Harvey Oswald
- Vietnam War: United States war to help free South Vietnam from Communist North Vietnam
- Medicare Bill: passed by President Lyndon Johnson to provide health insurance to senior citizens
- Billy Graham: evangelist who held large meetings that were televised around the world
- Civil Rights Movement: time of important gains in Black Americans' civil rights during 1950s and 1960s
- *Brown v. Board of Education of Topeka:* desegregation of public schools
- Rosa Parks, Montgomery bus boycott
- Dr. Martin Luther King, Jr., peaceful civil rights protests: freedom rides, sit-ins, March on Washington
- Southern Christian Leadership Conference: formed to peacefully ensure civil rights for Black Americans
- Several laws passed regarding equality: Civil Rights Act of 1964, Voting Rights Act of 1965, Fair Housing Act of 1968
- Assassination of Dr. Martin Luther King, Jr.
- Thurgood Marshall: first Black American Supreme Court Justice
- Rights for Native Americans: Indian Civil Rights Act
- MMR and polio vaccine developed
- Pacemaker: device developed to control heart rhythm
- USS *Nautilus:* first nuclear-powered submarine
- First U.S. atomic power station: Shippingport Atomic Power Station
- Alan Shepard: first American in space
- Apollo 11: first moon landing
- Neil Armstrong: first man on the moon
- Development of computer mouse, early internet
- 1962 Supreme Court ruling regarding school-led prayer in public schools; beginning of Christian school movement
- President Richard Nixon brought end to Vietnam War
- SALT talks: Nixon met with Soviet leader Leonid Brezhnev about weapons
- Watergate Affair: Nixon resigned; first president to resign from office; Gerald Ford became president
- President Jimmy Carter: Camp David Accords to form peace between Egypt and Israel
- Carter Doctrine: U.S. military would use force to defend U.S. interests in Persian Gulf
- Iran Hostage Crisis during Carter presidency
- New Energy Resources: Department of Energy formed
- U.S. Economy's Inflation and Recession; Arab Oil Embargo, Trans-Alaska Pipeline
- Inventions of email, cell phone, MRI
- Advances in Space Travel: Apollo 13, *Voyager 1*, *Voyager 2* space probes
- Traditional Values: James Dobson, Focus on the Family; Jerry Falwell, Moral Majority
- Reaganomics: President Ronald Reagan's plan to help America become stronger financially

History & Geography cont. p. 80

History & Geography cont.

U.S. History Study cont.

- Sandra Day O' Connor: first female on Supreme Court: Connor; appointed by Reagan
- Development of B-1 bomber, Peacekeeper missile
- American troops stopped Cuba's invasion of Grenada
- Reagan Doctrine: belief that a strong military could stop Communist takeovers
- Black Monday: event in 1982 that started a national recession
- Martin Luther King, Jr., Day: federal holiday honoring King; established by Reagan
- Space Shuttle *Challenger*: explosion after launch
- Air Force built Stealth Bomber, radar-resistant plane
- Robert Jarvik: invented artificial heart
- Steve Jobs, Bill Gates: Apple and Microsoft personal computers
- Mount St. Helens volcanic eruption, earthquake: deadliest volcanic eruption in U.S. history
- Exxon Valdez Oil Spill: covered over 1,000 miles of Alaskan shoreline, killed thousands of ocean animals
- San Francisco Earthquake of 1989
- Chemical Weapons Accord: agreement of Bush and Gorbachev to stop producing chemical weapons and destroy existing ones
- Commonwealth of Independent States: group of former Soviet countries
- Saddam Hussein: Iraq's dictator who began invasion of other countries; Operation Desert Storm began; Persian Gulf War followed
- General Colin Powell, General Norman Schwarzkopf: military leaders of Persian Gulf War
- North American Free Trade Agreement (NAFTA): leaders of United States, Canada, and Mexico agreed to charge no trade fees between their countries
- Oslo Accords: peace agreement between Israel and Palestine that President Bill Clinton helped to bring about
- Iraq Liberation Act: proposed by Congress and signed by Clinton, stated that the United States should support removing Hussein from power
- Women in Leadership: Janet Reno, Ruth Bader Ginsburg, Madeline Albright, Hillary Clinton
- Oklahoma City Bombing
- al-Qaeda, Osama bin Laden: linked to terrorist bombings at U.S. embassies, USS *Cole*
- Hubble Space Telescope: launched to orbit Earth and to send images of space
- *Mars Pathfinder* and rover landed on Mars
- John Glenn return to space at age 77 on *Discovery*
- Advances in Computer Technology: World Wide Web, Amazon Corporation, Google web browser
- America attacked: September 11, 2001, World Trade Center, Pentagon, four commercial planes overtaken by terrorists; Osama bin Laden claimed responsibility
- Department of Homeland Security: created by President George W. Bush to help protect Americans from future terrorist attacks
- War on Terror
- Afghanistan: bin Laden's hiding place; became target in War on Terror
- Operation Iraqi Freedom: military plan to capture terrorists, destroy weapons, remove Hussein from power
- 9-11 memorials dedicated
- Space Shuttle *Columbia*: exploded in reentry
- Condoleezza Rice: first female Black American secretary of state
- Federal Reserve: lowered interest rates led to a housing crash and Great Recession
- President Barack Obama: first Black American president
- Affordable Care Act: national healthcare insurance called Obamacare became law
- Tea Party: a conservative political group
- Hurricane Katrina
- Technology in the 2000s: hybrid automobiles, social media, smartphone
- Navy SEAL Team 6: soldiers who found Osama bin Laden
- Obama declared the end of the War in Iraq
- Obama's visit to Cuba: hoped to improve relations between countries
- President Donald Trump elected 2016
- Trump created stricter immigration limits
- Kilauea volcano: eruption in Hawaii
- Kim Jong-Un: Communist North Korean leader who met with President Trump
- U.S. embassy in Israel: Trump moved to Jerusalem
- Trump impeachment: found not guilty
- COVID-19 pandemic: quarantine, social distancing, development of vaccines
- Civil unrest during pandemic: George Floyd, public response
- President Joseph F. Biden won 2020 Presidential election
- Trump believed election was not conducted correctly
- Breaching of the Capitol Building; first time since the War of 1812
- President Biden inauguration
- Trump second impeachment: not guilty verdict
- Biden's goal of COVID-19 immunization met
- Biden takes U.S. troops out of Afghanistan; Taliban remained in control
- Challenge to students to take their place in history

State History Study

- 6 weeks of lessons including the following:
  - Political and physical maps, region, border states, climate, weather, population, latitude, longitude
  - Symbols: flag, motto, seal, nickname, flower, bird, tree, song, additional symbols
  - State history: native people groups, early colonization/settlement, historical figures, war heroes, military bases, famous landmarks, timeline
  - State government: leaders, state constitution, hierarchy of leaders
  - State industry, agriculture, natural resources
  - Cities: state capital, my city, my county, local leaders, educational institutions
  - Additional information: wildlife, plant life, sports, vacation spots, recreational spots, state/national parks, cultural heritage, museums, travel brochure

Document Recitation

- Gettysburg Address
- First Amendment to the Constitution
- States/Capitals
- U.S. presidents

Geography Study

- Maps, map key, map grid, distance scale, compass rose
- Cardinal and intermediate directions
- Hemispheres: Northern, Southern, Western, Eastern
- Seven continents; five oceans
- Lines of Latitude: Arctic Circle, Tropic of Cancer, Equator, Tropic of Capricorn, Antarctic Circle
- Lines of Longitude: Prime Meridian

History & Geography cont. p. 81

History & Geography cont.

Study of North America

- Bay: Hudson Bay
- Canal: Panama Canal
- Gulf: Gulf of Mexico
- Seas: Caribbean Sea
- Rivers: Colorado River, Mississippi River, Missouri River, Ohio River, Rio Grande, St. Lawrence River
- Great Lakes: Lake Erie, Lake Huron, Lake Michigan, Lake Ontario, Lake Superior
- Mountains: Rocky Mountains, Appalachian Mountains
- Deserts: Mojave Desert, Chihuahuan Desert, Great Basin Desert, Sonoran Desert
- Countries: Canada, Central America, Cuba, Dominican Republic, Greenland, Haiti, Jamaica, Mexico, Puerto Rico, San Salvador, United States

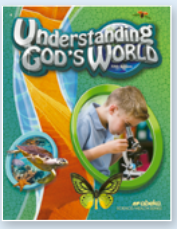
Topography and Geographical Terms

- Terms related to rivers: river, source, waterfall, mouth, delta, upstream, downstream
- Terms related to other bodies of water: sea, bay, gulf, lake, harbor, canal, channel
- Terms related to land: mountain, hill, valley, plain, mountain range, peak, isthmus, canyon, gorge, volcano, geyser, desert, oasis, marsh, island, peninsula, horizon, altitude, sea level

Physical and Political maps

- U.S. Maps: regions, states/capitals, territories
- 13 original colonies; U.S. expansion
- Inviting review sheets

Science



From the starry heavens to the ocean depths, *Understanding God's World* takes students on a journey to discover the Creator's detailed design in the world around them. Your students-turned-scientists will hone their observation and critical thinking skills through a variety of activities that bring learning to life. Over seventy different demonstrations and activities show students how broad scientific concepts relate to their daily lives. On their journey, students will become botanists that identify and dissect plants, meteorologists that track and interpret weather patterns, and ornithologists that attract birds to their own backyards. Demonstrations paired with detailed illustrations help students understand abstract concepts such as matter, energy, force, and motion. Comprehension checks and Chapter Checkups throughout the text ensure that students are retaining key information.

➤ **RED** *indicates first introduction of content.*

Added Enrichment

- Hands-on learning activities in daily lessons
- Worksheets/Activities/Experiments/Journal in STEM Activities (69)

Evaluation

- Quizzes (21)
- Chapter Tests (6)
- 9-weeks exam (3)

Science Foundations (Unit 1)

Scientific Process

- Father of scientific method: Sir Francis Bacon
- Scientific method: observe and ask questions, form a hypothesis, experiment and gather data, study data and reach conclusions
  - Terminology: observe, hypothesize, experiment, data, conclude, evidence, technology
- Learning to observe:
  - Use senses: taste, touch, sight, hearing, smell
  - Things to observe: leaves, caterpillars, shells, fruits, rocks, feathers, animal tracks, seeds
  - Tools for observation: notebook paper, pencil, camera
- Making predictions/designing experiments
  - Forming a hypothesis or prediction: begin with testable question
  - Fair experiment: include independent variable, controlled variable, dependent variable
- Recording and graphing data
  - Tools: computer programs, paper, pencil, camera
  - Graphs: circle graph—sector, bar graph—interval, line graph—point, trend
- Learning laboratory procedures
  - Where scientists work: laboratory
  - Science tools: goggles, gloves, mask, clocks, timer, stopwatch, metric system, thermometer, scale, ruler, beaker, flask, test tube, funnel, eyedropper, hand lens, microscope, binoculars, telescope

Activities & Demonstrations

- Observe to understand nature
- Grow plants from seeds for observation
- Jr. Scientist: the scientific method

Understanding Matter and Energy

- What is matter?
  - Substance of physical world
  - Real, has weight, takes up space
  - Made up of molecules and atoms
  - What is energy?
    - Ability to do work
    - Types: light, heat (thermal), sound
- Three states of matter: solid, liquid, gas
- Properties of matter
  - Physical properties are observable and measurable (size, weight, mass, volume, density).
  - Volume and mass
  - Weight and density
- Heating and cooling matter
  - Water's melting/boiling points—32°F, 212°F
  - Effects of heat energy on different states
- Mixtures
  - Types: solutions
  - Parts of solution: solvent and solute
  - Process: solvent dissolves solute
- Energy forms: potential and kinetic
  - Converted energy—fuel
  - Transferred energy—heat, light, sound, and electrical
- Static electricity
  - Atom parts: nucleus, electrons
  - Opposite charges attract.

Science cont. p. 82

➤ **RED** *indicates first introduction of content.*

Science cont.

Understanding Matter and Energy cont.

- ➤ Current electricity
  - ➤ Flows along path
  - ➤ Generator converts mechanical energy to electrical energy
  - ▪ Cables, conductors, insulators, currents, closed and open circuits, switch
  - ▪ Electrical storm safety
- ➤ Light-wave energy
  - ➤ Luminous, travels in straight line, travels faster than anything else
  - ➤ Examples: stars, light bulbs, fire, certain sea creatures, fireflies
  - ➤ Wave energy: how light travels
    - ➤ Parts of wave: crest, trough, amplitude
- ➤ Transmitting light
  - ➤ Opaque, transparent, translucent materials
  - ➤ Shadows and reflections
- ➤ Bending light
  - ➤ Refraction, wavelength, color spectrum, prism
- ➤ Sound-wave energy
  - ➤ Vibrations
  - ➤ Sound travels through matter
  - ➤ Sound cannot travel through empty space
- ➤ Volume and Pitch
  - ➤ Volume: loudness or softness of a sound; amplitude measures strength of sound wave
  - ➤ Pitch: highness or lowness of sound; faster vibrations make higher pitches; slower vibrations make lower pitches

Activities & Demonstrations

- ➤ Make a water molecule model.
- ➤ Show that matter takes up space.
- ➤ Observe to understand matter.
- ➤ Jr. Scientist: compare density by testing objects that sink and float.
- ➤ Design a buoyant object.
- ➤ Observe surface tension.
- ➤ Observe a heat energy transfer.
- ➤ Observe mixtures.
- ➤ Observe to understand energy.
- ➤ Observe the push and pull of static electricity.
- ➤ Make a miniature generator.
- ➤ Convert stored electrical energy into light energy.
- ➤ Classify materials according to light transmission.
- ➤ Observe the effects of sound vibrations.
- ➤ Amplify sound.
- ➤ Observe high and low pitch.
- ➤ Scientist Corner—Alexander Graham Bell: Inventor of the Telephone

Understanding Force and Motion

- ▪ Forces that affect motion
  - ➤ Motion: a change in position
  - ▪ Force: push or pull on an object
  - ▪ Work: when something has been moved; result of force
  - ▪ Types: friction, gravity, weight, magnetism
  - ▪ Balanced/unbalanced forces
- ▪ Motion needs force
  - ➤ Laws of motion: discovered by Isaac Newton, designed by God
  - ▪ Inertia
- ➤ Motion has energy.
  - ➤ Mass, speed, direction are all part of moving energy.
  - ➤ Collisions: What happens?
    - ➤ Some energy is usually transferred, causing a change in speed.
    - ➤ Some energy is converted to other forms of energy (sound/heat).
- ▪ Electromagnetic forces
  - ▪ Magnetism: force that attracts/repels
  - ▪ Polarity
  - ➤ Electromagnet parts: coiled wire, metal core, source of electricity; Earth is electromagnet.
- ▪ Overcoming friction
  - ▪ Machines: wheel and axle, inclined plane
  - ➤ Lubricant minimizes friction.
- ▪ Gravitational forces
  - ➤ Sir Isaac Newton—gravity experiments
  - ▪ Gravity is pulling force.
  - ▪ Weight determined by object's mass
  - ➤ Center of gravity: where pull of gravity is strongest in object; different shapes equal different centers of gravity.
- ▪ Overcoming weight and gravity
  - ▪ Engineering strong structures with foundations/frames
  - ▪ Types of support structures: arch, dome, column, triangle design
  - ▪ Machines that overcome weight/gravity: inclined plane (screw), wedge, pulley, lever
  - ▪ Parts of lever: load, fulcrum

Activities & Demonstrations:

- ➤ Observe to understand force and motion.
- ➤ Observe a marble collision.
- ➤ Make an electromagnet.
- ➤ Use machines to overcome friction.
- ➤ Determine the center of gravity.
- ➤ Make a square frame more stable by adding triangles.
- ➤ Construct a pulley to overcome weight and gravity.
- ➤ Construct a catapult.

Life Science (Unit 2)

Understanding How Plants Grow and Reproduce

- ▪ God's purposes for plants: beauty, produce food, give off oxygen, improve soil
  - ▪ Process of photosynthesis in green plants
  - ▪ Types of organisms: producers/consumers
  - ➤ Leaf litter, humus
- ▪ Identifying trees
  - ▪ Parts: crown, trunk, bark, roots, annual rings
  - ➤ Types:
    - ➤ Needleleaf: evergreen, conifers
    - ➤ Broadleaf: deciduous, fruit
    - ➤ Palms: no branches, annual rings, or bark
- ▪ Observing flowers
  - ▪ Purpose: to produce seeds
  - ➤ Parts: sepals, petals, stamens, pistil
  - ▪ Process of pollination
- ➤ Identifying flowers
  - ➤ Composite family: ray flowers, disk flowers
  - ➤ Weeds
- ➤ Seeds designed for travel
  - ➤ Types: airborne and windblown seeds, water-traveling seeds, hitch-hiker seeds, self-scattering seeds
- ▪ Seed design and germination
  - ▪ Parts: embryo, stored food, seed coat
  - ▪ Dormancy, germinate
  - ▪ 3 things a seed needs to germinate: water, oxygen, right temperature
  - ➤ Growing seed parts: primary root and shoot

Science cont. p. 83

Science *cont.*

Understanding How Plants Grow and Reproduce *cont.*

- Plants without seeds
  - Algae, ferns, mosses
  - Green plants that grow from spores: ferns and mosses
  - Plant-like organisms grown from spores: fungi and bacteria
  - Decomposers: mushrooms, toadstools, lichen, yeast, mold

Activities & Demonstrations:

- Observe to understand trees
- Dissect a lily
- Identify, research, and observe your state flower
- Jr. Scientist: the scientific method with photosynthesis
- Observe the three parts of a seed
- Observe germination
- Observe bacteria decompose lettuce
- Scientist Corner—Dr. George Washington Carver: The Plant Doctor

Understanding Animal Design

- A variety of vertebrates:
  - Animal classification:
    - Vertebrates: backbone, inside skeleton, five classes grouped by warm-blooded/cold-blooded
      - Warm-blooded vertebrates: maintain thermal energy; two classes—mammals, birds
    - Mammals/Birds: characteristics, breathe oxygen with lungs, life cycle
      - Cold-blooded vertebrates: three classes—fish, amphibians, reptiles
    - Fish: use gills to breathe, streamlined bodies, life cycle
    - Amphibians: instinct, life cycle, smooth/moist skin
    - Reptiles: life cycle, leather-like eggs, dry/scaly skin
- Observing bird design
  - Evolution, species
  - Beaks/bills: seed eating, insect eating, nectar drinking, birds of prey, predator/prey, spearfishing, pouches
  - Feet: perching, running, swimming (webbed), wading, talons
- Engineered for flight
  - Streamlined, lift
  - Bird bones: hollow, affects balance in flight, helps control body temperature
  - Feathers: only animals with feathers, down
  - Why birds don't get tired: two breaths moving through body at same time, digestive system processes food very quickly for energy to fly, gizzard helps with digestion
  - Seeing and Hearing: ears located inside head, sharp sense of sight, transparent eyelids
- Birds in your backyard:
  - Types: robin, cardinal, mockingbird, blue jay, hummingbird
  - Characteristics, beaks/bills, feet, habitats
- Birds of the world
  - Types: penguin, ostrich, parrot, flamingo
  - Characteristics: extinct animals, incubate, habitat, beak/bills, feet
- Bird feeders and birdbaths
  - Feed birds in fall and through winter, limit feedings during spring/summer
  - Types of feeders: hummingbird, suet, finch
  - Keep birdbaths clean, avoid metal as a material for building a birdbath
- Interesting invertebrates: animals without backbones
  - More invertebrate species than vertebrates
  - Insects are invertebrates.
  - Characteristics: exoskeleton, molting, antennae, no backbone, weak muscles, soft bodies, cold-blooded
    - Types: segmented worms, unsegmented slugs, snails, octopuses, squids
    - Segments, setae, jet propulsion, tentacles
- Unusual invertebrates
  - Stinging: corals, jellyfish, sea anemones
  - Colonies, symbiotic relationships
  - Spiny: starfish, sea urchins
  - Arthropods: largest group is insects
- Observing insect design
  - Characteristics: exoskeleton, three body parts, six jointed legs
  - Body parts: head, thorax, abdomen
  - Head: two antennae, compound/simple eyes, varied mouthparts by design
  - Thorax: six jointed legs, wings
  - Abdomen: contains heart and stomach, spiracles for breathing
- The miracle of metamorphosis
  - Complete metamorphosis: 4 stages—egg, larva, pupa, adult; most insects undergo complete metamorphosis
  - Incomplete metamorphosis: 3 stages—egg, pupa, adult
    - Insect homes/hatchings: parasite/host, parasitic relationship
- Insect instincts and equipment
  - Communication: sight, smell, touch, dancing, sound
  - Defense: weapons, fear, disguises, camouflage, mimicry
- Social insects
  - Communities: ant nests, beehives, paper wasp nests, termite mounds and tunnels

Activities & Demonstrations:

- See how birds use their God-given mouth structures.
- Observe to understand birds.
- Demonstrate lift.
- Identify, research, and observe your state bird.
- Make a suet feeder.
- Build a birdhouse.
- Observe jet propulsion.
- Create an insect zoo.
- Create an ant farm.
- Scientist Corner—Jean-Henri Fabre: The World's Greatest Entomologist

Understanding Ecosystems at Work

- What makes a habitat?
  - Habitat: natural home of plant or animal
  - Four things each habitat must have: space, shelter, water, food
    - Habitat location determines living/nonliving factors
      - Climate components: determined by sun's light/heat energy, water, air and its gases; altitude affects climate
      - Earth components: soil type, rocks and minerals
        - Soil layers: topsoil, subsoil
        - Rock: made of minerals, salinity
- What is an ecosystem?
  - Ecosystem communities: contain living and nonliving parts
  - Niche
  - Living parts: organisms—animals, plants, bacteria, fungi
  - Nonliving parts: water, sunlight, air and its gases, temperature, soil, rocks and minerals
  - Backyard ecosystems can vary by climate and season.

Science cont. p. 84

Science *cont.*

Understanding Ecosystems at Work *cont.*

- What is a food chain?
  - Transfer of energy from one living thing to another for survival
  - From sunlight energy to plant producers, plant consumers/herbivores, omnivores, carnivores, apex predator, decomposer
  - Healthy ecosystem is balanced
  - All energy is used or transferred in a food chain
  - Backyard food chain: varies according to season
- Forest ecosystems
  - 3 main kinds of forests: coniferous, temperate, rainforest
  - Forest environment: permafrost, tundra, tree line
  - Coniferous: most commonly found forest; thrive in differing temperatures
  - Temperate: grow in climates that have four seasons
  - Tropical rainforests: grow where there is much rain year round; highest level of biodiversity
    - Rainforest layers: emergent, canopy, understory, forest floor
  - Migration, hibernation
- Grassland ecosystems: large, flat, open area of grasses
  - Savanna environment: tropical grassland
    - Characteristics: two seasons—long, dry season and short, wet season
    - Life in savanna: decomposers, grazers, browsers, scavengers
- Desert ecosystems
  - Desert environment: dry, arid land with little plant growth
    - Characteristics: less than ten inches of rain per year, extreme temperatures
    - Gobi Desert: cold, flat plain; rocky soil; Bactrian camel; snow leopard; jerboa; golden eagles
    - Sahara Desert: hottest desert in world, mountains, sand dunes, gravelly soil, gazelles, foxes, baboons, hyenas, mongooses, venomous reptiles, oasis
    - Antarctic Desert: unique because covered in ice
    - Desert life:
      - Lowest level of biodiversity
      - Animals: birds, mammals, reptiles, arthropods, specially designed amphibians, nocturnal organisms/animals
      - Plants: cactus, thorns, spines, designed to store much water
- Polar ecosystems
  - Polar environment: frigid, polar habitat
    - Characteristics: two seasons—summer, winter; covered with polar ice cap, glaciers, icebergs, ice shelf, Ice Age
    - Life in Antarctica: scientists who live there temporarily, plankton, phytoplankton, zooplankton, krill, whales, seals, fish, penguins, orcas
    - Instincts, migration, insulation, blubber
- Saltwater ecosystems
  - Ocean environment: ocean basin, continental shelf, trenches, abyssal plain
    - Characteristics: temperature and habitats depend on depth and location, gravity causes tides, Earth's rotation shapes floor, salinity affects movement
    - Life in ocean: ocean zones
      - Sunlight zone—most life because of photosynthesis
      - Twilight zone—only blue light, no plant life, only animals
      - Midnight zone—no light, some sea animals
      - Abyss—deepest, darkest zone
    - Ocean trenches are deeper than abyss, and earthquakes often happen near them
    - Ocean food chains:
      - Phytoplankton: main producers of ocean
      - Kelp: type of alga, can form kelp forests
      - Zooplankton: feed on phytoplankton
      - Fish use gills to remove oxygen from water and return carbon dioxide to ocean
- Freshwater ecosystems
  - Freshwater environment: have little salt, water source for many animals, resupplied by precipitation and water run off, wetlands covered in water for part of year
  - Freshwater flows through mouth, delta, estuary, wetlands
  - Everglades environment: largest freshwater habitat in world
    - Characteristics: tropical ecosystem with two seasons—wet, dry
    - Life in Everglades: sawgrass, Cypress trees, mangrove forests, whirligig beetle, dragonfly, turtles, water moccasins, rattlesnakes, alligators, egret, ibis, roseate spoonbill, manatee, cougar, black bear
- Wetland Case Study 1: An Invasive Species
  - How Burmese pythons have affected the Everglades ecosystem
- Wetland Case Study 2: Stewardship and Conservation
  - How pollutants affect water sources
- Biblical Perspective of Conservation
- Wetland Conservation Discussion
  - Positive/negative effects of conservation

Activities & Demonstrations

- Create a shoebox diorama.
- Observe to understand an ecosystem.
- Producers and consumers.
- Create a rainforest terrarium.
- Observe iceberg buoyancy concepts.
- Observe oxygen dissolved in water.
- Construct a model of the ocean's zones.
- Watch a leaf "breathe."

Earth and Space Science (Unit 3)

Understanding the Earth and Its Foundations

- Geology: the study of the earth
  - Geologists: scientists who study the earth
  - Views of geology: evolution, creation in six days, worldwide Flood
- The circle of the earth
  - Earth's shape: sphere, equator, Northern/Southern hemispheres, Prime Meridian, diameter, latitude, longitude, slightly flattened at poles
  - Earth's layers:
    - Crust: continental, oceanic
    - Mantle: made mostly of solid, hot, dense rock and magma, 1,800 miles deep
    - Core: innermost part of Earth, hottest place in or on the earth
- Water and Land
  - Earth's water: more than 70% of Earth covered in water, oceans are largest bodies of water
    - Five oceans: Pacific, Atlantic, Indian, Arctic, Southern
    - Groundwater: found beneath Earth's surface, supplies springs and wells
  - Earth's land:
    - Seven continents: Asia, Africa, North America, South America, Antarctica, Europe, Australia
    - Crustal plates: large areas of Earth's crust, geological events occur where plates meet
      - Earthquakes happen along fault.
      - Volcanoes: eruption of magma as lava, Ring of Fire, dormant, extinct

Science cont. p. 85

Science *cont.*

Understanding the Earth and Its Foundations *cont.*

- Landforms: natural formation of rock or soil on Earth's surface
  - Types: volcano, mountain, hill, valley, waterfall, river, plain, canyon, peninsula, island, lake, marsh, desert, oasis
  - Mountain types: folded, fault-block
- Soil and its horizon layers
  - Soil's ingredients:
    - Humus: soft organic material made from decayed remains
    - Minerals: tiny pieces of rock, never manmade, same kinds of atoms, always in precise pattern that forms crystal; gems—rare, valuable minerals
  - Soil variation: color varies due to mineral content
  - Soil components:
    - Loam: mixture of sand (large particles), silt (medium-sized particles), and clay (fine particles)
  - Soil horizons: humus, topsoil, subsoil, bedrock
- Water affects soil.
  - Soil erosion and weathering of rock
    - Erosion: loss of soil by water or wind, gravity, and water runoff
    - Weathering: rocks are broken down by forces of nature.
  - Soil conservation: contour plowing, terraced fields
  - Soil building: sediment makes soil more fertile.
- Geological events that change the earth's surface.
  - Earthquakes: most likely to happen at a fault, focus, tremor, epicenter, can cause tsunami, earthquake safety
  - Volcanoes: eruption of hot liquid magma, vent, lava, can cause new landforms
- Properties of rock:
  - Visible properties: color, luster, texture
  - Testable properties: hardness (scratch test), density, cleavage (fracture), streak test
- Three types of rocks:
  - Igneous: pumice, obsidian, granite
  - Sedimentary: sandstone, limestone, shale
  - Metamorphic: marble, slate
- Fossils in rocks
  - Found in sedimentary rock that has hardened
  - Transitional forms: when one kind of animal could have turned into another kind, never found
- Earth's energy sources
  - Fossil fuels: coal, oil, natural gas
  - Nonrenewable energy source: fossil fuels that are burned up and cannot be used again
  - Renewable energy sources: cannot be used up
    - Wind: windmills generate electrical energy.
    - Water: hydropower—water energy is converted into electrical energy.
    - Solar energy: light and heat energy from sun converted into electrical energy.
  - Caring for Earth's resources: biblically care for/manage natural resources
- Renewable Energy Discussion
  - Comparing positive/negative effects of solar, wind, water power
- Geological Case Study: Mt. Saint Helens
  - Effects of volcanic eruption on surrounding ecosystems
- God's Promise
  - Worldwide Flood and God's promise to Noah not to flood the entire world again

Activities & Demonstrations

- Observe to understand landforms
- Measure the circumference of a sphere.
- Demonstrate how folded mountains may have formed.
- Make crystals.
- Demonstrate the pushing force of frozen water.
- Design an earthquake-resistant structure.
- Construct a "volcano."
- Test a rock for cleavage or fracture.
- Make sedimentary "rock" layers.
- Make a "fossil."

Understanding Weather

- The atmosphere and weather
  - Weather occurs in atmosphere.
    - Climate is weather conditions certain areas receive over time.
    - Weather is condition of air closest to Earth.
    - Air is mixture of colorless, odorless, tasteless gases.
    - Atmosphere—air surrounding Earth.
    - People, plants, animals depend on air to live.
  - Gases in the atmosphere
    - Air made up of different gases—oxygen, nitrogen, other gases
  - Levels of atmosphere
    - Gravity keeps atmosphere in place; densest air is closest to Earth
    - Lower atmosphere: greatest density of gases, where weather happens, conditions are always changing
    - Middle atmosphere: conditions stay same, ozone layer that protects Earth from sun, some types of planes can fly here
    - Upper atmosphere: lowest density of gases, temperature is high, air thins until outer space begins, satellites orbit Earth here
- Air's weight
  - Air has weight: air is matter—it takes up space/has weight.
- Air has pressure.
  - Pressure: measurement of the force exerted against an object.
  - Gases have weight and can exert pressure.
  - Balance of force of pressure between our bodies and air.
- Air pressure changes.
  - Air pressure decreases as you travel higher in atmosphere.
  - Air pressure near Earth varies.
  - Changes in lower atmosphere cause weather events.
  - Cold air is heavier than warm air.
  - Meteorologist: scientist who studies weather, watch for air pressure changes
  - Barometer: weather instrument that detects air pressure changes
  - Meteorologists can predict precipitation by monitoring air pressure.
  - Forecast: weather prediction
- Moving air
  - Air has temperature.
    - Air is transparent, allowing sunlight energy to pass through to Earth
    - Sunlight energy is converted to heat energy and absorbed by land and water.
    - Earth absorbs heat during day/radiates heat at night.
    - Greenhouse effect: atmosphere's ability to keep heat from easily escaping into space
  - Temperature and pressure cause wind.
    - Part of Earth tilted toward sun receives most heat, causing air to be warmer
    - Uneven heating of air is reason for wind.

Science cont. p. 86

Science *cont.*

Understanding Weather *cont.*

- Warm air rises because it is less dense, leaving area of low pressure near Earth's surface.
- Cooler denser air flows into low pressure area to replace warm air.
- Wind: constant motion of air

› Wind has direction and speed.
- › Wind named for direction it blows from
- › Measure power of wind by speed
- › Meteorologists make different predictions based on wind.
- › Global winds: bands of wind that flow in predictable patterns, help regulate Earth's air temperatures, blow in different directions at certain latitudes
- › Jet stream: collision high above Earth creates a band of wind that flows from west to east around globe, causes weather systems to move in predictable pattern (west to east, up and down)
- › Types of wind
  - › Seasonal: change when seasons change
  - › Local: predictable in certain areas
  - › Storm: occur during thunderstorms, hurricanes, tornadoes

- Water in the air
  - Gaseous water/water vapor always in air
  - Water is given off by plants, people, animals.
  - Most water vapor comes from water sources on Earth.
  - Humidity is water.
    - Humidity: amount of water vapor in air
    - High humidity means a lot of water vapor in air.
    - › Temperature affects humidity.
    - › Warm air holds more water vapor than cool air.
    - › Relative humidity: measure of amount of water vapor in air
    - › Hygrometer: weather instrument used by meteorologists to measure humidity levels
    - › Meteorologists forecast weather based on level of humidity.

› Clouds are made of water.
- › Clouds are matter—made mostly of water and air.
- › Kinds of clouds have different ranges of heights.
- › Fog: cloud at ground level
- › Clouds high in sky: made of ice crystals
- › Clouds low in sky: made of tiny water droplets

- The water cycle
  - Continuous process of earth and atmosphere exchanging water
  - Four main processes:
    - Evaporation: liquid water becomes water vapor
      - Sun's energy controls water cycle.
    - Condensation: water vapor begins to turn back into tiny droplets of liquid water
      - Water condenses on particles of dust, causing clouds to form.
    - Precipitation: any form of water falling from sky to earth; rain, snow, sleet, hail
    - Water runoff: precipitation that eventually trickles into streams
- Severe weather phenomena

› Weather phenomenon: weather event caused by specific conditions
- Thunderstorms: bring heavy rain, strong winds, lightning
  - Contain thunderheads, updrafts/downdrafts, lightning bolts
  - Thunder is sound caused by lightning when it heats air.
  - › Thunderstorms move from west to east in United States.

› Tropical cyclones
- › Cyclone: storm that begins to rotate around low-pressure area (eye)
- › Begins over warm, tropical seas
- › Typhoons: Pacific tropical storms moving toward Asia
- › Hurricanes: tropical cyclones in Atlantic moving toward North America; most severe type of tropical cyclone
- › Usually form during hot summer
- › Categories of storms: tropical disturbance, tropical depression, tropical storm, hurricane
  - Hurricanes get energy from warm ocean.
  - › Storm surge: rise of ocean water surrounding a hurricane
  - › Tropical cyclones travel from east to west.

- Other weather events
  - Tornado: cyclone that develops over hot land
    - › Tornado watch: conditions are right for tornado formation
    - › Tornado warning: tornado has been spotted
  - › Blizzards: severe snowstorm, causing colder temperatures, strong winds, blowing snow; moves from west to east
  - › Monsoons: seasonal wind that can bring heavy rain to places in southern Asia
  - › Flooding and Drought
    - › Drought: prolonged period of dryness
    - › Famine: shortage of food
    - › Flooding: overflow from rivers and other bodies of water, causing water to cover areas that are usually dry land

› Weather forecasting
- › Knowing and understanding God's laws of nature about weather
- › Gathering data
  - › Data comes from weather observation stations.
  - › Radar, planes, ships, weather balloons used to gather data
  - › Meteorologists measure: temperature, air pressure, humidity, precipitation, wind direction, wind speed
  - › Weather instruments: hygrometer, anemometer, rain gauge
- › Predicting the weather
  - › Short-range and long-range (extended) forecasts
  - › Air masses, cold and warm fronts, weather maps

Activities & Demonstrations
- › Observe to understand the sky.
- › Observe air pressure.
- › Make a barometer.
- › Make a weathervane to observe wind direction.
- › A week of weather
- › Observe to understand clouds.
- › Observe condensation.
- › Make a rain gauge.
- › Measure a snowfall.
- › Demonstrate that thunder is the sound of air caused by lightning's heat.
- › Scientist Corner—Robert Boyle: The Father of Chemistry

Understanding the Great Expanse of Outer Space

- The wonders of the night sky
  - Galaxy, Milky Way
- The beauty of the solar system
  - Solar system: sun and heavenly bodies orbiting it
  - Eight planets: orbit the sun
    - Inner planets: Mercury, Venus, Earth, Mars
    - Outer planets: Jupiter, Saturn, Uranus, Neptune
- How movement determines time
  - Day, night, and Earth's rotation
    - Axis, rotates from west to east, sundial

Science cont. p. 87

➤ **RED** *indicates first introduction of content.*

Science *cont.*

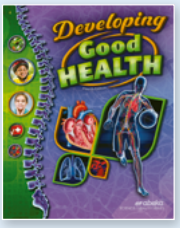
Understanding the Great Expanse of Outer Space *cont.*

- Year and Earth's revolution
  - Revolve, length of year, leap year, 24-hour day
- Earth's tilt and seasons
- Months and the moon's revolution
- Constellations
  - The Big Dipper, Great Bear, Little Dipper, Leo the Lion, Herdsman, Southern Cross, Orion
  - ➤ Stars: Regulus, Denebola, Arcturus
- Navigation and the stars
  - ➤ GPS (Global Positioning System)
  - ➤ Navigational instruments: sextant, horizon, astrolabe, compass
  - The North Star: Polaris or Pole Star
- The sun: the greater light
  - Light that rules the day: average-sized star
  - Made of hot, glowing gases
  - Avoid looking directly at it
  - Sun's energy: steady, light and heat energy
  - Cannot be explored with spacecraft because of heat
  - ➤ Light travels at 186,000 miles per second
  - Sun's gravity keeps planets in their orbit
- The moon: the lesser light
  - ➤ Luminous/nonluminous objects, reflected light, illuminated objects
  - Earth's only natural satellite
  - ➤ Lunar cycle: new moon, crescent moon, quarter moon, gibbous moon, full moon, gibbous moon, quarter moon, crescent moon, new moon
  - Length of cycle: about thirty days; gives us our months
- Space discovery
  - ➤ Galileo: used spyglass to observe Earth's moon; discovered Jupiter's moons
  - ➤ Exploring the moon
    - ➤ NASA (National Aeronautics and Space Administration): flight and space agency of the United States
    - ➤ *Apollo 11* crew landed on moon: Neil Armstrong, Buzz Aldrin
    - ➤ Space rocket: propulsion engine to launch spacecraft into space
    - ➤ Armalcolite: type of moon rock named for three *Apollo 11* astronauts
  - Exploring solar system and beyond
    - Space probes: *Voyager 1* and *Voyager 2*
    - ➤ Interstellar space
    - ➤ Space shuttle: reusable spacecraft
    - ➤ Challenger mission
    - ➤ Sally Ride, Guion Bluford, Christa McAuliffe
    - Space station
    - ➤ SpaceX, SpaceX Dragon capsule, reusable Falcon 9 rocket, Bob Behnken, Doug Hurley
  - Origin of the universe
    - Genesis 1 account of Creation
    - God is Designer/Creator of universe

Activities & Demonstrations

- ➤ Observe to understand the night sky.
- ➤ Create a relative model of the solar system by size.
- ➤ Discover the cause of day and night.
- ➤ Discover why winter is cold.
- ➤ Connect the stars.
- ➤ Discover why stars shine more brightly at night.
- ➤ Construct a star viewer.

Health



Through the new *Developing Good Health*, students will be amazed at God's intricate design of five different body systems. Practical instruction on fitness, nutrition, hygiene, and safety will equip students to improve their physical health. Thoughtful biblical guidance on right relationships with God and others will help students develop their spiritual, mental, and social health. Health continues with practical demonstrations and experiments to enhance the study of the human body.

Added Enrichment

- Comprehension Checks; Chapter Reviews
- Additional Enrichment/Hands-On Activities
- Worksheets

Evaluation

- Quizzes (7)
- Tests (3)

➤ **RED** *indicates first introduction of content.*

Developing a Healthy Life

- ➤ A miraculous masterpiece
  - ➤ Anatomy
  - ➤ The whole you
  - ➤ Health
  - ➤ Honoring God by caring for your health

Your Communication Network

- ➤ Coordinating the whole body
  - ➤ The body's systems
  - ➤ Cells, tissue, organ, system
  - ➤ Your nervous system
  - ➤ The central nervous system
  - ➤ Brain, spinal cord, reflex
  - ➤ The peripheral nervous system
- ➤ The brain
  - ➤ Parts of the brain
  - ➤ Cerebrum, cerebellum, brain stem
  - ➤ Neurologist
  - ➤ Epilepsy, seizure
- ➤ Nerves at work
  - ➤ Sensory nerves and motor nerves
  - ➤ Olfactory nerves, taste bud
  - ➤ Parts of the eye
  - ➤ Sclera, cornea, pupil, iris, lens, retina, optic nerve
  - ➤ Parts of the ear

Health cont. p. 88

Health cont.

Your Communication Network cont.

- Outer ear, auditory canal, eardrum, middle ear, inner ear, semicircular canals, cochlea, auditory nerve
- Caring for your nervous system
  - Food as fuel
  - Exercise and rest
  - Protecting your nervous system
  - Drug

Your Transportation System

- A trip around the body
  - The circulatory system
  - Heart, blood vessels
  - Parts of the blood
  - Plasma, antibodies, red blood cells, white blood cells, platelets
- The heart
  - Cardiac muscle
  - How the heart works
  - Four chambers
  - Atrium, ventricle, septum
- Cardiologist
  - Pulse, blood pressure
- Routes of travel
  - Arteries, veins, and capillaries
  - Carbon dioxide
  - Circulation
- Caring for your circulatory system
  - Heart-healthy nutrition
  - Making your heart strong
  - Endurance
  - Managing asthma
  - Protecting your circulatory system
  - Nicotine, air pollution

Your Body's Defenses

- Designed for defense
  - The immune system
  - Immunity
  - Pathogen invaders
  - Microorganisms, pathogen, bacteria, viruses
  - Diseases: communicable and noncommunicable
  - When to seek health care
  - Fever
- Protective barriers
  - A strong outer protection
  - Skin, epidermis, dermis, sebum
  - Gates and gatekeepers
  - Mucus, cilia
- The army inside you
  - White cell warriors
  - Phagocyte, lymphocyte
  - Immunity
  - Vaccine
- The cleanup crew
  - The lymphatic system
  - Tissue fluid, lymph, lymph nodes
  - Organs of the lymphatic system
  - Tonsils, adenoids, spleen, thymus
  - Allergies
  - Allergist, anaphylaxis
- Caring for your immune system
  - Prevention through proper care
  - Prevention by stopping the spread of pathogens

Fuel for a Healthy Body

- Digestion and nutrition
  - The digestive system
  - Digestion, nutrition, mouth, saliva, enzymes, esophagus, stomach, small intestine, villi, large intestine
- Nutrients which give energy
  - Essential nutrients
  - Carbohydrates, protein, fats, and oils
  - Managing diabetes
  - Water
- Nutrients which protect and regulate body systems
  - Vitamins
  - Minerals
  - Pediatrician
- A balanced diet
  - Five food groups
  - Healthy eating habits
- Food labels and food safety
  - Reading food labels
  - Serving size, calories
  - Food safety
  - Food storage, perishable foods, food preparation

Exercise for a Healthy Body

- Designed to move
  - The skeletal system
  - Skeleton
  - Designer bones
  - Clavicle, sternum, scapula, rib cage, humerus
  - Inside a bone
  - Designer joints
- Hinge joints, ball-and-socket joints, pivot joint, ligament, skull, cranium, vertebrae, vertebra, phalanges, pelvis, femur, patella
- On the move
  - The muscular system
  - Voluntary muscles, involuntary muscles
  - The skeletal muscles of the muscular system
- Tendons, biceps, triceps, trapezius, abdominal muscles, quadriceps, hamstrings
  - The body's involuntary muscles
- Being active
  - Physical fitness
  - A lifestyle of fitness
  - Training your posture
  - Training your breathing
  - Warming up
  - Stretching
  - Exercising
  - Aerobic exercise, anaerobic exercise
  - Cooling Down

Health cont. p. 89

Health cont.

Protection for a Healthy Body

- Staying safe
  - Sports safety
  - Concussion
  - Seat belt safety
  - Fire safety
  - Water safety
  - Sun safety
  - Ultraviolet rays, clothing, cream, SPF, cap, cover
- Being aware, alert, and careful
  - Being aware in public places
  - Being alert to danger
  - Being careful around others
  - Being careful about boundaries
- Taking care of injuries
  - First aid, medical emergency
  - Calling 9-1-1
  - Sports injuries
  - Strain, sprain, rest, ice, compression, elevation
  - Burns
  - Hypodermis
  - Bleeding
  - Choking
  - Trachea, Heimlich maneuver
  - Poisoning
  - Poison
- Caring for yourself
  - Adolescence
  - Puberty
  - Hormones
  - Hygiene
  - Skin care, perspiration, acne, hair care, follicles, dental care, enamel, dentin, pulp, plaque, dental caries
- Deciding to say "no!"
  - Alcohol, tobacco, and other drugs
  - Addiction
  - Drug abuse, substance abuse, limbic system
  - How to say "no!"
  - Finding accurate health information

Growth of a Healthy Spirit

- Spiritual life
  - Spiritual birth
  - Spiritual growth
  - Spiritual cleansing
  - Spiritual peace
  - Spiritual development
- Social life
  - Making new friends
  - Being a good friend
  - Communicating with others
  - Resolving conflict with others
  - Avoiding unhealthy friendships
- Growing mentally and emotionally
  - Taking thoughts captive
  - A confident heart
  - A grateful heart
  - A hopeful heart
  - Spirit-controlled emotions
  - Feeling difficult emotions
  - Overcoming anger
  - Conquering fear
  - Dealing with jealousy
  - Grieving a personal loss
  - What to do when you feel sad

Health cont. p. 90

Bible



Using the foundation that has been laid from preschool to third grade, fourth graders revisit familiar books of the Bible to make deeper personal applications. Through the study of Creation, students will see how sin entered the world, leaving man in desperate need for a Savior. The study of the triumphs and failures of men like Noah, Abraham, Jacob, and Joseph will give students the opportunity to strengthen their biblical worldview and build their faith through personal application of the Bible. Through the Gospels, the lessons from Jesus' birth, His miracles, and His death, burial, and resurrection will provide the opportunity to accept the free gift of salvation or develop a deeper appreciation for that gift. Students will also see how the message of salvation spread throughout the world through the three missionary journeys of Paul. Biblical worldview truths from these lessons are naturally highlighted in the correlated songs, verses, and doctrinal truths. The *Bible 4 Journal* gives students the opportunity to move from knowledge to application as they read the Bible passages for themselves, answer questions, record personal thoughts, and put into action the lessons learned.

Evaluation

- Graded memory verse passages (8)
- Content quizzes (12)

➤ **RED** *indicates first introduction of content.*

Lessons *405 Abeka Flash-a-Cards*

- Salvation Series (5 lessons)
- Genesis Series (21): Creation, Adam, Cain; Enoch, Noah, Babel; Abraham and Isaac; Jacob; Joseph
- The First Thanksgiving
- Life of Christ Series (36): First Christmas; Boyhood and Early Ministry of Jesus; Jesus Heals and Helps; Later Ministry of Jesus; Crucifixion and Resurrection
- Life of Paul Series 1 and 2 (14)

Music *36 songs*

- Choruses, hymns of the faith, holiday songs, patriotic songs including:
  - ➤ 13 new hymns and songs; 11 new choruses

Bible 4 Journal

- ➤ Personal application of the Bible lessons
- ➤ Discussion/questions strengthen biblical worldview

Memory Work

- ➤ New passages (11) containing 60 verses
- Review verses (74)
- ➤ Books of the Bible, sword drills

Doctrinal Drill *70 questions/answers*

- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation
- ➤ 8 questions with verses to memorize as answers

Prayer Time

- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Sword Drills

- 88 Old and New Testament references to find
- ➤ Three sections of references to choose from—weekly, themed, special events

Music



American music reflects the spirit and strength of its people, telling the history of our country's struggle for independence, growth, and expansion. America's rich, colorful legacy is essential to a child's education. *Songs We Enjoy 4* brings together traditional, patriotic, holiday, and fun selections that students have enjoyed singing for generations. The sing-along CD makes song time enjoyable for the students and easy for the teacher.

➤ **RED** *indicates first introduction of content.*

Skills Development *51 songs*

- Follow a song leader while singing with class or CD
- ➤ Define and explain 16 unfamiliar words and phrases in lyrics
- Aid in understanding a song's message
- ➤ Count a steady rhythm in songs
- Enunciate silly words
- ➤ Sing a two-part canon and rounds of 3 or more parts
- Echo singing parts
- Use dynamic contrast in music
- Improve coordination skills through motion songs
- ➤ Learn historical facts through patriotic, folk, and Americana music

Variety of Songs to Memorize

- Folk, fun, patriotic, spirituals and hymns, holiday, Americana, songs at sea

Arts & Crafts



In *Art A,* students practice the fundamental principles of color and perspective using basic drawing, coloring, and painting techniques with colored pencils and watercolors. A decorative calendar begins each monthly selection, and suggestions for interesting variations and further practice stimulate creativity. This art book has been carefully organized and illustrated so that students may work in them independently or as a class.

Concept Development *39 projects*

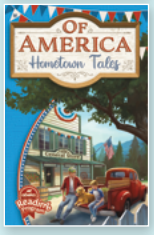
- Primary and secondary colors (14)
- Intermediate colors (4)
- Complementary colors (6)
- Neutral and analogous colors (5)
- Colors of spectrum (3); color wheel (10)
- Perspective (3)

Technique Development

- Drawing: template, freehand, animation (8)
- Modeling (7)
- Painting: wash (2)
- Texture, weaving (4)
- Paper curling, folding, and shaping (5)
- Duplicating (1)
- Proportion (1)
- Motion lines (2)
- Translucent and cut-paper sculpture (5)
- Lettering (13)

Language Arts: Reading







Inspiring nonfiction, relatable modern fiction, humorous plays, and intriguing classics can all be found in the three fifth-grade readers. Acquaint readers with a variety of genres while studying the parts of narrative and informative text structures. Literary enrichment gives practice in recognition, analysis, and application of writing techniques while providing opportunities for collaboration. Let your imagination take you to other lands and times with selections about the Wright Brothers' initiative, Thomas Jefferson's integrity, and the Fighting Red Tails' courage.

Literary Value

- Well-known authors including Louisa May Alcott, Frances Hodgson Burnett, Beverly Cleary, Rudyard Kipling, Mark Twain, E. B. White, James Whitcomb Riley, Laura Ingalls Wilder, Robert Louis Stevenson, Nathaniel Hawthorne, and Henry Wadsworth Longfellow
- Character-building themes such as initiative, problem solving, optimism, wisdom, friendship, perseverance, responsibility, resourcefulness, generosity, integrity, faith, compassion, and forgiveness

Materials

- Readers (3) containing:
  - Short stories
  - Poems, plays, songs
  - Informative selections
- Christian fiction novel
- Biographical novel
- Speed and comprehension readers
  - Read and Comprehend Skill Sheets 5
  - *Adventures in Nature*

Evaluation

- Weekly oral reading grades
- Speed and comprehension quizzes for timed silent reading exercises and stories

Reading Skills Development

- Read orally and silently with comprehension
- Strive to increase accuracy, fluency, phrasing, alertness to punctuation, expression, appropriate speed, comprehension, volume, poise
- Vocabulary development through words and definitions
- Development of understanding literary types, terms, and concepts
- Exercise critical thinking through inference, evaluation, analysis, and personal application—using fact and reasoning in the development of a biblical worldview

Literary Concept Development

- Understanding and applying literary concepts: elements of story—title, author, character, main character, setting, moral, main idea, stanza; elements of poetry—meter, rhyme scheme, alliteration, repetition; elements of plot—introduction, rising action, climax, falling action, conclusion; foreshadowing; elements of play—act, scene, drama, cast, stage directions; figurative language—simile, metaphor, personification, allegory; symbolism; variety of genres: autobiography, biography, fiction, nonfiction, folk literature, legend, fable, biblical narrative; elements that reflect author's style—point of view, narrator, inference, idiom, limericks, onomatopoeia, hyperbole; irony, dialect, dialogue, mood; summary; excerpt
- Summarizing plot
- Predicting endings
- Discerning fact from opinion
- Recognizing and analyzing text structures—narrative, informative, sequential, descriptive, problem/solution, compare/contrast, cause/effect
- Determining point of view—first and third person
- Analyzing characters and setting
- Recognizing genres: realistic fiction, historical fiction, fantasy, biographical stories including folktales, fables, legends, myths, fairy tales, parables, Scripture, informative selections
- Distinguishing fantasy from reality
- Charting information: word webs, Venn diagrams, compare/contrast, predict possible outcomes, create a playbill, analyze characters, analyze plot
- Creative collaboration activities for developing critical thinking
- Analyzing illustrations and photos
- Interpreting figurative language
- Prompts for creative writing
- Understanding acts/scenes within a play
- Comparing fiction/nonfiction
- Providing evidence from text to support analysis
- Discerning author's intent
- Recognizing themes in literature
- Recognizing and implementing good creative writing techniques

Updates Coming Soon

Language Arts: Language



As well as providing a thorough review of capitalization, punctuation, and the parts of speech, *God's Gift of Language B* deepens students' knowledge of grammar and increases their writing skills. Students will be introduced to the four main types of complements and to additional rules for punctuation. They will learn how to diagram prepositional phrases and complements. Students' writing skills will improve as they learn how to write effective topic sentences and paragraphs and how to use transitional words.
Skills learned in outlining, note taking, and preparing a bibliography will aid fifth graders in writing an encyclopedia report and a library research report.

Evaluation

- Quizzes from quiz/test book (12)
- Exercises from student book (9; each counts as a quiz grade)
- Tests from quiz/test book (11)
- Encyclopedia report (counts as test grade)
- Library research report (counts as 2 test grades)
- 7 graded book reports:
  - Short format (2; each counts as 2 quiz grades)
  - Long format (3; each counts as test grade)
  - Oral (2; each counts as test grade)

➤ **RED** *indicates first introduction of content.*

Grammar

- Capitalization:
  - First word in every line of poetry, every sentence, and direct quotations
  - Pronoun *I*
  - Proper nouns:
    - Names, initials
    - ➤ Nationalities, races, religions
    - Days, holidays, months
    - ➤ Historical events or periods, organizations, businesses, ships, awards
    - Other particular nouns
    - Geographical locations: streets, cities, states; regions of the country or world; countries, continents
    - Geographical features
    - ➤ Recreational areas, planets
  - ➤ Proper adjectives
  - First and last words and all important words in the following titles:
    - Books, magazines, poems, and stories
    - ➤ Plays, paintings, and other works of art
  - Title of person before a name
  - ➤ Titles used instead of a name in direct address
  - Nouns referring to the Bible; nouns and pronouns referring to God
- Punctuation:
  - End marks
  - Commas:
    - To separate three or more items in a series
    - ➤ To separate two or more adjectives before a noun
    - ➤ Before coordinating conjunctions joining a compound sentence
    - To separate items in a date or address
    - After salutation of a friendly letter and closing of any letter
    - After *well, yes, no,* and *why* at beginning of sentence
    - To set off words of direct address, direct quotation
  - Apostrophes:
    - To form contractions and possessive words
    - ➤ To form the plural of letters
  - Colons:
    - To write time
    - After salutation of business letters
    - In Scripture references
  - ➤ Hyphens: to divide a word at end of line
  - ➤ Semicolons: to separate simple sentences not joined by conjunction
  - Underline:
    - Titles of books, newspapers, ships, plays, sculptures, paintings, and other works of art
    - ➤ Titles of films, planes, trains
  - Quotation marks:
    - With direct quotations
    - With titles of short stories, poems, songs, chapters, articles, other parts of books, magazines, and newspapers
- The sentence:
  - Know definitions of sentence, subject, predicate
  - Find subjects and verbs: compound, simple
  - Identify four types of sentences: declarative, imperative, interrogative, exclamatory
  - Recognize simple and compound sentences
  - ➤ Diagram compound sentences
  - Correct run-on sentences and fragments
  - ➤ Identify complements: direct objects, indirect objects, predicate nominatives, predicate adjectives, objects of preposition
  - ➤ Avoid wordiness
  - ➤ Find the subject and verb:
    - ➤ Inverted order (interrogative sentences)
    - ➤ There and other words when beginning the sentence
- Parts of speech:
  - Recognize and diagram all eight parts of speech:
    - Noun as subject
    - ➤ Noun as predicate nominative, direct object, indirect object, and object of the preposition
    - Verb, pronoun, adjective, adverb
    - ➤ Preposition
    - Conjunction
    - ➤ Interjection
  - Verbs:
    - Action, state of being, helping
    - ➤ Linking
    - Verb phrase
    - ➤ Principle parts of verbs
    - Spelling rules for verb endings
    - ➤ Irregular forms of principle parts
    - Correct and effective verbs

Updates Coming Soon

Language cont. p. 94

➤ **RED** *indicates first introduction of content.*

Language cont.

Grammar cont.

- ➤ Correct use of troublesome verbs: *burst, busted; attacked, attackted; brought, brung; climbed, clumb; drowned, drownded; ate, et; eaten, aten; grew, growed; sneaked, snuck; stole, stoled; threw, throwed; thought, thunk*
- Nouns:
  - Common, proper, compound, plural
  - Nouns as antecedents, subjects
  - ➤ Nouns as direct object, indirect object, predicate nominative, object of preposition
- Pronouns:
  - Personal pronouns (subject, object, possessive)
  - ➤ Compound, interrogative, demonstrative
  - ➤ Subject and verb agreement with pronouns
- Adjectives:
  - Proper
  - ➤ Adjectives that look like verbs
  - Possessive nouns and pronouns as adjectives
  - ➤ Predicate adjectives
  - ➤ Distinction between adjectives modifying noun and a compound noun
  - ➤ Positive, comparative, and superlative degrees
  - ➤ Comparison of irregular adjectives
- Adverbs:
  - Know adverbs modify verbs, adjectives, and other adverbs
  - Distinguish adjectives from adverbs
  - Use modifiers correctly
  - Use *good* and *well* correctly
  - Use adverbs and negatives correctly
  - ➤ Compare adverbs
- Prepositions:
  - Prepositional phrase
  - Object of preposition
  - ➤ Adjective or adverb phrase
  - Preposition or adverb
  - ➤ Diagram prepositional phrases
- Conjunctions: *and, but, or, nor, for, yet*
- Interjections:
  - Punctuation
  - ➤ Diagram
- Word study and diction:
  - Use the best words; use specific words
  - Understand synonyms, homonyms, and antonyms
  - Use the dictionary
  - ➤ Use the thesaurus
  - Correctly use:
    - *Between, among; can, may; less, fewer*
    - ➤ *Amount, number*

Composition

- ➤ Write a book report with character sketch using the Writing Process
- Use a checklist for book reports
- Write:
  - Friendly letters
  - Post cards
  - Thank-you notes
  - ➤ Paragraphs with a topic sentence
  - Paragraphs with unity
- Write with details
- ➤ Write dialogue
- ➤ Complete creative writing assignments including a poem, narrative, biography, Bible story, dialogue, paragraphs, etc. (8)
- ➤ Make topical and sentence outlines
- Use the encyclopedia and Writing Process to write an encyclopedia report: taking notes, writing a rough draft, rewriting
- Use the Writing Process for a library research report:
  - ➤ Make a preliminary outline
  - ➤ Take notes
  - ➤ Write bibliography cards
  - ➤ Make a final outline
  - ➤ Write the rough draft, a second rough draft, and the final draft

Language Arts: Penmanship/Creative Writing



Penmanship Mastery II concentrates on what fifth graders need most—practice with "trouble-maker" letters. Each week's lessons provide practice with basic letter size and formation, correct pen grip, slant, and overall neatness. Students are given the opportunity to employ their skills through a variety of interesting activities such as word studies and creative writing exercises. Each week, students will also complete a creative writing assignment, including a biweekly journal entry.

Added Enrichment

- Journal compilation (16)
- Creative writing assignments (75)

Evaluation

- Tests (34)
- Progress report boxes (32)

➤ **RED** *indicates first introduction of content.*

Skills Development

- Maintain good writing position:
  - Sitting properly in desk
  - Holding pencil correctly
  - Slanting paper correctly
- Write in ink with a relaxed grip and flowing movement
- Use correct warm-up procedure with slants, ovals, basic letter strokes
- Correctly write all upper- and lowercase letters and numbers 0–9
- Maintain correct letter formation, uniform slant and size, correct spacing, letters that touch the line, and proper margins for success in writing legibly
- Use key strokes: slant, loops, tails, and humps
- Evaluate writing for personal improvement
- Copy most assignments from print to cursive
- Be able to write sentences as dictated
- Write topical journal entries

Penmanship cont. p. 95

Updates Coming Soon

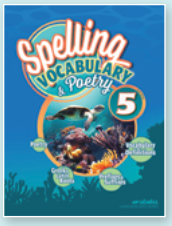
➤ **RED** *indicates first introduction of content.*

Penmanship cont.

Skills Development cont.

- Creative writing assignments:
  - Match words to definitions or abbreviations (18)
  - Write a paragraph or sentence on a particular topic (16)
  - Use words beginning with or containing a particular letter (8)
  - Write a poem, paragraph, or sentence with given words (8)
  - Classify words by syllables or alphabetical order (8)
  - Complete a given paragraph or sentence (6)
  - Correct word usage or spelling (5)
  - Create tongue twisters or limericks (3)
  - Form compound words from given parts or new words by adding prefix or suffix (2)
  - Word search (1)
- Copy assignments from print to cursive using language skills and science and geography facts
- ➤ Complete challenging and fun-filled assignments using poetry, word puzzles, and jokes

Language Arts: Spelling, Vocabulary & Poetry



In order to achieve spelling mastery, students must learn how spelling "works." *Spelling, Vocabulary & Poetry 5* allows students to understand how spelling "works" by teaching them to examine words and apply spelling and phonics rules. They will also learn the spelling and abbreviation for each book of the Bible and the difference between pairs of words commonly used as synonyms, antonyms, or homonyms. A variety of exercises allows fifth graders to recognize misspelled words, practice using spelling and vocabulary words in sentences, and improve their proofreading skills. Students will enjoy memorizing and reciting the six character-building poems that have been included in this text.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (34) including a review list at the end of each 9 weeks:
    - Spelling words (725)
    - Vocabulary words (300)
    - Organized by topic (29)
  - Practice exercises (68) including cumulative review of vocabulary words and definitions
- Spelling games (19)
- Pronunciation key
- Spelling rules in text for quick reference
- Teacher resources:
  - Sentence bank
  - Practical spelling tips and suggestions
- Poetry:
  - Poem introductions include: discussion ideas, some historical content, and information about the author
  - CD included to help with interpretation
  - Vocabulary words and definitions with each poem

Evaluation

- Spelling tests (34)

➤ **RED** *indicates first introduction of content.*

Spelling & Vocabulary Skills Development

- ➤ Master spelling and vocabulary lists including:
  - ➤ Vocabulary words and definitions
  - ➤ Synonyms and homonyms
  - ➤ Antonyms
- Use vocabulary words in proper context
- Memorize vocabulary definitions
- Correctly write sentences dictated by teacher using vocabulary words
- Create good sentences using spelling and vocabulary words
- Proofread for spelling errors: recognize misspelled words in pairs, lists, and sentences
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- Learn background information on some spelling and vocabulary words
- ➤ Learn the spelling and abbreviation for each book of the Bible
- ➤ Distinguish between pairs of words commonly used as synonyms, antonyms, or homonyms
- Learn spelling rules:
  - Use *i* before *e*, except after *c*, or when sounded like *a*
  - Double a final consonant before adding a suffix beginning with a vowel
  - Know when to change *y* to *i* when adding suffixes
  - Drop the silent *e* before adding a suffix beginning with a vowel
  - ➤ Learn:
    - ➤ Exceptions to the final *e* rule
    - ➤ Words that follow no spelling pattern
    - ➤ How to choose the correct ending for spelling words with sound-alike suffixes
    - ➤ Rules for standard plural nouns
    - ➤ Compound words and words with hyphens

Spelling, Vocabulary & Poetry cont. p. 96

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

Spelling, Vocabulary & Poetry cont.

Poetry Skills Development

- ➤ Memorize 5 lyrical poems and 1 hymn
- Develop appreciation of poetry
- Perform in front of an audience
- Recite in unison
- Develop appropriate expression and volume
- Learn definitions and use of unfamiliar words
- Improve comprehension of emotion and content
- Develop mental visualization of the poem
- Discuss meaning and purpose of each poem
- Use proper observation of punctuation

Arithmetic



An information box, abundant practice of new and review concepts and facts, and daily word problems are key features of *Arithmetic 5*. Problem-solving strategies are scattered throughout the text to help students acquire the skills necessary to be expert problem solvers. Emphasis is placed on topics such as whole numbers, fractions, decimals, measurement and algebraic equations, and basic geometric problems.

Evaluation

- Biweekly tests (17)
- Biweekly quizzes (17)
- Daily skills development exercises (135)

➤ **RED** *indicates first introduction of content.*

Numbers

- Place value:
  - ➤ Whole numbers to the 100 billions' place
  - Decimals to the thousandths' place
  - Counting sequences
- ➤ Writing numbers from dictation to the 100 billions' place
- Roman numerals:
  - Value of I, V, X, L, C, D, M
  - Basic rules for Roman numerals
  - More complex rules for forming Roman numerals:
    - ➤ Subtract a numeral only from the next two greater numerals
- ➤ Terms: notation, numeration
- Comparing
- Recognize symbols:
  - > (greater than); < (less than)
  - ≠ (unequal)
- ➤ Rounding: whole numbers, money, decimals, timed mastery
- Number sentences: greater or less than
- Estimating:
  - Sum, difference
  - Product, quotient

Addition

- Addition families 1–18 in mixed order
- Timed mastery
- Terms: addend, sum
- Missing sign
- Word problems
- Money
- ➤ Mental arithmetic: problems combining addition, subtraction, multiplication, and division up to 13 numbers
- Carrying to any position
- Checking by:
  - Addition
  - ➤ Casting out 9s
- Addends: column addition
- Averaging
- Fractions with common and uncommon denominators
- Measures
- Decimals with annexing zeros

Subtraction

- Subtraction families 1–18 in mixed order
- Timed mastery
- Missing sign
- ➤ Mental arithmetic: problems combining subtraction, addition, multiplication, and division up to 13 numbers
- Word problems
- Terms: minuend, subtrahend, difference
- Borrowing from any position
- Money
- Checking by addition
- Fractions with common and uncommon denominators
- Measures
- Decimals with annexing zeros
- Number sentences: greater or less than

Multiplication

- Multiplication facts: 0–12 tables
- Word problems
- Timed mastery
- Terms: factors, product, partial products
- Missing sign
- ➤ Mental arithmetic: problems combining multiplication, division, addition, and subtraction up to 13 numbers

Arithmetic cont. p. 97

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Multiplication *cont.*

- Multiplying with up to 3-digit multiplier (factor)
- Carrying
- ➤ Checking by:
  - Reversing factors
  - ➤ Casting out 9s
- Money
- Factors:
  - Factoring
  - Finding common and greatest common factor
- Fractions:
  - Using cancellation
  - Multiplying:
    - Fractions with whole or mixed numbers
    - Fractions with 2 mixed numbers
- ➤ Decimals:
  - ➤ Multiplied by whole numbers
  - ➤ Multiplied by another decimal
  - ➤ Annexing zeros in multiplication
- Number sentences: greater or less than
- ➤ By powers of ten

Division

- Division facts: 1–12 tables
- Word problems
- Steps of division
- Terms: dividend, divisor, quotient
- Missing sign
- Timed mastery
- ➤ Mental arithmetic: problems combining division, multiplication, addition, and subtraction up to 13 numbers
- Divisor:
  - 1 or 2 digits
  - ➤ 3 digits
- Dividends up to 6 digits
- Remainders written as fractions
- Checking by:
  - Multiplication
  - ➤ Casting out 9s
- Money
- Averaging
- Estimating quotients
- Divisibility rules:
  - Dividing by 2, 3, 4, 5, 9, 10
  - ➤ Dividing by 6
- ➤ Dividing fractions:
  - ➤ Whole or mixed number by a fraction
  - ➤ Fraction by a fraction
  - ➤ Fraction or mixed number by a whole number
  - ➤ By a mixed number
- ➤ Decimals:
  - ➤ Dividing a decimal by a whole number
  - ➤ Eliminating the decimal point in the divisor
  - ➤ Annexing zeros to avoid remainders
- Number sentences: greater or less than
- ➤ By powers of ten

Fractions

- Parts of a whole or group
- ➤ Word problems: a broader and deeper understanding of concepts
- Timed mastery
- Terms: numerator, denominator
- Number words
- Types:
  - Proper, mixed, improper
  - Change to mixed or whole number
- Reducing:
  - Finding least common denominator
  - Answers reduced to lowest terms
- Number line
- Addition with common or uncommon denominators
- Subtraction:
  - With common or uncommon denominators
  - With borrowing
- Multiplication:
  - Using cancellation
  - Multiplying a fraction with a whole or mixed number
  - Multiplying 2 mixed numbers
- Equivalent fractions
- ➤ Division:
  - ➤ Whole or mixed number by a fraction
  - ➤ Fraction by a fraction
  - ➤ Fraction or a mixed number by a whole number
  - ➤ By a mixed number
- ➤ Changing fractions to decimals and decimals to fractions

Decimals

- Money
- Reading and writing:
  - Writing fraction as a decimal
  - Writing decimal as a fraction
- Place value to the thousandths' place
- Addition and subtraction: annexing zeros
- ➤ Multiplication:
  - ➤ By a whole number
  - ➤ By another decimal
  - ➤ When zeros are annexed
- ➤ Division:
  - ➤ Dividing a decimal by a whole number
  - ➤ Eliminating the decimal point in the divisor
  - ➤ Annexing zeros to avoid remainders
- ➤ Comparing and repeating decimals
- ➤ Rounding
- ➤ Timed mastery
- Changing decimals to fractions or fractions to decimals

Problem Solving & Applications

- Word problems:
  - Addition, subtraction, multiplication, division, fractions
  - Money, measures, averages, decimals
  - Geometry: area, perimeter
  - Graphs
  - ➤ Scale drawings, temperature

Updates Coming Soon

Arithmetic cont. p. 98

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Problem Solving & Applications *cont.*

- Steps of problem-solving process:
  - ➤ Problems requiring four steps
  - Mixed operations, estimating answers, eliminating unnecessary facts
  - ➤ Writing a number sentence, drawing a model of a problem, using a schedule, estimating money amounts, guessing and checking, making an organized list, reading a chart, using educated trial and error
- Applications:
  - ➤ Developing a broader and deeper understanding of concepts:
    - ➤ Measures, Roman numerals
    - ➤ Fractions, money, decimals
    - ➤ Graphs, scale drawings
    - ➤ Temperature, geometry, place value

Time

- Table of time: second, minute, hour; day, week, year, leap year; decade, score, century, millennium

Money

- Addition, subtraction, multiplication, and division with $
- ➤ Estimation
- ➤ Rounding to nearest cent

Measures

- Temperature:
  - Reading and writing
  - Term: degrees
  - Celsius and Fahrenheit:
    - Freezing and boiling points of water
    - Normal body temperature
    - ➤ Converting Celsius to Fahrenheit and Fahrenheit to Celsius
    - ➤ Negative temperatures
- Length:
  - Measuring to $\frac{1}{8}$ of an inch
  - English: inch, foot, yard, mile
  - Metric: millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer
  - ➤ Converting kilometers to miles and miles to kilometers
- Weight:
  - English: ounce, pound, ton
  - Metric: milligram, centigram, decigram, gram, decagram, hectogram, kilogram
- Capacity:
  - English: fluid ounce, cup, pint, quart, gallon, peck, bushel, teaspoon, tablespoon
  - Metric: milliliter, centiliter, deciliter, liter, decaliter, hectoliter, kiloliter
- Ordering measures: least to greatest
- Converting measures from one measure to another within same system
- Adding unlike measures within the same system
- Subtracting unlike measures within the same system
- Square measures:
  - Square inches, square feet, square yards
  - ➤ Acres, square miles
- Timed mastery; metric prefixes

Graphing, Statistics, Probability

- Statistics: averaging
- Scale drawing
- Graphs:
  - Drawing graphs
  - Pictographs, bar, and line graphs
  - ➤ Column graphs
  - Identify title, labels, and scale
  - Ordered pairs
- ➤ Probability ratio

Geometry

- Plane figures:
  - Simple closed figure, polygon
  - Quadrilateral: parallelogram, rectangle, square, rhombus, trapezoid
  - ➤ Pentagon, hexagon, heptagon, octagon
  - Triangle: right, isosceles, equilateral
- Angles:
  - Right, congruent
  - Acute, obtuse, straight
- Lines:
  - Line segment, line, ray, intersecting lines
  - ➤ Parallel and perpendicular lines
- Terms:
  - Point, plane, congruent
  - Similar, diagonal
- Perimeter of a polygon
- Area: formulas for rectangle and square
- Recognize models and symbols: • (point); – (line segment); ↔ (line); → (ray); ∠ (angle)
- Squares and square roots

Percent, Ratio, Proportion

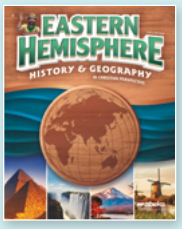
- ➤ Introduction to concept
- ➤ Recognize symbol: % (percent)

Pre-Algebra

- ➤ Solving equations:
  - ➤ 4 new axioms:
    - ➤ With number and unknown side by side
    - ➤ Unknown as numerator and number as denominator
- ➤ Negative numbers
- Squares and square roots
- ➤ Exponents, bases, radical signs
- ➤ Order of operations

Updates Coming Soon

History & Geography



Old World History and Geography presents a fascinating study of the Eastern Hemisphere by geographical regions starting with the Middle East, where history began. It not only presents the importance of studying history and the significance of geography, but also describes the beginnings of history from a Christian perspective. Students are introduced to worldwide missions and missionary heroes while learning about the history, geography, and culture of these specific locations: Asia, Africa, Europe, Australia, Oceania, and Antarctica. They will also study history as it relates to important topics such as creation, evolution, humanism, government, and nations.

Added Enrichment

- Comprehension checks (69)
- Chapter checkups at end of each chapter (16)
- Special feature boxes with in-depth study of Eastern Hemisphere (36):
  - Concepts and places of history
  - Spotlights on events
  - Animals of the world
  - Wonders of geography
  - Important people of history and missionaries of the world
- Maps (43) and important facts about each continent at beginning of each unit
- Worksheets (39):
  - Geography facts and review (24)
  - Chapter content worksheets (6)
  - Geography atlas and continent study (6)
  - Map skills (3)
- *Nation Notebook* optional research project:
  - For nation from Eastern or Western Hemisphere
  - Including geography, symbols, way of life, history
  - Improving skills: organizing time and meeting deadlines, gathering information, writing reports, reading maps, mounting and labeling pictures, making a timeline

Evaluation

- Printed quizzes (36)
- Homework quizzes (6)
- Tests (11)
- 9-weeks content and geography exams (4)
- Atlas, continent, and geography facts memorized and evaluated (36)

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History Study

- ➤ Fertile Crescent:
  - ➤ Cradle of civilization:
    - ➤ Land of beginnings
    - ➤ Sumer: civilization of southern Mesopotamia (Babylon), irrigation, writing, wheel, archaeologists, ziggurats
    - ➤ Ur of the Chaldees: Chaldea, stone temples, marketplace, Abraham
- ➤ Ancient Middle East:
  - ➤ Where history began
  - ➤ Homes of ancient times
  - ➤ Daily life in an ancient city
  - ➤ Phoenicians (seafaring people): sailors, Carthage, alphabet, papyrus, blown glass
  - ➤ Hittites: empire builders
  - ➤ Lydians (makers of money): trade by barter, first coins minted
  - ➤ Israelites (God's chosen people): Sinai Peninsula, Ten Commandments, Joshua, "Holy Land," Canaanites, judges, King Saul, King David, King Solomon
  - ➤ Assyrian Empire: feared conquerors
  - ➤ Babylonian Empire: Code of Hammurabi, Chaldeans, Seven Wonders of the Ancient World, Daniel, King Belshazzar
  - ➤ Persian Empire: Cyrus the Great
- ➤ Middle East today:
  - ➤ Geographical features
  - ➤ Climate: desert regions, Mediterranean climate, fertile land
  - ➤ Plants and animals
  - ➤ People: Arabic language, Islam religion
  - ➤ Importance of history and current events: Islam, Judaism, Christianity, natural resources
  - ➤ Three geographical areas: Fertile Crescent, Arabian Peninsula, Northern Plateaus
  - ➤ Henry Martyn: missionary to India and Middle East
- ➤ Countries of Central and Southern Asia:
  - ➤ India:
    - ➤ Topographical features, caste system, family life, religion, place value, decimal numeral system
    - ➤ Taj Mahal, Vasco da Gama, East India Company, William Carey, East and West Pakistan, Mt. Everest
  - ➤ Amy Carmichael: missionary to Indian children
  - ➤ Other Central and Southern Asian Countries
- ➤ Countries of the Far East:
  - ➤ China:
    - ➤ Huang He (China's Sorrow), dynasties, Great Wall of China, discoveries and inventions, missionary efforts
    - ➤ Changing country, Republic of China, Communism, Mao Tse-tung, Chiang Kai-shek, People's Republic of China
    - ➤ Modern China, Beijing, Hong Kong, Tiananmen Square
  - ➤ Chinese sphere of influence
  - ➤ Northeast and Southeast Asian countries
- ➤ Egypt:
  - ➤ Geography of Egypt
  - ➤ Egypt's beginning: early river civilizations
  - ➤ Dynasties
  - ➤ Building projects of the pharaohs: irrigation and flood control, shadoof, pyramids, Great Sphinx, obelisks, Valley of the Kings, "King Tut"
  - ➤ Everyday life in ancient Egypt: people, education, food
  - ➤ Papyrus plant: first paper, hieroglyphics, Rosetta Stone
  - ➤ Decline of Egypt

History & Geography cont. p. 100

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

History Study cont.

- Africa long ago:
  - Land of mystery: "Dark Continent"
  - Highlights of African history:
    - Land of Phut, Sahara, Land of Cush
    - Ethiopian eunuch, Queen of Sheba, early Christians in North Africa
    - Muslim control, Ghana Empire, Mali Empire
  - Age of exploration and missions:
    - Malaria, yellow fever, sleeping sickness, slave trade
    - Robert Moffat, David Livingstone, Victoria Falls, Henry Stanley, Samuel Crowther, Mary Slessor
- Africa in modern times:
  - Northern Africa: Sahara, Barbary Coast, Aswan High Dam, Suez Canal, Sudan, Khartoum
  - Tropical Africa: history and geography
  - Southern Africa: European settlement, Republic of South Africa, resources and industries
  - Modern Africa's needs: the Gospel, food, shelter, education, stable government
- Ancient Greece
  - Geographical features
  - First Greeks: Minoans, Crete, Mycenaeans, Trojan horse
  - Greek alphabet and writings: Homer, Aesop
  - Greek philosophers: Pythagoras, Democritus, Socrates, Plato, Aristotle
  - Greek city: city-state, agora, acropolis, theater, gymnasium, stadium
  - A Greek idea: democracy (people rule)
  - Two famous city-states: Sparta, courage, strength, loyalty, helots; Athens, culture
  - Philip of Macedonia: Macedonia, phalanx
  - Alexander the Great (Conqueror of the World): Hellenistic Age
- Rome:
  - Land: Apennine Peninsula, Italy, Alps, Po River, Tiber River
  - People: Italians, Latins, Etruscans, Greek influence
  - Life in Rome: home, education, roads, bridges, tunnels, aqueducts, concrete, government, Roman Republic, patricians, plebeians
  - How Rome conquered the world: Punic Wars, Julius Caesar, Rubicon River, dictator, Mark Antony, Pompeii
  - Roman Empire: Augustus Caesar, Pax Romana
- Christianity:
  - Greatest event in history: birth of Jesus, early ministry of Jesus Christ, spread of the Gospel
  - Nero and the persecution of Christians: colosseum, gladiators, the catacombs
  - Rise of Constantine
  - Fall of Rome
  - Middle Ages:
    - Peasants and lords, Roman church, Charlemagne, Holy Roman Empire
    - Monasteries, convents, crusades, Waldensians, Inquisition, John Wycliffe, John Huss
  - Invention of printing press: Johann Gutenberg, Gutenberg Bible
  - Martin Luther and the Protestant Reformation: indulgences, purgatory, Ninety-Five Theses
- England and the British Isles:
  - British Isles: "Mother Country," biblical heritage
  - Great events in English history:
    - Magna Carta, Elizabethan Age
    - Age of Puritans:
      - Puritans and science, Wesleyan Revival
    - Rise of industry, Victorian Age, England's decline, restoring England's greatness, Margaret Thatcher
  - England: land and people, Pennine Chain, London, Thames, the Chunnel
  - Ireland, Scotland, and Wales: "Emerald Isle," people, potato famine, Republic of Ireland, Northern Ireland, Scottish Highlands
- Other countries of Western Europe:
  - Two Europes: Communist Eastern Europe, Free Western Europe
  - Mediterranean Europe:
    - Spain: ancient Armada
    - Portugal: explorers
    - Italy: Renaissance
    - Greece: early European civilizations
  - Central Europe:
    - France: revolution
    - Switzerland: mountain republic
    - Austria: culture and beauty
    - Germany: reformation
  - The low countries: The Netherlands (land below sea level), how Dutch made Holland, Belgium and Luxembourg
  - Scandinavia (land of Vikings):
    - Norway: land of the Midnight Sun
    - Sweden: largest Scandinavian country
    - Denmark: Hans Christian Andersen
    - Iceland: land of fire and ice
    - Finland: scenic forest land, European tundra
  - Languages of Europe: Romance, Germanic, Slavic, and others
- Countries of Eastern Europe:
  - Russia under the czars
  - How Communism began: Karl Marx, Marxism
  - Birth of the Soviet Union: Russian Revolution, Communist terrorism
  - Changes in the Soviet Union:
    - No food, disaster in Afghanistan
    - Mikhail Gorbachev
    - Perestroika and glasnost, Lech Walesa, Solidarity, Baltic Republics
  - Life in the Soviet Union: atheism, few freedoms, government control
  - Soviet Union and United Nations
  - Fall of the Soviet Empire: Boris Yeltsin, Russian Republic, Commonwealth of Independent States
  - Modern countries of Eastern Europe
- Australia and beyond:
  - Australia: "Island Continent," land and climate, Great Barrier Reef, plants and animals, history, government, cities, country life, industry and resources
  - Oceania: islands of the Pacific
  - Antarctica: coldest continent, discovery and exploration, Captain James Cook, Richard Byrd

Updates Coming Soon

History & Geography cont. p. 101

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History & Geography cont.

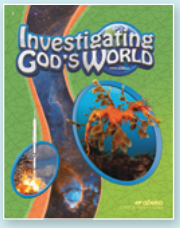
Memory Work

- 6 documents:
  - ➤ The American's Creed
  - ➤ Portion of The Declaration of Independence
  - ➤ Preamble to the Constitution
  - First Amendment to the Constitution
  - The Rights of Americans
  - Lincoln's Gettysburg Address
- States and capitals
- 44 U.S. Presidents

Geography Study

- Atlas facts memorized:
  - ➤ Eastern Hemisphere: political map of nations, cities, states, bodies of water, oceans
  - ➤ World: physical maps of rivers, seas, deserts, mountain ranges, mountains
  - ➤ Kingdoms and empires of the ancient world
  - ➤ Africa: countries, rivers, mountains, bodies of water
  - Landforms
  - ➤ Bodies of water
  - U.S. states and capitals
- ➤ Continent facts memorized:
  - ➤ Asia: countries, capital names, locations; continent facts, seas, rivers, mountain ranges, mountains, deserts
  - ➤ Africa: countries, capital names, locations; continent facts, rivers, deserts, mountain ranges, mountain
  - ➤ Europe: countries, capital names, locations; continent facts, seas, rivers, mountain ranges, mountains
  - ➤ Australia, Oceania & Antarctica: countries, capital names, locations; continent facts, mountain ranges, desert, islands
- Geography terms and facts memorized:
  - Circle of the earth:
    - Sphere
    - ➤ Diameter, circumference
  - Oceans
  - ➤ Seas
  - Seven continents
    - Earth's hemispheres:
      - Northern, southern
      - Eastern, western
  - Latitude and longitude:
    - Parallels of latitude, tropics, meridians
    - Poles, Equator
  - ➤ Bodies of water: gulf, strait, channel
  - Rivers:
    - ➤ Tributary, mouth, delta
    - Upstream, downstream
  - ➤ Landforms: plains, plateaus, hills, mountains
  - ➤ Mountains and mountain ranges: sea level, altitude, peak, summit; volcano, dormant, extinct
  - ➤ World's greatest deserts
  - ➤ Climate zones
  - ➤ Tropical rainforests
  - ➤ Tropical savannas

Science



Investigating God's World leads students continually from the known to the unknown by teaching important science concepts within the context of things they can see and know. The aim is to help students better understand basic science principles rather than to merely teach them science vocabulary.

This text presents the world as the creation of God and glorifies Him as its Sustainer and Upholder. It introduces great scientists and naturalists who believed in the biblical account of Creation, and where appropriate, it refutes the materialist's faith in evolution. Students will also learn about topics such as plants and animals, matter and energy, light, and minerals.

Additional Helps

- Suggested:
  - Enrichment projects (3)
  - DVDs (4)
- Worksheets (24)

Evaluation

- Printed quizzes (25)
- Homework quizzes (3)
- Tests (6)
- 9-weeks exam (3)

➤ **RED** *indicates first introduction of content.*

Insects & Plants

- The mysteries around us:
  - Science and observation
  - ➤ Law and order
- A detective's tools: his senses and intelligence, books and equipment
- ➤ Investigating a goldenrod jungle:
  - Pollination
  - Honeybees
- More stinging insects: bumblebees, yellow jackets
- Victims and villains:
  - Predator, prey
  - Food chain
  - Mimicry:
    - Monarchs and viceroy butterflies
    - ➤ Bee and fly differences; bee killers

Science cont. p. 102

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Insects & Plants *cont.*

- Camouflage:
  - ➤ Ambush bug, goldenrod spider
  - ➤ True bugs:
    - Piercing and sucking mouthparts
    - ➤ Wings that cross
  - ➤ Praying mantis: egg case, nymph
- Beetles and seed eaters:
  - ➤ Beetle characteristics, locust borer, goldenrod soldier beetle
  - Seed feeders:
    - Birds
    - ➤ Rabbits
- Composite flowers: characteristics of composites; daisy, aster, blackeyed Susan, thistle, goldenrod, ragweed
- William Carey: missionary and botanist in India

Activities & Demonstrations:

- ➤ Setting up a living flower exhibit
- ➤ Making a meadow in a terrarium
- ➤ Observing insect orders
- ➤ Making plant exhibits: drying flowers, building a gall cage
- ➤ Using a water lens
- Learning more about honeybees: the "bee dance"
- Observing social insects
- ➤ Making a creature keeper
- ➤ Making a pitfall trap

Mammals

- Habitats
- Vertebrates:
  - Characteristics:
    - ➤ Four limbs: two forelimbs, two hind limbs
    - Warm-blooded
    - Hair:
      - Fur, wool, spines or quills, bristles, whiskers
      - For warmth:
        - Whales' blubber
      - For camouflage
    - ➤ Special structures: horns, claws, nails, hoofs, hard plates
    - ➤ Mammary glands: most mammals provide milk for their young
- ➤ Unusual mammals:
  - ➤ Marsupials
  - ➤ Platypus and echidna: hatch from eggs
- ➤ Gnawing mammals:
  - ➤ Rodents (herbivores): rats, mice
  - ➤ Rabbits are not rodents
- Insect-eating mammals:
  - ➤ Ant-eating mammals: giant anteater, aardvark, pangolin
  - ➤ Insectivores: shrews, moles, hedgehogs
  - ➤ Bats
- ➤ Dogs (canines): breeding, training
  - ➤ Carnivores
  - ➤ Wild dogs: wolves, coyotes, foxes
- ➤ Cats (felines):
  - ➤ Designed to stalk: night vision, whiskers, rough tongue, padded feet
  - ➤ Wild cats: tiger, lion, jaguar, leopard, etc.
- ➤ Other carnivores: contrast in size
  - ➤ Large carnivores: bears, giant pandas
  - ➤ Small carnivores:
    - ➤ Weasels and minks
    - Skunks
- ➤ Primates (tree-dwelling mammals):
  - ➤ Characteristics
  - ➤ Apes: mountain gorillas and chimpanzees
  - ➤ Monkeys: New World and Old World
- ➤ Horses: man's best helper
- ➤ Cloven-hoofed animals:
  - ➤ Bovids (useful ruminants): cattle, sheep, goats
  - ➤ Deer (antlered ruminants): white-tailed deer, moose, reindeer and caribou
  - ➤ Differences between horns and antlers
  - ➤ Grenfell of Labrador: missionary and doctor
- ➤ Mammals and man:
  - ➤ Likenesses and differences
  - ➤ Balance of nature; extinct and endangered species

Activities & Demonstrations:

- Collecting and recognizing animal tracks
- ➤ Investigating your dog and cat
- ➤ Following tracks: studying animal tracks
- ➤ Demonstrating wool's ability to hold heat
- ➤ Building a nature sanctuary
- ➤ Observing animal measurements

Energy: Light

- Defining light:
  - Speed of light
  - Transparent, opaque, translucent light
  - Shadows
- Journey of light:
  - Luminous objects
  - ➤ Natural and artificial light
- Reflection: bouncing light; convex and concave mirrors
- Refraction (bending light rays):
  - ➤ Convex and concave lens, telescopes
- The spectrum: ROY G. BV, infrared, ultraviolet
- ➤ Eyes (the light detectors):
  - Parts of the eye:
    - Pupil, iris, lens, retina, optic nerve
    - ➤ Cornea
  - ➤ Eye conditions: nearsightedness, farsightedness
- ➤ Sir Isaac Newton and the eye
- ➤ Animal eyes:
  - ➤ Characteristics of birds' eyes
  - Insects' eyes
  - Night vision
  - ➤ Binocular vision, monocular vision
  - ➤ Seeing color

Activities & Demonstrations:

- ➤ Making a lens and mirror collection
- ➤ Observing light reflectors
- ➤ Observing eyeshine
- ➤ Demonstrating transparent, translucent, and opaque materials
- ➤ Observing mirrored impressions
- ➤ Making a spectrum

Science cont. p. 103

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Geology

- The earth's structure: crust, mantle, outer core, inner core
- Soil (a natural resource):
  - Humus; conservation
  - ➤ Chemical and physical weathering
- Rocks: igneous, sedimentary, metamorphic
- Minerals: crystals and gemstones; mineralogists
- ➤ Metals:
  - ➤ Characteristics of metals
  - ➤ Gold, silver, copper, iron, aluminum, mercury, uranium
- ➤ Hidden treasures:
  - Fossil fuels: coal, oil
  - ➤ Hot springs and geysers
  - ➤ Hollowed-out caves: stalactites, stalagmites, spelunkers
  - ➤ Charles Spurgeon: preacher who loved nature
  - ➤ Interesting treasures:
    - Fossils:
      - Formation, kinds
      - ➤ Paleontologists
  - ➤ Men who saw dinosaurs: Bible characters; others throughout history

Activities & Demonstrations:

- ➤ Gathering a rock collection
- ➤ Doing the acid test
- ➤ Making a crystal garden
- ➤ Identifying minerals
- ➤ Identifying artificial fossils
- ➤ Observing physical weathering at work

Oceanography

- ➤ The sea is His: beauty, power, secrets
- ➤ Water (the necessary resource):
  - Composition of water
  - Water cycle
- ➤ Tide and shore:
  - ➤ Types of tides, tidal zones
  - ➤ Rocky shores
  - Sandy shores
- ➤ Shellfish: mollusks, crustaceans
- ➤ Sea stars
- ➤ Beauties of the coral reef: coral polyps; fish of the coral reefs
- ➤ Some seafaring mammals:
  - Whales
  - ➤ Pinnipeds, sea otters
- ➤ Winged wanderers: albatrosses, gulls, penguins
- ➤ Preserving the sea:
  - ➤ Oil spills
  - Conservation

Activities & Demonstrations:

- ➤ Gathering a seashell collection
- ➤ Moving molecules
- ➤ Demonstrating a miniature oil slick

Energy & Engines

- Force and motion (engines):
  - Forces necessary for motion:
    - Force of gravity, force of friction
    - ➤ Force of contact
- Electricity and magnetism:
  - ➤ Force of electricity: positive and negative charges
  - Force of magnetism
- Work and energy:
  - Forms of energy; types of energy; transfers of energy
  - Energy for muscles
- The power of water and wind: windmills, water wheels
- Water, ice, and steam:
  - The three states of matter, changes in the states
  - Water's three states
  - Water molecules in motion
- The power of steam:
  - ➤ Performance under pressure
  - ➤ Steam engine; steam locomotive
- ➤ The power of internal combustion:
  - ➤ Necessary ingredients for combustion
  - ➤ Gasoline and diesel engines
- The power of jet propulsion: how a jet engine works
- The power of rocket engines:
  - ➤ Rockets and oxygen
  - ➤ Modern rocketry
  - ➤ Two types of rocket engines

Activities & Demonstrations:

- ➤ Calculating weight on the moon (effect of gravity)
- ➤ Demonstrating electrical charges
- ➤ Observing molecules move in water
- ➤ Demonstrating:
  - ➤ Importance of oxygen in combustion
  - ➤ Magnetic field

Astronomy

- The sun:
  - Size; a source of energy
  - ➤ Layers: core, photosphere, chromospheres, corona
- The stars: constellations of the northern and southern hemispheres
- The moon:
  - Appearance
  - ➤ Moon seas, phases of the moon
- Eight planets: names, description of each
- Air: gases in the air, importance of air, atmosphere, air pressure
- ➤ The wild blue yonder: troposphere, stratosphere, mesosphere, thermosphere, exosphere, magnetic field
- ➤ Wernher von Braun: aerospace engineer

Activities & Demonstrations:

- ➤ Exploring space from your backyard
- ➤ Demonstrating:
  - ➤ Air's expansion and contraction in response to temperature
  - ➤ Air pressure with an atmospheric egg

Updates Coming Soon

Science cont. p. 104

➤ **RED** *indicates first introduction of content.*

Science cont.

Weather

- Temperatures and winds:
  - ➤ Solar rays; greenhouse effect
  - ➤ Seasons:
    - ➤ Result of Earth's tilt on axis
  - ➤ The winds:
    - ➤ Temperature differences
    - ➤ Air pressure
    - ➤ Major wind systems
- Water vapor: humidity; condensation
- ➤ Atmosphere: ingredients for cloud formation; types of air masses, fronts
- ➤ Clouds:
  - ➤ Shapes and names: cumulus, stratus, cirrus, combination clouds
  - ➤ Fog
- Precipitation:
  - Rain, sleet, snowflakes
  - Dry snow, wet snow, freezing rain, tropical rain
- Storms:
  - ➤ How a storm is produced
  - ➤ Anatomy of a cumulonimbus cloud
  - Hailstones
  - ➤ Types of lightning
  - ➤ Tornadoes: watches and warnings
  - Storm safety
  - ➤ Weather monitoring and forecasting

Activities & Demonstrations:

- ➤ Building a water barometer
- ➤ Creating a wind system
- ➤ Building a hygrometer
- ➤ Making fog
- ➤ Investigating snow crystals
- ➤ Being a weather prophet

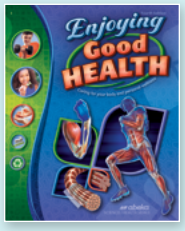
Variety of Vertebrates

- Classification of animals
- Warm-blooded and cold-blooded vertebrates: definition
- Birds and flight:
  - Structure of feathers and bones
  - ➤ Types of wings
  - ➤ Powerful breast muscles
- Fish:
  - Structure: gills, scales, swim bladder
  - ➤ Types: jawless fish, cartilaginous fish, bony fish
- Snakes (reptiles):
  - ➤ Parts of a snake, venomous snakes, common snakes, constrictors
  - ➤ Treatment of snakebites
- ➤ Lizards (reptiles): defenses, types
- ➤ Turtles and crocodiles (reptiles):
  - ➤ Armor-like structure, parts of turtle shells
  - ➤ Types of turtles and crocodiles
- Amphibians:
  - Types
  - Tadpole metamorphosis
  - ➤ Unusual amphibians
- Louis Agassiz: "America's Greatest Science Teacher" (1847–1873)

Activities & Demonstrations:

- ➤ Conducting an egg watch
- ➤ Observing fish
- Raising tadpoles

Health



The active lifestyle presented in *Enjoying Good Health* emphasizes the significance of maintaining sound health habits. While reviewing the muscular and respiratory systems of the human body, each student is encouraged to measure his level of fitness. An in-depth study of the circulatory system adds to the student's knowledge of physical fitness. The study of nutrition focuses on the importance of a healthful diet and its effects on overall fitness and personal appearance.

Enjoying Good Health also stresses personal responsibility in overcoming spiritual battles, concluding with a practical study of the Christian's spiritual armor.

Additional Helps

- Worksheets (11)
- Physical exercises (7)
- Mental exercise (1)
- Demonstrations:
  - Measuring amount of air in breath
  - Determining your optimal range
- Review games (16)

Evaluation

- Printed quizzes (6)
- Homework quizzes (3)
- Tests (4)

➤ **RED** *indicates first introduction of content.*

Circulatory System

- Blood: cardiac muscle, arteries, capillaries, veins, plasma, red and white cells, antibodies, platelets
- Heart: atrium, ventricle, valves
- ➤ Circulatory system: aorta, pulse, capillaries, venae cavae, varicose veins, blood pressure
- ➤ Rest: lactic acid, carbon dioxide, amount needed
- ➤ Protecting your heart: alcohol and tobacco use, cholesterol, physical fitness

Health cont. p. 105

Updates Coming Soon

➤ **RED** *indicates first introduction of content.*

Health *cont.*

Nutrient Study
- Energy; diet
- Nutrients:
  - ➤ Simple and complex carbohydrates
  - Saturated and unsaturated fats
  - ➤ Water-soluble and fat-soluble vitamins
  - Minerals: phosphorus, magnesium, sodium, potassium, iron, iodine, zinc
  - ➤ Deficiency conditions: osteoporosis, goiter, anemia
- Daily Food Guide: malnutrition, balanced diet, Food Guide Pyramid and 5 groups
- ➤ Energy for activity: calories, metabolism
- Balanced meals: a good breakfast, lunch, dinner, and snacks
- Energy input and output: maintaining a healthy weight, obesity

Digestive System
- ➤ Digestive system: alimentary canal
  - Parts: mouth, esophagus, stomach, small intestine, colon
  - Saliva, gastric juices, bile
- ➤ Excretory system: kidneys, bladder
- ➤ Job of the liver in digestion
- Absorption and elimination: villi, colon, fiber
- Water:
  - Importance, amount needed
  - ➤ Safe drinking water
  - ➤ Dysentery
  - ➤ Caffeine
- ➤ Aids and hindrances to digestion
- Pleasant meals: manners

Physical Fitness in Action: Exercise
- Factors:
  - Aerobic endurance
  - Muscular strength and endurance; agility
  - ➤ Flexibility
  - Body composition

Interpersonal Relationships
- Social acceptance:
  - Influenced by personal appearance and hygiene: posture, halitosis, brushing, flossing, deodorant
  - Influenced by actions:
    - Polite conversations; proper introductions
    - Telephone courtesy during incoming and outgoing calls
    - ➤ RSVPs, thank-you notes
    - Being a good friend
- ➤ Mental awareness: potential, eye-gate, ear-gate, right attitudes, gratitude
- ➤ Spiritual warfare: armor of God

Updates Coming Soon

Bible



Fifth grade Bible is filled with many astounding stories about Bible characters such as Moses, Ruth, Daniel, Samuel, and David. Students will also study Joshua's life and learn how his loyalty to God made him an excellent leader and caused him to triumph in battle. These Bible stories will show students how God can do mighty acts when a person has faith in Him.

Evaluation
- Graded memory verse passages (8)
- Content tests (5)

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Lessons *407 Abeka Flash-a-Cards*
- Salvation Series (5 lessons)
- Life of Moses Series (20): Moses in Egypt; Journey to Sinai; Journey through the Wilderness
- Tabernacle (3)
- First Christmas (5); Joshua (7); Judges (6); Ruth (3); Jonah (2)
- Crucifixion and Resurrection (9); Life of Samuel (4)
- Life of David Series (13):
  - Young David, David in Hiding
  - ➤ David the King
- The First Thanksgiving

Music *45 songs*
- Choruses, hymns of the faith, holiday songs, and patriotic songs:
  - ➤ 18 new hymns and songs; 12 new choruses

Bible 5 Journal
- Personal application of the Bible lessons
- Discussion/questions strengthen biblical worldview

Memory Work
- ➤ New Scripture passages (8) containing 49 verses
- Review verses (97)

Doctrinal Drill *59 questions/answers*
- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation
- 8 questions with verses to memorize as answers

Prayer Time
- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Sword Drills
- Learn to quickly find 112 Old and New Testament references

Music



One important foundation of a nation's heritage is its music. *Songs We Enjoy 5* contains songs that reflect the spirit and strength of the American people. These traditional, patriotic, holiday, and fun songs have been delighting students for generations. The sing-along CD makes song time easy for the teacher and even more enjoyable for the students.

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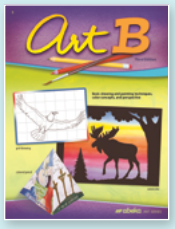
Skills Development *66 songs*

- Follow a song leader, while singing with class or CD
- ➤ Define and understand 17 unfamiliar words and phrases in lyrics
- ➤ Improve coordination skills with songs that require hand motions
- Benefit from fun activities that keep interest:
  - Dynamic contrasts, singing in rounds
  - ➤ Tongue twisters
- Learn historical facts through patriotic, folk, and Americana music

Variety of Songs to Memorize

- Patriotic, folk, Americana, fun, spirituals and hymns, holiday, songs at sea

Arts & Crafts



Students use *Art B* to review fundamental principles of color with colored-pencil renderings and watercolor paintings. Fifth graders will learn new concepts such as light and dark values, one-point perspective (with step-by-step drawings), and symmetry. Students will enjoy using different types of media to create three-dimensional forms. *Art B* also encourages students to appreciate art by introducing them to accomplished artists and art techniques.

Added Enrichment

- Art Appreciation
  - Introduction to influential artists such as Julius Schnorr von Carolsfeld, Currier and Ives, and Brian Jekel
  - Art forms: woodcuts, calligraphy, origami, and lithographs
  - Introduction to well-known prints and works

➤ **RED** *indicates first introduction of content.*

Skill & Concept Development *37 projects*

- Primary, secondary, intermediate, complementary, analogous, and neutral hues
- ➤ Value: light and dark; watercolor; contrasting (12)
- ➤ Perspective: horizon line, vanishing point (6)
- ➤ Symmetry (4)

Technique Development

- ➤ Drawing: sketching basic shapes (4)
- ➤ Shading; enlarging and reducing (4)
- Animation
- Modeling (4):
  - Paper shaping, paper cutting, paper folding
  - ➤ Foil, imprinting, curling
- ➤ Painting: watercolor techniques (4)

Updates Coming Soon

Language Arts: Reading



Discover how art and literature work together to communicate throughout time. Abeka's refreshed sixth grade reading curriculum explores the works and the lives of renowned authors and artists throughout different literary time periods. Students will analyze the works of celebrated authors such as Robert Frost, Henry Wadsworth Longfellow, and Laura Ingalls Wilder. They will also examine the works of beloved artists such as Garth Williams, Wesley Dennis, and others. This deeper look into literature and art will equip students not only for the next grade, but also for a lifetime of literary learning.

Students will read a biographical novel and a Christian fiction novel and use them when writing language book reports. Two speed and comprehension readers contain challenging and interesting selections for the development of a wider range of comprehension and critical thinking.

Literary Value

- Authors include well-known writers such as Louisa May Alcott, Benjamin Franklin, Rudyard Kipling, Lucy Maud Montgomery, Henry Wadsworth Longfellow, Laura Ingalls Wilder, Robert Frost, Emily Dickinson, Robert Browning, Alfred Lord Tennyson, and Max Lucado
- Themes include brotherhood, friendship, generosity, honor, ingenuity, leadership, patience, prayer, justice, loyalty, citizenship, dedication, and responsibility

Materials

- Readers (3) containing:
  - Short stories
  - Poems, plays, songs
  - Informative selections
  - Scripture selections
- Christian fiction novel
- Biographical novel
- Speed and Comprehension Readers
  - *Reading Comprehension 6 Skill Sheets*
  - *Adventures in Greatness* series

Evaluation

- Weekly oral reading grade
- Speed and comprehension quizzes for timed silent reading exercises and stories

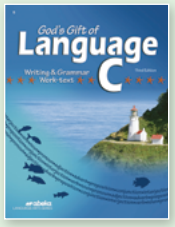
Reading Skills Development

- Read orally and silently with comprehension
- Strive to increase accuracy, fluency, phrasing, alertness to punctuation, expression, appropriate speed, comprehension, volume, poise
- Vocabulary Development through words and definitions
- Development of understanding literary types, terms, and concepts
- Exercise critical thinking through inference, evaluation, analyzation, and personal application—using facts and reasoning in the development of a biblical worldview

Literary Concept Development

- Understanding and applying literary concepts: elements of story—title, author, character, main character (protagonist), setting, moral, main idea, stanza; elements of poetry—meter, rhyme scheme, alliteration, repetition; elements of plot—introduction, rising action, climax, falling action, conclusion; foreshadowing; elements of play—act, scene, drama, cast, stage directions; figurative language—simile, metaphor, personification, allegory; symbolism; variety of genres: autobiography, biography, fiction, nonfiction, folk literature, legend, fable, biblical narrative; elements that reflect author's style—point of view/perspective, narrator, inference, idiom, limericks, onomatopoeia, hyperbole; irony, dialect, dialogue, mood; summary; excerpt; parody
- Summarizing plot
- Predicting endings
- Discerning fact from opinion
- Recognizing, analyzing, and comparing text structures—narrative, informative, sequential, descriptive, problem/solution, compare/contrast, cause/effect
- Determining point of view—first and third person
- Analyzing characters and setting
- Recognizing genres: realistic fiction, historical fiction, fantasy, biographical stories including folktales, fables, legends, myths, fairy tales, parables, Scripture, informative selections
- Distinguishing fantasy from reality
- Charting information: word webs, Venn diagrams, compare/contrast, predict possible outcomes, create a playbill, analyze characters, analyze plot
- Introducing literary time periods
- Analyzing author/writing techniques
- Appreciating art styles from specific time periods
- Highlighting skilled authors and artists

Language Arts: Language



The sixth grader should be constantly guided to see how grammar applies to his writing and speaking. *God's Gift of Language C* gives a thorough, systematic presentation of grammar, composition, and mechanics in a clear and appealing manner. Both the student and the teacher will appreciate the explanations and demonstrations of the writing process. Students who use this program are not "afraid of composition." *Creative Writing,* a companion text to *God's Gift of Language C,* helps students to think and to convey their thoughts more clearly, critically, and creatively.

God's Gift of Language C features a cumulative review section at the end of each unit and a Handbook of Rules and Definitions at the end of the text.

Added Enrichment

- Creative writing focus (23 lessons)
- The Student Writer's Handbook includes:
  - How to use a dictionary, thesaurus, encyclopedia; The Writing Process; a Writer's Checklist; proofreader marks
  - How to write book reports using the Writing Process and the Book Report Checklist; friendly letters and social notes
  - How your library works

Evaluation

- Quizzes:
  - From quiz/test book (15)
  - Graded grammar exercises in student book (10)
- Tests from quiz/test book (10)
- Book reports (7):
  - Short format (3; each counts as 2 quiz grades)
  - Long format (3; each counts as test grade)
  - Oral (1; counts as test grade)
- Library research report (counts as 2 test grades)
- Graded creative writing exercises (3)

Grammar

- Capitalization:
  - Proper nouns:
    - Particular persons, places, things; words referring to Deity or the Holy Scriptures
  - Words formed from proper nouns:
    - Proper adjectives
    - › Abbreviations of proper nouns
  - Titles of persons:
    - Used before a person's name as part of the name
    - Used alone in direct address
  - Titles of works:
    - First, last, and all important words in titles of books, magazines, newspapers, poems, stories, plays, and works of art
  - First word in a sentence, including quoted sentences
  - Pronoun *I*
- Punctuation:
  - End marks
  - Commas:
    - Before a coordinating conjunction joining two simple sentences
    - To indicate where word(s) have been omitted
    - › To avoid a possible misreading
    - To indicate nonessential elements in a sentence: nouns of direct address; *well, yes, no, why*
    - › To indicate parenthetical words or expressions
    - In dates and addresses
    - In letter salutations and closings
  - Apostrophes:
    - To show possession
    - To show omissions from a word
    - › To show omissions from an expression
    - With *s* to form:
      - The plural of letters
      - › The plural of numbers, signs, and words used as words
  - Quotation marks:
    - In a direct quotation
    - To enclose titles of short stories, short poems, songs, chapters, articles, and other parts of books or magazines
  - Semicolons:
    - To separate simple sentences not joined by a conjunction
    - › With a conjunction to join two simple sentences if those sentences already contain commas
  - Colons:
    - › Before a list of items
    - Between chapter and verse of a Bible reference
    - Between hour and minute when writing the time
    - After the salutation of a business letter
  - Underlining: titles of books, magazines, newspapers, plays, works of art, ships, trains, and airplanes
  - Hyphens:
    - To divide a word at the end of the line
    - › In compound numbers
    - › In fractions used as adjectives
- The sentence:
  - Identify sentences and fragments
  - Correct sentence fragments and run-on sentences
  - Recognize four types of sentences: declarative, imperative, interrogative, exclamatory
  - Locate simple and complete subjects and predicates
  - Identify compound subjects and verbs; compound sentences
  - Locate out-of-the-ordinary subjects and verbs
- Parts of speech:
  - Recognize and diagram all eight parts of speech
  - Verbs:
    - Distinguish action, state of being, helping, and linking verbs
    - Recognize verb phrases, principal parts of verbs, and irregular verbs
    - Use spelling rules for verb endings
    - Use action verbs with picturing power
    - Find exact verbs
    - Use troublesome verbs correctly
  - Nouns:
    - Recognize common, proper, compound
    - Use:
      - As subjects, predicate nominatives, direct objects, indirect objects, objects of the preposition
      - In direct address
    - › Make subject agree with verb

Language cont. p. 109

➤ **RED** *indicates first introduction of content.*

Language *cont.*

Grammar *cont.*

- Pronouns:
  - Recognize personal pronouns: nominative, objective, possessive
  - Choose correct pronoun case
  - Recognize:
    - Compound, demonstrative, and interrogative pronouns
    - ➤ Indefinite pronouns
  - ➤ Make pronoun agree with the verb
- Adjectives:
  - Know distinguishing characteristics of adjectives
  - ➤ Correctly use compound proper adjectives
  - Recognize:
    - Predicate adjectives, verbs used as adjectives
    - Prepositional phrases used as adjectives
  - Use and compare adjectives correctly
  - ➤ Correctly use *less, least; fewer, fewest; them, those*
  - ➤ Place adjectives correctly in sentence
  - ➤ Learn how to use adjective-forming suffixes
- Adverbs:
  - Distinguish adjectives from adverbs
  - Identify prepositional phrases used as adverbs
  - Correctly use:
    - *Good, well*
    - Adverbs in comparisons
  - Avoid double negatives and double comparisons
- Prepositions:
  - Recognize prepositional phrases
  - Distinguish prepositions from adverbs
  - Avoid:
    - Preposition errors
    - ➤ Unnecessary prepositions
- Conjunctions:
  - ➤ Recognize coordinating and correlative conjunctions
- Interjections

Composition

Note: Many creative writing exercises are included in *Creative Writing,* a companion text to *Language C.*

- Creative writing exercises:
  - Write:
    - Friendly letter and social notes
    - Dialogue
    - Paragraphs:
      - Develop:
        - A good topic sentence
        - ➤ Paragraphs with details, examples, reasons, or brief story
      - Use paragraph unity
      - ➤ Develop sentence order: chronological order, order of importance
      - ➤ Write a compare-and-contrast paragraph
      - ➤ Write a narrative paragraph
      - Write about an emotion and a memory
      - Apply the Writing Process to writing paragraphs
      - Use transitional words and phrases
      - ➤ Combine paragraphs to make a composition
  - Write a library research report using the Writing Process:
    - Make bibliography cards and preliminary outline
    - Take notes
    - Make a final outline
    - Write the rough, second, and final drafts
    - Write the final bibliography
  - ➤ Write poetry:
    - ➤ Using rhymes, assonance, consonance
    - ➤ Definition and picture poems
    - ➤ Haiku and cinquain poetry

Language Arts: Penmanship & Creative Writing



Creative Writing is a companion text to *God's Gift of Language C.* This work-text develops students' abilities to observe, proofread, think clearly, and use descriptive words. Students learn what characterizes good writing and how they can write more creatively as they study observation and creativity, poetry, and journal writing. The challenging Mind Stretchers provide lively openers for each creative writing class as students create anagrams, acrostics, and rebuses, and work with synonyms, connotation, and alliteration. *Creative Writing* features many examples for students to follow as they complete these exercises. Sixth graders will also review previously learned penmanship skills and concepts by completing practice exercises.

Added Enrichment

- Journal compilation including creative writing assignments (24)
- Additional exercises to build creative writing skills (40)

Evaluation

- Penmanship tests (17)
- Progress report boxes throughout penmanship section (12)

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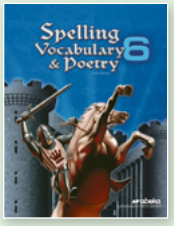
Penmanship Skills Development

- Maintain good writing position:
  - Sitting properly in desk
  - Holding pen correctly
  - Slanting paper correctly
- Write in ink with a relaxed grip and flowing movement
- Evaluate writing for personal improvement
- Maintain correct letter spacing, shape, alignment, and proportion; uniform slant, retracing, and smooth connecting strokes
- ➤ Identify and practice difficult connections (13)
- Use correct warm-up procedure using slants, ovals, and basic letter strokes
- Correctly write all upper- and lowercase letters
- Use key strokes: humps, slants, loops, tails
- Be able to write sentences as dictated (10)

Creative Writing Skills Development

- ➤ Understand the value of creativity in writing
- ➤ Write alliterated sentences and acrostics (38)
- ➤ Make observations while paying attention to details
- ➤ Proofread with correction symbols while rewriting and perfecting work
- ➤ Write topical journal entries
  - ➤ Descriptions, portraits, dialogue (7)
  - ➤ With "color words" (1)
  - ➤ Poems, rhymes, couplets, picture poetry (5)
  - ➤ Haiku and cinquain poetry (5)
  - ➤ About memories (3)
  - ➤ A rebus (1)
  - ➤ About an emotion (1)
  - ➤ Using comparisons, improvisations (1)

Language Arts: Spelling, Vocabulary & Poetry



Spelling, Vocabulary, and Poetry 6 teaches students the spelling and meaning of words through the study of prefixes, roots, and suffixes. They will be able to spell and recognize thousands of words after learning these common roots, prefixes, and suffixes. Sixth graders will appreciate the eight review lists and exercises that provide opportunity for spelling mastery. Three Spelling Challenge lists allow them to learn commonly misspelled words that pertain to a specific spelling rule. Students will also practice their proofreading skills while learning about the origin and development of the English language from a Christian perspective.

Spelling, Vocabulary, and Poetry 6 contains eight delightful poems written by well-known poets; this recitation and memorization of poetry will further develop each student's appreciation for good poetry.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (34) including 8 review lists:
    - Spelling words (460)
    - Definition included with each spelling word
    - Vocabulary words and definitions (345)
    - Frequently misspelled words (150)
    - Organized by prefixes (49), roots (50), suffixes (33)
    - Practice exercises included with each list (77)
  - Spelling games (19)
  - Pronunciation key
  - Thought-provoking quotation with each list
- Quick-reference lists:
  - All prefixes, root words, and suffixes
  - Word meaning and/or sample derivation
- Teacher resources: practical spelling tips and suggestions; sentence bank
- Poetry:
  - Poem introductions include:
    - Discussion ideas
    - Historical content
    - Information about the author
  - CD included to help with interpretation
  - Vocabulary lists accompany each poem

Evaluation

- Spelling tests (34)

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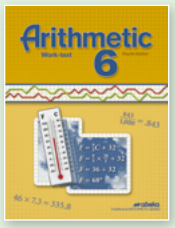
Spelling & Vocabulary Skills Development

- ➤ Master spelling and vocabulary lists:
  - ➤ Prefixes, root words, and suffixes
  - ➤ Vocabulary words and definitions
  - ➤ Homonyms, synonyms, and antonyms
  - ➤ Frequently misspelled words
- Use vocabulary words in proper context
- Memorize vocabulary definitions
- Correctly write sentences dictated by teacher using vocabulary words
- Create good sentences using spelling and vocabulary words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- ➤ Learn about the history and literal meaning of words
- ➤ Learn to pronounce thousands of words correctly
- ➤ Become familiar with a pronunciation key
- ➤ Practice proofreading skills while also learning about the origin and development of the English language from a Christian perspective
- ➤ Develop spelling skills using Greek and Latin roots, prefixes, and suffixes
- ➤ Be able to identify commonly misspelled words
- ➤ Be able to comprehend a word within proper context
- Proofread for spelling errors: recognize misspelled words in lists or sets of words
- ➤ Apply knowledge of prefixes, roots, suffixes to:
  - ➤ Form words
  - ➤ Answer comprehension questions
- Learn spelling rules:
  - Use *i* before *e*, except after *c*, or when sounded like *a*
  - Double a final consonant before adding a suffix beginning with a vowel
  - Change *y* to *i* when adding suffixes
  - Drop the silent *e* before adding a suffix beginning with a vowel
  - A prefix is added to the beginning of a word to change the meaning
  - A suffix is added to the end of a word to change the function of original word, not the meaning
- Learn:
  - ➤ Exceptions to spelling rules
  - Words that follow no spelling pattern
  - How to choose correct ending for words with sound-alike suffixes
  - ➤ Principle of assimilation to expand creativity

Poetry Skills Development

- ➤ Memorize 6 lyrical poems and 2 dramatic poems
- Develop appreciation of poetry
- Perform in front of audience
- Recite in unison
- Develop appropriate expression and volume
- Improve comprehension of content and emotion
- Learn definitions and use of unfamiliar words
- Develop mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

Arithmetic



The *Arithmetic 6* work-text includes an abundance of practice problems and review exercises to help each student master important arithmetic skills and concepts. Almost daily story problems and frequent problem-solving strategies are featured, providing practical application for real-life situations. *Arithmetic 6* takes students from the known to the unknown as they study fractions, decimals, proportions, percents, prime factoring, algebraic equations, measurement, basic geometry, and beginning banking.

Evaluation

- Biweekly quizzes (17)
- Biweekly tests (17)
- 4 weekly skills development exercises (135)

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Numbers

- Place value:
  - Whole numbers to the 100 billions' place
  - ➤ Decimals to the millionths' place
- Writing numbers to the 100 billions' place
- Roman numerals:
  - Value of I, V, X, L, C, D, M
  - Basic and complex rules for forming Roman numerals
  - ➤ Use of dash to increase value one thousand times
- Terms:
  - Notation, numeration
  - ➤ Prime number, composite number
- Comparing

➤ Rounding to nearest billion
➤ Prime numbers: Eratosthenes sieve
➤ Composite numbers

- Estimating: divisor, quotient
- Rounding: whole numbers, money, decimals, timed mastery

➤ Irrational numbers

Addition

- Addition families 1–18: mixed order
- Timed mastery
- Terms: addend, sum
- Word problems:
  - ➤ With added complexity
- Money

➤ Mental arithmetic: problems combining addition, subtraction, multiplication, and division up to 16 numbers

- Checking by addition and casting out 9s
- Addends: column addition
- Averaging
- Fractions with common and uncommon denominators
- Measures
- Decimals with annexing zeros

➤ Compound measures

Subtraction

- Subtraction families 1–18: mixed order
- Timed mastery

➤ Mental arithmetic: problems combining subtraction, addition, multiplication, and division up to 16 numbers

- Word problems:
  - ➤ With added complexity
- Terms: minuend, subtrahend, difference
- Money
- Checking by addition
- Fractions with common and uncommon denominator
- Measures
- Decimals with annexing zeros

➤ Compound measures

Multiplication

- Multiplication facts: 0–12 tables
- Word problems:
  - ➤ With added complexity
- Timed mastery
- Terms: factors, product, partial products

➤ Mental arithmetic: problems combining multiplication, division, addition, and subtraction with up to 16 numbers

- Multiplying with up to a 3-digit multiplier (factor)
- Checking by reversing factors and casting out 9s
- Money

➤ Recognize symbol: • (raised dot)

- Factors:
  - Factoring
  - Finding common and greatest common factor
  - ➤ Prime factors:
    - ➤ Division by primes
    - ➤ Factoring tree
    - ➤ Least common multiple

➤ Compound measures

- Fractions:
  - Using cancellation
  - Multiplied by fractions, mixed or whole numbers
- Decimals:
  - Multiplied by decimals or whole numbers
  - Multiplied by powers of ten

Division

- Division facts: 1–12 tables
- Word problems:
  - ➤ With added complexity
- Timed mastery
- Steps of division
- Terms: dividend, divisor, quotient

➤ Mental arithmetic: problems combining division, multiplication, addition, and subtraction with up to 16 numbers

- Divisors:
  - ➤ Up to 4 digits

Arithmetic cont. p. 113

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Division *cont.*

- Dividends:
  - ➤ Up to 7 digits
- Remainders written as fractions
- Checking by multiplication or casting out 9s
- Money
- Averaging
- Estimating quotients
- Divisibility rules for dividing by 2, 3, 4, 5, 6, 9, 10
- Fractions:
  - Dividing a whole number, mixed number, or fraction by a fraction or mixed number
  - Dividing a fraction or mixed number by a whole number
- Decimals:
  - Dividing a decimal by a whole number
  - Eliminating decimal point in divisor
  - Annexing zeros to avoid remainders
  - ➤ Including zeros immediately to the right of decimal point in quotient
- Dividing by powers of ten

Fractions

- Parts of a whole or group
- Word problems:
  - ➤ Broader, deeper understanding of concepts
- Timed mastery
- Terms: numerator, denominator
- Types:
  - Proper, mixed, improper
  - Change to mixed number or whole number
  - Change mixed number to an improper fraction
- Simplifying: reducing and making proper
- Addition with common and uncommon denominators
- Subtraction:
  - With common and uncommon denominators
  - With borrowing
- Multiplication:
  - Using cancellation
  - Multiplying a fraction with a whole or mixed number
  - Multiplying two mixed numbers
- Equivalent fractions
- Division:
  - Of a whole number, mixed number, or fraction by a fraction or mixed number
  - Of a fraction or a mixed number by a whole number
- Changing fractions to decimals; decimals to fractions
- Finding fractional part of whole

Decimals

- Money
- Reading and writing: writing a fraction or decimal as a fraction
- Place value:
  - To the thousandths' place
  - ➤ To the millionths' place
- Addition and subtraction: annexing zeros
- Multiplication:
  - By a whole number
  - By another decimal
  - When zeros are annexed
- Division:
  - By a whole number
  - Eliminating decimal point in divisor
  - Annexing zeros to avoid remainders
- Comparing and repeating decimals
- Rounding
- Timed mastery
- Changing fractions to decimals and decimals to fractions
- ➤ Terminating decimals
- ➤ Repeating decimals
- ➤ Converting repeating decimals to fractions

Problem Solving & Applications

- Word problems: steps of problem-solving process
- Addition, subtraction, multiplication, division
- Fractions, money, measures
- Time, averages, decimals
- Geometry, graphs
- ➤ Equations, ratio, percent, proportion
- One, two, three, and four steps
- Mixed operations
- Eliminating unnecessary information
- ➤ Making a table
- ➤ Conversion factors
- ➤ Using logic charts
- ➤ Finding a pattern
- ➤ Testing a hunch
- ➤ Making a sensible guess
- ➤ Drawing a geometric model
- ➤ Using proportions
- Applications:
  - ➤ Broader, deeper understanding of concepts:
    - ➤ Measures, Roman numerals, money, graphs, scale drawings, geometry
    - ➤ Charts, time, banking, ratio, proportion, reading meters (electric and gas)
    - ➤ Discount, interest, sales tax, profit, commission
    - ➤ Installment buying, planning budgets, amount of profit

Time

- Table of time:
  - Second, minute, hour
  - Day, week, month, year, leap year
  - Decade, score, century, millennium
- ➤ Time zones:
  - ➤ Prime meridian
  - ➤ International Date Line
  - ➤ Coordinated Universal Time
- ➤ Daylight Savings Time
- ➤ Latitude
- ➤ Degrees

Money

- Addition, subtraction, multiplication, and division with dollar sign ($) and decimal point (.)

Arithmetic cont. p. 114

➤ **RED** *indicates first introduction of content.*

Arithmetic *cont.*

Measures

- Temperature:
  - Reading and writing
  - Terms: degrees
  - Celsius and Fahrenheit: freezing and boiling points of water; normal body temperature
- Conversions: Celsius to Fahrenheit; Fahrenheit to Celsius
- Length:
  - English: inch, foot, yard, mile
  - Metric: millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer
- Weight:
  - English: ounce, pound, ton
  - Metric: milligram, centigram, decigram, gram, decagram, hectogram, kilogram
- Capacity:
  - English: fluid ounces, cup, pint, quart, gallon, peck, bushels, teaspoon, tablespoon
  - Metric: milliliter, centiliter, deciliter, liter, decaliter, hectoliter, kiloliter
- Ordering measures: least to greatest
- Converting measures within the same system
- Adding and subtracting unlike measures within the same system
- Square measure:
  - English: square inches, square feet, square yards, square acres, square miles
  - ➤ Metric: cm^2, m^2, km^2; hectares
- Timed mastery
- Metric prefixes

➤ Compound measures: adding, subtracting, multiplying

Graphing, Statistics, Probability

- Graphs:
  - Pictographs; bar, line graphs
  - ➤ Circle, rectangle graphs
  - ➤ Statistics: range, mean, median, ranked
- Scale drawing

➤ Finding distance on maps

- Probability ratio

Geometry

- Plane figures:
  - Simple closed figure, polygon
  - Quadrilateral: parallelogram, rectangle, square, rhombus, trapezoid
  - Pentagon, hexagon, heptagon, octagon
- Triangle: right, isosceles, equilateral
- Angles:
  - Right, acute, obtuse, straight
  - ➤ In a circle
- Lines: line segment, ray, intersecting lines; parallel and perpendicular lines
- Terms:
  - Point, plane, vertex, congruent, similar, diagonal
  - ➤ Base, radius, diameter, arc, degree, semicircle
- Perimeter of a polygon
  - Formulas for:
    - Rectangle, square
    - ➤ Parallelogram, triangle, irregular shapes
- Converting measures to find perimeter
- Area
  - Formulas for:
    - Rectangle, square
    - ➤ Parallelogram, triangle, circle, complex shapes

➤ Circumference: formula

➤ Using a compass and protractor

➤ Constructions: circles, angles

➤ Bisecting angles

➤ Sliding, rotating, and flipping shapes

- Recognize models and symbols:
  - • (point); – (line segment); ↔ (line); → (ray); ∠ (angle)
  - ➤ ∥ (parallel lines); Δ (triangle); ≅ (congruent); ∩ (arc); π (pi)

Percent, Ratio, Proportion

- Recognize symbol: % (percent)

➤ Reading and writing:

- ➤ Percent as a fraction, decimal, ratio
- ➤ Fraction as a percent
- ➤ Decimal as a percent

➤ Subtracting from 100%

➤ Word problems

- Timed mastery

➤ Finding percentage:

- ➤ Of a whole number
- ➤ When the percent ends in a fraction; percent is over 100%
- ➤ By comparison when the percent is given as more or less than
- ➤ Less than 1%

➤ Estimating answers

➤ Finding:

- ➤ Percent by comparison
- ➤ Percent of increase or decrease
- The rate of discount
- ➤ Percent for circle graphs
- Discounts
- ➤ Amount of profit
- Simple interest
- ➤ The base

➤ Ratio:

- ➤ Reading and writing
- ➤ Terms: antecedent, consequent
- ➤ Equivalent, word problems

➤ Proportion:

- ➤ Reading and writing
- ➤ Terms: means, extremes, cross products, word problems

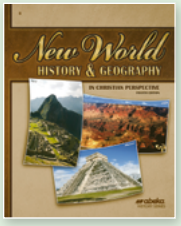
Pre-Algebra

- Solving equations
- Negative numbers
- Squares and square roots:
  - ➤ Perfect squares
- Exponents, bases, radical signs ($\sqrt{\ }$)
- Order of operations:
  - ➤ Broader, deeper understanding of concepts
- Powers of ten

➤ Algebraic multiplication

➤ Two-step equations

History & Geography



New World History and Geography offers a Christian perspective on the history and geography of North and South America. It includes a chapter on Canada and a chapter on the recent events in the United States and around the world. Important geographical facts and historical documents that should be given special attention throughout the year are highlighted and placed for easy reference. By reading special-feature articles found throughout the text, students will learn about the lives and contributions of great missionaries and other well-known Christian leaders.

Added Enrichment

- Maps and important facts about each continent
- Comprehension checks (92)
- Chapter checkups (18)
- Timeline of important dates at beginning of each U.S. history chapter (9)
- Special feature boxes (25):
  - Historical concepts, events, and special interests
  - People of history and missionary heroes that influenced Western Hemisphere countries highlighted throughout text
- Map skills and activities worksheets (44)
  - Chapter content review (7)
  - Review of physical, political, and geographical features of Western Hemisphere (34)
  - Map skills (4)
- Current event reports (12)
- *Canadian Province Notebook:* optional research project of a selected Canadian province or territory
- Nation map project: optional

Evaluation

- Printed quizzes (39)
- Homework quizzes (6)
- Tests (11)
- 9-weeks exam (4)
- Atlas and geography facts memorized and evaluated on quizzes and tests

➤ **RED** *indicates first introduction of content.*

History Study

- The first Americans and the land they found:
  - ➤ Greatest migration in history
  - Land the Americans settled:
    - Geography of North America
    - ➤ Geography of Central and South America
  - How American Indians lived: education, food, clothing, shelter, recreation, religion
- North America: cold lands to the north:
  - ➤ Trip to the North Pole
  - ➤ Tundra ("Land of the Midnight Sun"): land, plants, animals
  - ➤ People of the tundra (Eskimos): traditional life, modern life
  - ➤ Northern woodlands: tall trees, animals
  - ➤ Indians of the Far North: food, clothing, homes, religion, children, modern life
- Canada: the second largest country:
  - ➤ Vast lands to the north: sparsely settled
  - ➤ Highlights of Canadian history
  - ➤ Maritime provinces
  - ➤ Quebec and Ontario
  - ➤ Prairie provinces
  - ➤ British Columbia and Territories
  - ➤ People, resources, and industry
  - ➤ Canadian government: constitutional monarchy, Prime Minister, Parliament, Royal Canadian Mounted Police
- The Eastern United States:
  - Eastern coast and mountains
  - ➤ Atlantic Ocean facts, uses, fish
  - ➤ Woodland animals
  - Indians of the eastern woodlands:
    - ➤ Hopewell Indians, Iroquois League of Five Nations, Southern Indians
    - Indians the Pilgrims knew
  - Missionaries to the American Indians:
    - John Eliot
    - ➤ John Campanius
    - Roger Williams, David Brainerd
  - Famous woodland Indians:
    - Sequoya
    - ➤ Joseph Brant and Tecumseh
- The North American plains:
  - ➤ World's largest prairie
  - ➤ Animals of the prairie
  - ➤ Special geographical features of the land
  - ➤ Plains Indians
- The American West:
  - Rocky Mountains:
    - ➤ Cordilleras Chain, the Great Divide, mountain flora and fauna
  - ➤ Intermountain Region: plateaus and deserts
  - ➤ Desert flora and fauna: hardy plants, variety of animals
  - Pacific Ocean:
    - ➤ Coastal Regions
  - ➤ Indians of the West
- The colonial heritage:
  - English colonize America:
    - Spain and France
    - England: John Cabot
    - Roanoke
    - Jamestown:
      - London Company
      - Captain John Smith
      - ➤ Lord De La Warr
      - ➤ Free enterprise system

History & Geography cont. p. 116

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

History Study cont.

- Pilgrims: lovers of religious freedom:
  - Settling in Plymouth
  - Friends with the Native Americans
  - First Thanksgiving
  - ➤ Thanksgiving of 1623
- New England Colonies:
  - Massachusetts and the Puritans:
    - ➤ Massachusetts Bay Company and Charles I
    - Massachusetts Bay Colony and Boston
    - ➤ Ole' Deluder Satan Act
  - Roger Williams and Rhode Island
  - New Hampshire: fish and lumber
  - Connecticut: "Place of the Long River"
  - New England: churches
- Middle Colonies:
  - New York:
    - Settled by the Dutch
    - ➤ Patroon system
  - Delaware: New Sweden
  - Pennsylvania:
    - Quaker State
    - ➤ Society of Friends
    - ➤ Moravians and Count von Zinzendorf
  - New Jersey: haven of religious freedom
- Southern Colonies:
  - Virginia: oldest colony
  - Maryland: freedom for Catholics
  - Carolinas: the Southern Plantation
  - Georgia: last of the thirteen
- The Great Awakening:
  - Jonathan Edwards, George Whitefield
  - ➤ Phillis Wheatley
- George Washington and the New World's first republic:
  - Young hero of the French and Indian War
    - French settle New France
    - French and Indian War:
      - Fort le Boeuf and George Washington
      - General Braddock
      - ➤ Fort Duquesne
      - Defeat at Quebec
  - Threats to American Freedoms:
    - King George III and the Stamp Act
    - The Boston Massacre and the Boston Tea Party
    - ➤ The Quebec Act
    - Colonists prepare to fight
  - Fight for Independence
  - Independence for America
  - Building a new nation:
    - ➤ Civil government
    - ➤ Three branches of government
    - ➤ Rights and responsibilities of Americans
- Expansion and evangelism:
  - Pioneers push farther west:
    - Daniel Boone and the Wilderness Road:
      - ➤ Cumberland Gap
    - Settling the Northwest Territory
    - ➤ The Erie Canal
  - Revival and missions:
    - Second Great Awakening:
      - ➤ Richard Allen
    - Beginnings of American missions
  - Christianity among black Americans:
    - Lott Carey, Colin Teague, Lemuel Haynes
    - ➤ John Jasper, Catherine Ferguson, John Chavis
  - From the Gulf of Mexico to the Rocky Mountains:
    - Purchasing and exploring Louisiana
    - War of 1812:
      - ➤ Treaty of Ghent
    - United States gains Florida and the Southwest
  - From sea to sea:
    - Gold Rush:
      - ➤ John Marshall
    - Oregon Territory
  - New friends in Japan:
    - ➤ Commodore Matthew Perry, Samuel Wells Williams, and Jonathan Goble
- Division and reunion:
  - Slavery, compromise
  - ➤ Tariffs
  - States' rights
  - ➤ Abolitionists: Harriet Beecher Stowe, Sojourner Truth
  - ➤ Underground railroad and Harriet Tubman
  - Civil War begins:
    - Fort Sumter, Emancipation Proclamation, Ulysses S. Grant, Robert E. Lee
    - ➤ Stonewall Jackson
  - Important Civil War battles
  - Gettysburg Address
  - Other events of Civil War times:
    - ➤ National motto, new songs, American Red Cross
    - Gospel spreads, Pony Express, transcontinental railroad
  - Rebuilding the South: Booker T. Washington, George Washington Carver
- The nation grows and prospers:
  - Western frontier: Indians of the Great Plains, Homestead Act, Oklahoma Land Rush
  - ➤ Famous westerners: Buffalo Bill, Annie Oakley
  - ➤ James Garfield
  - Immigration, revival, industry
  - Inventions: new ways to do things
    - ➤ Norbert Rillieux
    - ➤ Granville T. Woods
  - New frontiers: Alaska, Hawaii
  - Spanish-American War: Philippines, Guam, Puerto Rico

History & Geography cont. p. 117

➤ **RED** *indicates first introduction of content.*

History & Geography cont.

History Study *cont.*

- Into the twentieth century:
  - ➤ Our country in 1900
  - ➤ Major world power
  - ➤ Education, religion
  - ➤ Masters of invention and technology
  - ➤ Hall of Fame for Great Americans
  - ➤ President Theodore Roosevelt:
    - ➤ Childhood, public servant, Great White Fleet
    - 26th President, Rough Riders, Panama Canal
  - ➤ Discovery of the North Pole
  - ➤ Sinking of the *Titanic*
  - World War I
  - Between the World Wars:
    - Great Depression and plans for peace that failed
    - ➤ Challenges to Christianity
- Fighting for freedom:
  - World between the wars:
    - Russia: Communism
    - Italy: Fascism
    - Germany: National Socialism
    - ➤ Japan: Militarism
  - ➤ World War II: many wars in one
  - ➤ U.S. enters World War II:
    - ➤ Japanese-American patriots
    - ➤ Benjamin O. Davis, Jr.
    - ➤ General Douglas MacArthur
  - Continuing world problems: United Nations, spread of Communism, Berlin divided, Israel becomes a nation, Korean War
- Time for freedom and responsibility:
  - Years of prosperity and opportunity:
    - Post-war boom
    - Advances in technology
  - Freedom and opportunity for all Americans:
    - ➤ Jackie Robinson and Mel Martinez
- Preserving freedom in an age of big government:
  - Proper role of government
  - President Eisenhower
  - President Kennedy:
    - ➤ New frontier
  - President Johnson:
    - ➤ Great Society
  - Return to peace through strength: Ronald Reagan, decline of the "Evil Empire"
  - Advances for freedom: Operation Desert Storm, collapse of the Soviet Union
  - Twentieth century comes to a close:
    - ➤ Nationwide moral decline:
      - ➤ Declining academics and school violence
      - ➤ Whitewater investigation
- Into the new millennium:
  - Terrorism strikes again 9/11, "War on Terror"
  - War in Afghanistan
  - Natural disasters
  - ➤ Axis of evil, War in Iraq
  - ➤ Illegal immigration, election 2008
- ➤ Mexico and Central America:
  - ➤ Middle America
    - ➤ Mexico (land of the Aztecs): geography, many climates, natural resources, people, cities, recreation, government
    - ➤ Central America (land in between):
      - ➤ Mayans: builders of civilization
      - ➤ Climate, natural resources, wildlife
    - ➤ Countries of Central America
- ➤ West Indies—Islands of the Caribbean:
  - ➤ Land of discovery: rich heritage, from colonial days to modern days
  - ➤ Exploring the West Indies: islands of mountains and coral, colorful creatures on land and in the sea, climate, industry
  - ➤ Cuba: country under Communist dictatorship, desire and need for capitalism
- ➤ South America:
  - ➤ Exploring South America: tropical climate and opposite seasons, many nations and varied geography, animal life, abundant national resources
  - ➤ The Amazon and its peoples
  - ➤ Highlights of South American history: Incas, rule by Spain and Portugal, struggle for independence, South America's greatest need
- ➤ Nations of South America:
  - ➤ Peru: land of Incas
  - ➤ Ecuador
  - ➤ Bolivia: country with two capitals
  - ➤ Colombia, Venezuela, and the Three Guianas
  - ➤ Brazil (giant of the south): land of the Amazon, historical events, prosperous economy, people, cities
  - ➤ Argentina: land of pampas, granary of the south
  - ➤ Chile: where land ends
  - ➤ Paraguay: from prosperity to poverty
  - ➤ Uruguay: industrious little country

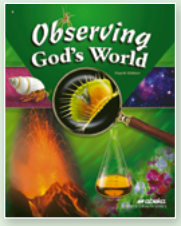
Geography Study

- Atlas facts memorized:
  - 9 maps, both physical and political, cover hemispheres, continents, oceans
  - Western Hemisphere: location of straits, bays, gulfs, rivers, lakes, waterfalls, islands, peninsulas and isthmuses, mountain ranges, mountain peaks, deserts, and highlands
  - ➤ Map mastery countries and cities for the Western Hemisphere:
    - ➤ Canada: 13 provinces and territories, 8 cities
    - ➤ Middle America: 20 countries and dependencies, 12 cities
    - ➤ South America: 13 countries, 9 cities
- Geography facts memorized:
  - Geography terms over land and sea forms (68)
  - Climate zones
  - Using latitude and longitude

Memory Work

- 6 documents:
  - The American's Creed
  - Portion of The Declaration of Independence
  - Preamble to the Constitution
  - First Amendment to the Constitution
  - The Rights of Americans
  - Lincoln's Gettysburg Address
- States and capitals
- 44 U.S. Presidents

Science



Observing God's World is an excellent bridge between elementary and junior high or middle school science. This memorable text presents the universe as the direct creation of God and refutes the manmade idea of evolution.

Observing God's World features photos, art, and charts that clearly illustrate the science concepts being taught. Students will apply what they have learned by doing projects and experiments both at home and at school. Some of the topics students will study include invertebrates, plants, forces of the earth, the universe, space travel, and matter and chemistry.

Added Enrichment

- Worksheets (24) including: labeling diagrams, identification, chapter content review
- Suggested:
  - Review games (13)
  - DVDs (2)
- Adopt-a-Tree poster
- Astronomy report

Evaluation

- Printed quizzes (25)
- Homework quizzes (9)
- Tests (8)
- 9-weeks exam (3)

➤ **RED** *indicates first introduction of content.*

Plants

- Leaves:
  - ➤ Photosynthesis in detail, leaf anatomy, tendrils, spines, bulbs, insectivorous plants
  - Roots and stems:
    - ➤ Shoot system, taproot, root cap, root hairs
    - ➤ Epiphytes, cellulose, cell wall
    - ➤ Stolon or "runner," rhizomes, thorns
- Flower, fruit, and seed:
  - Flower structure:
    - ➤ Bud, bracts, ovary, ovules, stigma
  - ➤ Process of fertilization
  - Fruits:
    - ➤ Development and scientific definition
  - Conditions for seed growth
  - Seed structure:
    - ➤ Cotyledons
  - ➤ Hybrid
- Plant families you should know:
  - Composite family
  - ➤ Pea, rose, lily, grass families:
    - ➤ Cereal grass, turf grass, woody grass
- Trees:
  - ➤ Perennials, annuals, biennials
  - Notable trees:
    - ➤ California redwood
    - ➤ Banyan, candlewood, and baobab trees
    - Bristlecone pine
  - ➤ Cambium, tree bark
  - Annual growth rings
  - Broadleaf trees:
    - ➤ Hardwoods
    - Deciduous
    - Selected broadleaf trees:
      - Maples, elms, oaks:
        - ➤ Specific examples, Dutch elm disease
      - ➤ Birches, willows: specific examples
  - Conifers:
    - ➤ Types of cones, conifer pollination
    - ➤ Characteristics contrasted with broadleaf trees
    - Evergreens
    - Selected conifers:
      - Pines, hemlocks, firs, spruces:
        - ➤ Specific examples
        - ➤ Douglas firs
        - ➤ Larches: tamarack
      - ➤ Redwoods: giant sequoia, General Sherman tree, bald cypress, knees
      - ➤ Cypresses: cedars, junipers, western red cedar, cedar of Lebanon
  - Palms:
    - ➤ Fronds
    - Coconuts
- Plant surprises:
  - Ferns:
    - Spores
    - ➤ Fern anatomy: spore cases, rhizoids, fronds
    - ➤ Tree fern
  - Mosses:
    - ➤ Moss anatomy
    - ➤ Peat moss
  - Algae:
    - ➤ Diatoms, diatomite, dinoflagellates, flagella, filamentous algae
    - Seaweeds: blades, air sacs, holdfasts
    - Kelp
    - ➤ Algin
  - Carrageenan
- Fungi:
  - ➤ Saprophytes
  - Parasites
  - ➤ Mycelium, hyphae
  - Molds and mildews:
    - ➤ Structure and characteristics
    - Penicillin
  - Mushroom:
    - ➤ Structure: fruiting body
  - Yeast
  - ➤ Slime molds, lichens

Activities & Demonstrations:

- ➤ Recognizing leaf shapes
- ➤ Coloring carnations
- ➤ Demonstrating tropism in plants
- ➤ Dissecting a flower
- ➤ Making bark rubbings
- ➤ Working with yeasts
- ➤ Hunting mushrooms
- Producing bread mold spores

Science cont. p. 119

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Invertebrates

- Classification:
  - ➤ Kingdom, phylum, class, order, family, genus, species, scientific name
  - Vertebrate, invertebrate
- Insects:
  - ➤ General characteristics of anthropods
  - Insect anatomy:
    - ➤ Tracheae, air sacs
  - Metamorphosis:
    - Complete
    - ➤ Incomplete
  - ➤ Classification
  - ➤ Familiar orders of insects: Orthoptera, Odonata, Coleoptera, Homoptera, Hymenoptera, Lepidoptera, Hemiptera, Diptera
- Spiders:
  - ➤ Arachnids, book lung, details of silk production and use
- Selection of spiders:
  - ➤ Trap-weaving, ambushing, and hunting spiders
  - Swimming spiders:
    - ➤ Fishing spider
    - Water spider
  - ➤ Tarantulas, Goliath birdeater
- ➤ Other arachnids: harvestman, scorpions, ticks, mites
- Crustaceans:
  - Regeneration, plankton
  - Crabs, lobsters, shrimp:
    - ➤ Anatomy, specific examples
  - Barnacles
  - ➤ Krill, wood lice
- ➤ Centipedes and millipedes
- Worms:
  - Earthworms:
    - ➤ Castings
- ➤ Parasitic worms: leeches, tapeworms, roundworms
- Mollusks:
  - ➤ Mantle
  - Snails and slugs:
    - ➤ Gastropods
    - Univalves
    - Cowrie, conch
    - ➤ Nudibranch
  - Bivalves
  - Cephalopods:
    - Jet propulsion; octopus, squid
    - ➤ Cuttlefish, nautilus
- Strange sea specimens:
  - Sea stars: rays, tube feet
  - Sea urchins:
    - ➤ Sand dollar
  - ➤ Sea lily, feather star, sea cucumber
  - ➤ Sponge
  - Sea anemone
  - ➤ Coral polyp
  - ➤ Hydra
  - Jellyfish:
    - Stinging cells
    - ➤ Life cycle: larva, polyp, medusa
    - Portuguese man-of-war
- Protozoans:
  - ➤ God's design for variety in the world of invertebrates
  - ➤ Cell parts: cell membrane, cytoplasm, organelles, nucleus, chromosomes
  - ➤ Amoeba: pseudopods, food vacuole
  - ➤ Paramecium: cilia
  - ➤ Relationship between protozoans and humans; discovery of protozoans
- ➤ Science and great Christians: Jonathan Edwards

Activities & Demonstrations:

- ➤ Observing spiders and their ways
- ➤ Snorkeling for sea invertebrates
- Making exhibits:
  - Insect
  - ➤ Arachnid, crustacean, earthworm, mollusk, ocean, protozoan

Geology

- Earth's structure:
  - Crust, mantle, core:
    - ➤ Moho
  - Chemical and physical weathering
  - ➤ Movements of the crust, plates, mid-oceanic ridges
- ➤ Earthquakes: tsunami, tremor, seismology, fault, focus, epicenter, magnitude, Richter scale, seismic belts
- Volcanoes:
  - Magma
  - ➤ Magma chamber, vent, Ring of Fire, fumaroles
  - Lava
  - ➤ Tephra: volcanic ash, bombs and blocks, lapilli
  - ➤ Classification:
    - ➤ By formation: shield, cinder cone, composite, caldera
    - ➤ By activity: active, dormant, extinct
    - ➤ By kind of eruption: Hawaiian, Strombolian, Plinian
- Igneous rocks:
  - ➤ Extrusive, intrusive
- Sedimentary rocks:
  - ➤ Mechanical, chemical, and organic sediments; breccia, halite, gypsum
- Metamorphic rocks:
  - ➤ Foliated and unfoliated
- Gems:
  - ➤ Precious and semiprecious stones
  - Diamond:
    - ➤ Diamond pipe
  - Ruby
  - ➤ Sapphire, emerald, red spinel
- Metals:
  - ➤ Precious metal
  - Gold, silver
  - ➤ Platinum
  - Iron:
    - ➤ Steel
  - Copper: brass, bronze
  - ➤ Aluminum

Science cont. p. 120

➤ **RED** *indicates first introduction of content.*

Science *cont.*

Geology *cont.*

- Fossil fuels:
  - Coal:
    - ➤ Types of coal: anthracite, bituminous, sub-bituminous, lignite
    - ➤ Coal mining: surface mining, overburden, underground mining
  - Petroleum:
    - ➤ Crude oil, hydrocarbons
    - ➤ Finding, recovering, and refining petroleum: fractional distillation
- Caves:
  - ➤ Cavern, speleology
  - ➤ Cave types: sea cave, lava cave, solution cave
  - Limestone:
    - ➤ Calcium carbonate
  - Cave formations:
    - Stalactites, stalagmites
    - ➤ Soda straws, columns, draperies, flowstones, moon milk, cave rafts, cave pearls
  - ➤ Life in caves: trogloxenes, troglophiles, troglobites
- Earth's magnetic field:
  - Basics of magnetism
  - ➤ Magnetic vs. geographic poles of Earth
  - ➤ The source of Earth's magnetism: electromagnet
  - The magnetosphere: solar wind, auroras

Activities & Demonstrations:

- Demonstrating:
  - Weathering from water and plants
  - ➤ Weathering from chemicals
- ➤ Making a volcano
- ➤ Demonstrating:
  - ➤ Igneous rock textures with fudge
  - ➤ Stratification of sedimentary rock
- Growing salt crystals; rock hounding; testing for calcium carbonate
- ➤ Growing stalactites

God's Great Universe

- What space is like: vacuum, temperature extremes
- Galaxies:
  - Galaxy, Milky Way
  - ➤ Local group; notable galaxies, supercluster
  - ➤ Galactic shapes: spiral, barred spiral, elliptical, irregular
  - ➤ Nebulae
- Constellations:
  - ➤ Cassiopeia, Cepheus, Andromeda, Pegasus, Cygnus, Draco, Taurus, Sagittarius, Centaurus
- Stars:
  - Structure and atmosphere of the sun:
    - ➤ Granule, spicule, solar prominence, solar flare
  - ➤ Light year, star magnitude, colors and categories, supernova
- ➤ Early ideas in astronomy: earth-centered universe, sun-centered universe, ellipse, three laws of planetary motion, gravity
- Exploring the solar system: overview of planets, moons
- Earth: revolution, rotation, atmosphere, ozone layer, greenhouse effect
- Moon: lunar month, phases, the moon and tides
- Smaller space travelers:
  - ➤ Asteroids, comets
  - Meteors:
    - ➤ Meteorite, impacts

Activities & Demonstrations:

- ➤ Observing friction
- ➤ Drawing ellipses
- ➤ Studying the tail of a comet
- ➤ Learning meteor shower schedules

Exploring Space

- Understanding light:
  - ➤ Electromagnetic wave
  - Speed of light
  - ➤ Frequency, wavelength, electromagnetic spectrum
- Instruments of astronomy:
  - Refracting and reflecting telescope, Hubble Space telescope
  - ➤ Adaptive optics; spectroscope, radio telescopes
- Principles of space flight:
  - Astronauts
  - ➤ Objects and satellites in orbit
- ➤ Sir Isaac Newton: discoverer of God's laws
- ➤ Race to the moon: *Sputnik* and *Explorer I,* Gemini and Apollo programs
- ➤ Space stations: *Salyut, Skylab, Mir,* International Space Station
- ➤ Space shuttle and beyond: private space flights, return trips to moon
- ➤ Satellites and space probes: communication, weather, navigational, earth observation, military, and astronomical satellites; space probes
- ➤ Exploring:
  - ➤ Inner planets: detailed description of Mercury, Venus, Earth, Mars
  - ➤ Outer planets: detailed description of Jupiter, Saturn, Uranus, Neptune
- ➤ Space explorers: William and Caroline Herschel
- Origin of the universe: God created

Activities & Demonstrations:

- Observing: reflection and refraction; the sights in night sky

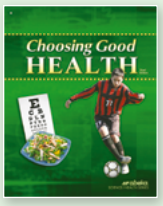
Matter & Chemistry

- Materials and matter:
  - Mass, weight, density
  - ➤ Measuring density
- Atoms:
  - ➤ Anatomy of an atom
  - Electrons
  - ➤ Protons, neutrons, atomic number
- ➤ Elements: definition of an element, selected elements
- Groups of elements:
  - ➤ Periodic table, metals, nonmetals, semimetals
  - ➤ Alkali metals, alkaline earth metals, halogens, noble gases
- Molecules and compounds:
  - ➤ Definition of compound, formulas of compounds, nonmolecular compounds
  - ➤ Nonionic crystals, compounds vs. mixtures, chemical reactions
- Robert Boyle: pioneer of modern chemistry

Activities & Demonstrations:

- ➤ Observing elements
- ➤ Separating mixtures
- ➤ Observing chemical reactions

Health



Choosing Good Health places special emphasis on the study of the endocrine, immune, and nervous systems. Students become familiar with major health concerns, such as drug abuse and AIDS, and discover the physical, mental, social, and spiritual effects of these problems on the individual and on the nation. A proper attitude toward safety is stressed in *Choosing Good Health,* teaching students personal responsibility for safety behavior. Students learn to recognize symptoms requiring emergency aid and practice basic first-aid procedures for minor injuries.

Added Enrichment

- Worksheets (11) including: chapter content review; body systems content; locating and identifying body systems and parts
- Physical exercises (15)
- Mental exercises (7)
- Demonstrations (2): checking your pulse; checking your field of vision
- Review games (17)
- Optional CD and DVD

Evaluation

- Printed quizzes (8)
- Homework quizzes (2)
- Tests (4)

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Safety & First Aid

- Safety:
  - Personal safety:
    - Poison prevention
    - Electrical shock, fire and burn prevention
    - Passenger safety
    - Strangers
  - Recreational safety:
    - Bicycle and walking safety
    - Water safety:
      - Dealing with poisonous plants, ticks, and poisonous snakes
  - Environmental safety in:
    - Thunderstorms, hurricanes, tornadoes
- First Aid:
  - Basic first aid
  - Sports aid: muscles and bones:
    - Strain, sprain
    - Simple and compound fracture
    - Skin-deep irritations:
      - Abrasions
      - Nosebleeds, insect stings, contact poisoning
      - ➤ Critical conditions
    - Not breathing:
      - ➤ Choking: Heimlich maneuver
    - Poison:
      - Substance swallowed
      - Poison bite:
        - ➤ Burns

Growth & Fitness

- Your changing body
- ➤ Maintaining an active lifestyle
  - Importance of good nutrition: balanced diet, vitamins, minerals
  - Physical fitness needed:
    - Circulatory system: aerobic exercises
    - Respiratory system: alveoli, diaphragm
    - Muscular system:
      - Muscle names

A Healthy Mind & Body

- Your body's defenses:
  - Immunity and disease-causing microorganisms:
    - Microbes, viruses, bacteria
    - Skin layers, mucus membrane, cilia
    - Protein products:
      - Disease fighters: antibodies
  - Protection through prevention:
    - Vaccines
    - Healthful foods:
      - Prevent rickets, osteoporosis
    - Rest and sleep, daily exercise
- Nervous system:
  - Peripheral nervous system:
    - Involuntary actions
    - Nerves and senses:
      - Taste buds
      - Optic nerve
- Drug use and abuse:
  - Use of drugs:
    - Helpful drugs, antibiotics
  - Abuse of drugs
  - Spiritual life: spiritual food, spiritual exercise, spiritual rest

Bible



Sixth graders are looking for heroes, and they will find many to pattern their lives after as they study such outstanding Old Testament figures as Daniel, Elijah, and Esther. They will also learn many important values by studying stories such as the parables of Jesus. These stories teach students about being compassionate, having faith in God's provision, knowing that God still loves His wayward children, anticipating Christ's return, and praying for specific things. Those attributes are just a few important truths that each sixth grader will learn and can apply to his life. (Optional: *Bible 6 Journal*)

Evaluation

- Graded memory verse passages (8)
- Content tests (5)

Lessons *435 Abeka Flash-a-Cards*

- Salvation Series (5 lessons)
- Life of Christ Series (36): First Christmas; Boyhood and Early Ministry of Jesus; Jesus Heals and Helps; Later Ministry of Jesus; Crucifixion and Resurrection
- Parables of Jesus Series 1 and 2 (12)
- Elijah (6); Daniel (6); Esther (5); Ezra and Nehemiah (7)
- The First Thanksgiving

Bible cont. p. 122

➤ **RED** *indicates first introduction of content.*

Bible *cont.*

Music *54 songs*
- Choruses, hymns of the faith, and holiday and patriotic songs including:
  - ➤ 20 new hymns and songs; 8 new choruses

Memory Work
- ➤ New individual verses (13); passages (9) containing 31 verses
- Review verses (86)

Doctrinal Drill *60 questions/answers*
- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation
- 8 questions with verses to memorize as answers

Prayer Time
- Learn to pray with thanksgiving for each other, our nation, those in authority over us

Sword Drills
- Learn to quickly find 114 Old and New Testament references

Bible 6 Journal
- Personal application of the Bible lessons
- Discussion/questions strengthen biblical worldview

Music



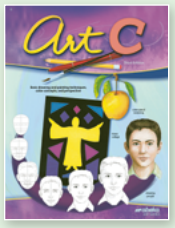
Songs We Enjoy 6 brings together traditional, patriotic, holiday, and fun songs that have become a part of our American heritage. Historical and cultural information, definitions for unfamiliar words, and other enrichment ideas are included throughout this book. The sing-along CD makes song time easy for the teacher and enjoyable for the students.

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Skills Development *66 songs*
- Follow a song leader while singing with class or CD
- ➤ Define and understand 37 unfamiliar words and phrases in lyrics
- Sing in rounds and echo sing; sing with dynamic contrasts
- Improve coordination skills with songs that require hand motions
- Learn historical facts through patriotic, folk, and Americana songs

Variety of Songs to Memorize
- Folk, patriotic, Americana, fun, holiday, songs at sea, spirituals, and hymns

Arts & Crafts



Art C encourages students to keep drawing and creating their own works of art. As they follow the step-by-step format, students will be excited with their increasing ability to draw. They will learn new art concepts such as two-point perspective and composition. In addition to using mixed media to create collages and three-dimensional sculptures, students will use colored pencils and watercolor paints or markers. Students will also become acquainted with different styles of art by studying the work of accomplished artists.

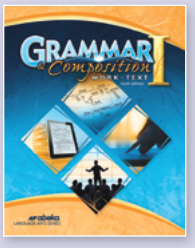
Added Enrichment
- Introduction to influential artists: N. C. Wyeth, Adam Clague, Thomas Sully, Bonnie Kwan Huo, and Brian Jekel
- Art forms: woodcut, origami, abstract, calligraphy, collage, still life, and landscapes
- Introduction to popular prints and works

➤ **RED** *indicates first introduction of content.*

Skill & Concept Development *38 projects*
- Value (12)
- ➤ Perspective: one- and two-point; foreshortening (7)
- ➤ Proportion: facial, body; size distance relations (6)
- Analogous, primary, secondary, and intermediate hues (17)
- Complements (3)
- ➤ Composition (3)
- Symmetry (2)
- ➤ Mood: using color (1)

Technique Development
- Drawing:
  - Sketching, shading, shapes (4)
  - ➤ Figures (1)
  - Animated expression and cartoons (1)
  - ➤ Overlapping (1)
  - Enlarging (1)
- Modeling:
  - ➤ Mixed-media shaping (5)
- Painting:
  - Washes, watercolors (4)
  - ➤ Masks (2)
  - Resists (1)
  - ➤ Streaking, dabbing (3)
  - Spattering (2)
  - ➤ Dry brushing (2)
  - Chalking (2)

ENGLISH: *Grammar & Composition*



Grammar and Composition I's purpose is to emphasize the orderly structure of our language and to train students to use the English language effectively. The Christian perspective of this textbook promotes standards of correct grammar and usage, equipping students with the tools they need to become effective communicators in both speaking and writing.

Students will learn to recognize the different parts of speech, fit these parts of speech together to form sentences, join sentences together to make paragraphs, and organize paragraphs into compositions. They will also learn to develop complete and orderly thoughts and to communicate those thoughts clearly and concisely, so that they can use God's gift of language effectively.

Added Enrichment

- Review games
- Grammar Court procedures explained

Evaluation

- Grammar quizzes (21)
- Tests (8), quarter exams (2)
- Semester exam, final exam
- Compositions

Compositions

- Essays (Answer, Informative, Narrative, Process)
- Letters
- Summaries
- Character sketch
- Book reports
- Research paper

➤ **RED** *indicates first introduction of content.*

Grammar

- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things
    - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection *O*
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period for declarative sentences and abbreviations
    - Period or exclamation point for an imperative sentence
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - ➤ To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - If joined by
        - ➤ Transitional words
        - Coordinating conjunction if clauses already contain commas
  - Colons:
    - Before a list of items
    - Between
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
  - Italics: for titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
  - Hyphens:
    - To divide a word at the end of line
    - In compound numbers
    - In fractions
  - Quotation Marks:
    - In a direct quotation
    - To enclose titles of short poems, songs, chapters, articles, and other parts of books or magazines
  - Apostrophes:
    - To form possessive case of nouns
    - To show omissions from words
    - With *s* to form plurals of letters, numbers, signs, and words used as words
- The sentence:
  - Recognizing eight parts of speech
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming compound subjects and verbs
  - Locating complements
  - Correcting fragments and run-on sentences

Grammar & Composition cont. p. 124

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

Grammar *cont.*

- Parts of speech:
  - Verbs:
    - Recognizing action, linking, and helping verbs
    - ➤ Distinguishing verbs from verbals
    - Using principal parts of verbs
    - Regular verb endings
    - Irregular verbs
    - Using correct principal parts
    - Verb tense
    - ➤ Using consistent verb tense
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
  - Nouns:
    - Recognizing nouns: compound, common, and proper
    - ➤ Recognizing collective nouns
    - Keeping agreement of subject and verb
    - Recognizing nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address
    - Diagramming nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions
    - ➤ Recognizing and diagramming nouns as appositives
  - Pronouns:
    - Antecedents
    - Recognizing:
      - Personal, interrogative, demonstrative, indefinite, compound
      - ➤ Relative pronouns
    - Keeping agreement of verbs and indefinite pronoun subjects
    - Nominative case:
      - For subjects and predicate nominatives
      - ➤ For appositives of subjects and appositives of predicate nominatives
    - Objective case:
      - For direct objects, indirect objects, and objects of prepositions
      - ➤ For appositives of direct objects, indirect objects, objects of prepositions
    - Possessive case
  - Adjectives:
    - Recognizing and diagramming:
      - Adjectives and proper adjectives
      - ➤ Participles
    - Distinguishing adjectives from nouns and pronouns
    - Recognizing and diagramming predicate adjectives
    - Using and diagramming:
      - Prepositional phrases as adjectives
      - ➤ Participial phrases as adjectives
      - ➤ Adjective clauses
    - Placing and punctuating adjective modifiers
    - Using adjectives in comparison
    - Avoiding double comparison and double negatives
  - Adverbs:
    - Recognizing and diagramming adverbs
    - Distinguishing adverbs from adjectives
    - Using and diagramming:
      - Prepositional phrases as adverbs
      - ➤ Adverb clauses
    - Correct placement of adverb modifiers
    - Using adverbs in comparison
  - Prepositions:
    - Recognizing prepositions, prepositional phrases, and objects of prepositions
    - Distinguishing between prepositions and adverbs
    - Using prepositions correctly
  - Conjunctions:
    - Recognizing:
      - Coordinating and correlative conjunctions
      - ➤ Subordinating conjunctions
  - Interjections
  - Sentence structure:
    - ➤ Defining dependent and independent clauses
    - Recognizing and diagramming:
      - Simple and compound sentences
      - ➤ Complex and compound-complex sentences

Composition

- ➤ Manuscript form: abbreviations, numbers
- ➤ Essay Answer
- Writing Letters:
  - Friendly: letter parts, thank-you note
  - ➤ Business: letter parts, appropriateness
- ➤ Summaries
- The Writing Process: plan, write, rewrite, edit
- Outline:
  - Topical outline
  - Sentence outline
  - Format of outline
  - ➤ Parallelism in an outline
  - Steps to preparing an outline
- Book reports:
  - Preparing:
    - Written book reports including introduction, body, conclusion
    - Oral book reports: written preparation and oral presentation
- Introducing paragraphs:
  - Topic sentence
  - Summarizing sentence
  - Paragraph development with details
  - Paragraph unity
  - Paragraph coherence:
    - Chronological order, order of importance, and transitional expressions
    - ➤ Space order, pronoun reference, and repetition
- ➤ Informative Essay
- ➤ Writing descriptions: character sketch
  - ➤ Steps: point of view, careful selection of details, arrangement of details, use of exact nouns and verbs
- The library: Dewey Decimal System, Library of Congress Classification System, using the catalog and reference section
- Research paper:
  - Planning the paper: selecting subject, finding sources, noting bibliography information, making a preliminary outline, taking notes, avoiding plagiarism
  - Writing the paper: introduction, body, conclusion
  - ➤ Using parenthetical citations

Grammar & Composition cont. p. 125

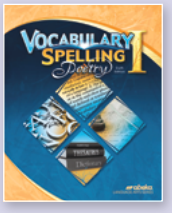
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ENGLISH: *Grammar & Composition* *cont.*

Composition *cont.*

- Rewriting the paper:
- Check:
  - Organization, introduction, and conclusion
  - ➤ Unity, coherence, and citations
- Editing the paper: check each paragraph, sentence, word; capitalization and punctuation
- ➤ Preparing works cited page
- ➤ Finalizing the paper
- ➤ Documenting the research paper
- ➤ Narrative Essay
- ➤ Process Essay

ENGLISH: *Vocabulary, Spelling, Poetry*



Vocabulary, Spelling, Poetry I emphasizes the application of spelling rules to lists of challenging words and the utilization of an expanded vocabulary. All of the spelling words are practical, and many are words that are frequently misspelled. A majority of the vocabulary words are taken from the stories in *Of People.* The goals of poetry recitation and memorization are an enjoyment and appreciation of poetic beauty and excellence.

Added Enrichment

- Spelling and vocabulary:
  - Spelling and vocabulary lists (28) including review list at end of each quarter:
    - Spelling words (560)
    - Vocabulary words (280)
    - Organized by spelling rules, suffixes, homonyms, compound words, and commonly misspelled words
    - Application exercises (56)
  - Review exercises (17)
  - Each vocabulary word includes:
    - Pronunciation, part of speech
    - Synonyms, antonyms, related forms
    - Definition, sample sentence
  - Pronunciation key
  - Teacher resource: spelling and vocabulary mastery sentences
  - Poetry teacher resource: introductions for each poem

Evaluation

- Spelling and vocabulary quizzes:
  - Weekly (28)
  - Quarterly review (1 each quarter; each counts as 2 quiz grades)
- Poetry quizzes:
  - Written (7)
  - Oral (2)

➤ **RED** *indicates first introduction of content.*

Spelling & Vocabulary Skills Development

- ➤ Master spelling and vocabulary lists that include:
  - ➤ Vocabulary words and definitions
  - ➤ Words that follow the spelling rules
  - ➤ Sound-alike suffixes
  - ➤ Commonly misspelled words
  - ➤ Homonyms
- Use vocabulary words in sentences and in proper context
- Memorize vocabulary definitions
- Be able to identify commonly misspelled words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- ➤ Learn:
  - ➤ Synonyms and antonyms of vocabulary words
  - ➤ To distinguish between homophones
  - ➤ Practical spelling tips and suggestions by studying Keys to Good Spelling
  - Spelling rules:
    - Use *i* before e, except after c, or when sounded like long a
    - Double a final consonant before adding a suffix beginning with a vowel
    - Change *y* to *i* when adding suffixes
    - Drop the silent *e* before adding a suffix beginning with a vowel
    - Learn exceptions to the spelling rules
    - ➤ Creating a compound word doesn't change the spelling of the two parts
    - ➤ Adding a prefix to a word doesn't change the word's spelling

Poetry Skills Development

- ➤ Memorize 7 lyrical poems and 1 hymn
- Develop appreciation of poetry
- Lay foundation for future literature study
- Perform in front of an audience
- Recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

ENGLISH: *Literature*



Of People features stories and poems that can help students increase their understanding of the world, man, and God from a Christian perspective. Students will gain exposure to people of different ages, nationalities, races, cultures, and economic levels to develop a better understanding of people's motives and feelings and to recognize the consequences of particular actions. Students will also become familiar with classics such as *A Christmas Carol, Robinson Crusoe, Don Quixote,* and *Of Plymouth Plantation.*

Literary Value

- 93 authors, including well-known writers such as Louisa May Alcott, John Bunyan, Charles Dickens, Robert Frost, and Henry Wadsworth Longfellow
- Prose selections (50), poems (63), plays (4)
- Character-building themes such as personal sacrifice, importance of family, admitting one's mistakes, and hard-work ethics
- Literary terms such as alliteration, conflict, personification, simile, setting, and protagonist and antagonist

Added Enrichment

- Footnotes define and explain unfamiliar words
- Comprehension and discussion questions after selections
- Character-building quotations and verses throughout
- Introductory paragraphs for interest and background information
- Author biographies and photos for important authors to know
- Suggested compositions (descriptions, summaries, poems, narratives, and imaginative stories)

Evaluation

- Speed and comprehension quizzes (14) with English DTA words-per-minute timer
- Homework reading quizzes (20)
- Tests (12), quarter exams (2)
- Semester exam, final exam

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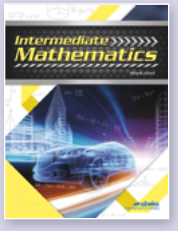
Reading Skills Development

- Develop skills in reading speed and comprehension
- Further develop oral reading skills
- ➤ Be able to identify significant quotations and the selection in which they are featured
- Increase vocabulary
- ➤ Recognize basic literary devices in the selection

Comprehension, Discussion & Analysis Skills Development

- ➤ Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- ➤ Apply literary devices throughout the text
- ➤ Build appreciation for good literature and a love of reading

MATHEMATICS: *Intermediate Mathematics*



Intermediate Mathematics gives a strong review of all arithmetic concepts with practical application to daily life. With solid skills in arithmetic, students have the confidence to advance to other branches of mathematics. Instruction in plane and solid geometry, probability and statistics, and algebra (four units) provides the foundation students need to enjoy success in future mathematics courses.

Practice and review problems in each lesson give sufficient opportunity for students to develop and maintain their skills while learning to work quickly and accurately. Word problems and problem-solving strategies throughout the text ensure that students can apply their mathematical skills to everyday situations and encourage students to connect varying types of mathematical knowledge. Fast Fact opportunities allow for further expansion of the concepts covered.

Features

- Flexible pacing options in curriculum: Fast Facts (35)
- Review exercises in every section (81)
- Mid-chapter reviews (14)
- Chapter reviews (12)
- Nine-weeks reviews (2)
- Semester review
- Final review

Evaluation

- Quizzes (47)
- Tests (8)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Numbers

- Arabic system
- Place value
  - Decimal system/powers of ten
  - Whole numbers up to 100 millions place
  - Decimals up to ten thousandths place
- Rounding: whole numbers, decimals, money
- ➤ Types of numbers
  - ➤ Counting (natural), whole, positive, negative, integer
  - ➤ Rational/irrational numbers
  - ➤ Absolute value
- Comparing numbers

Intermediate Mathematics cont. p. 127

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Intermediate Mathematics* *cont.*

Numbers *cont.*

- Number line
- ➤ Scientific Notation
  - ➤ Standard form
- ➤ Sequences, numerical
  - ➤ Arithmetic, geometric
  - ➤ Common difference
  - ➤ Common ratio
  - ➤ Finding the next term
- ➤ Sequences, visual

Factoring

- Rules of divisibility
- Prime Factoring
  - Prime/Composite numbers
  - Prime to each other
  - Fundamental theorem of arithmetic
  - Division by primes/Factor Tree
- Greatest common factor
- Least common multiple
- Exponent/base
- ➤ Factorial

Arithmetic

- Estimation
- Order of operation
  - Parentheses
  - ➤ Brackets, braces, fraction bar
- Addition
  - Addend, sum, annex
  - Whole numbers, fractions, decimals
  - ➤ Signed numbers
  - ➤ Additive inverse
- Subtraction
  - Minuend, subtrahend, difference
  - Whole numbers, fractions, decimals
  - ➤ Signed numbers
- Multiplication
  - Factor, partial product, product
  - Whole numbers, fractions, decimals
  - Powers of ten
  - ➤ Signed numbers
  - By zero
- Division
  - Dividend, divisor, quotient, remainder
  - Whole numbers, fractions, decimals
  - ➤ Signed numbers
  - Powers of ten
- Word problems
  - Problem Solving Strategies
- ➤ Properties of arithmetic
  - ➤ Commutative
  - ➤ Associative
  - ➤ Distributive
  - ➤ Applying properties

Fractions

- Numerator, denominator
- Types:
  - Proper, improper, mixed number
  - ➤ Complex, reciprocal
- Addition, subtraction, multiplication, division
  - Least common denominator
- ➤ Simplifying complex fractions
- Changing a fraction to a decimal
  - ➤ Unit price
- Word problems
- Ratios
  - Antecedent, consequent
  - Expressing/reading
  - Word problems

Decimals

- Types:
  - Terminating, repeating
  - Rational, irrational
- Changing a decimal to a fraction

Percent, percentage, base

- Expressing:
  - Percent as a decimal
  - Decimal as a percent
  - Fraction as a percent
  - Percent as a fraction
  - Fractional percent as a decimal
- Percentage
  - Simple interest
  - Discount and sale price
  - More or less in percent
- Percent
  - Rate of discount
  - Percent of change
- Base

Geometry

- ➤ Plane figure notation
- Plane figures
  - Plane, point, line, line segment, ray, angle
  - Intersecting, parallel, or perpendicular lines
- Polygon, closed figures
  - Side, vertex
  - Triangle, pentagon, hexagon, octagon
  - Quadrilateral, rectangle, square, rhombus, trapezoid
  - Similar polygons
- Congruent polygons
- Line symmetry
- Perimeter: polygon, rectangle, square, any polygon with equal sides
- Angles: acute, obtuse, right, straight, reflex
- ➤ Pairs of angles: vertical, adjacent, complementary, supplementary
- Measuring and drawing angles
- Using a protractor and compass
- ➤ Constructing angles
- Triangles: acute, obtuse, right, equiangular, equilateral, isosceles, scalene
- ➤ Drawing triangles
  - ➤ Included side or angle
- ➤ Triangles formed: 0, 1, 2, or infinitely many
  - ➤ Ambiguous case
- Circles
  - Center, radius, diameter, arc, semicircle, chord, central angle, subtended
  - Sum of central angles: 360°
- Circumference with radius or diameter
- Area
  - rectangle, square, parallelogram, triangle, circle, trapezoid
  - ➤ using a grid and scale
  - ➤ Complex figures using addition or subtraction

Intermediate Mathematics cont. p. 128

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Intermediate Mathematics* *cont.*

Geometry *cont.*

- ➤ Three-dimensional figures
  - ➤ Face, edge, base
  - ➤ Rectangular prism, cube, triangular prism, square pyramid, cylinder, cone, sphere
- ➤ Surface area
  - ➤ Rectangular prism, cube, square pyramid, cylinder
- ➤ Lateral surface area
  - ➤ Rectangular prism, cube, cylinder
- ➤ Volume
  - ➤ Rectangular prism, cube, cylinder, cone
- ➤ Cross Sections

Measurement

- Linear
  - U.S. Customary: inch, foot, yard, mile
  - Metric: millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer
- Capacity
  - U.S. Customary: fluid ounce, cup, pint, quart, gallon, peck, bushel, teaspoon, tablespoon
  - Metric: milliliter, centiliter, deciliter, liter, decaliter, hectoliter, kiloliter
- Weight
  - U.S. Customary: ounce, pound, ton
- Mass:
  - Metric: milligram, centigram, decigram, gram, decagram, hectogram, kilogram
- Biblical Measures
  - Weight: Shekel
  - Money: talent, mite
  - Length: cubit
- Converting between U.S. Customary measures
  - Single conversion factor
  - Multiple conversion factors
- Converting between metric measures
- ➤ Converting between square measures
- Time
  - Second, minute, hour, day, week, month, year, decade, score of years, century, millennium
  - solar year, calendar year, leap year
  - ➤ 24-hour time
  - Elapsed time
- Mixed measures
  - Express a mixed measure as a single measure
  - Add, subtract, multiply, divide
- ➤ Dimensional analysis
  - ➤ Express conversion factor as a ratio
  - ➤ Convert between U.S. Customary or time measures

Probability

- ➤ Counting
  - ➤ Outcome
  - ➤ Exhaustive list, tree diagram
  - ➤ Fundamental theorem of counting
- Basic probability
  - ➤ Outcome, event,
- ➤ Properties of probability
  - ➤ Each probability $0 \leq x \leq 1$,
  - ➤ Sum = 1
  - ➤ Complement
- ➤ Compound probability
  - ➤ Compound events
  - ➤ Mutually exclusive
  - ➤ Independent
  - ➤ Dependent
- ➤ Theoretical probability
- ➤ Experimental probability
- ➤ Relative frequency table (one way)

Statistics

- ➤ Data, statistic, statistics
- ➤ Frequency table
- ➤ Population, sample, random sample
- ➤ Biased questions
  - Measures of center: Mean, median, mode
  - Range
  - ➤ Outliers, sensitive
  - Ranked data
  - ➤ Dot plot

Statistical Representation

- ➤ Chart title, scale, category label, axis title, major/minor gridlines, legend
- Bar graph, stacked bar graph
  - Interpreting/constructing
- Circle graph
  - Interpreting/constructing
- ➤ Box-and-whisker plot
  - ➤ Dispersion, range
  - ➤ Five-number summary
  - ➤ Minimum, first quartile, median, third quartile, maximum
  - ➤ Interpreting/constructing
  - ➤ Comparing two plots
- ➤ Stem-and-leaf plot
  - ➤ Stem, leaf, class
  - ➤ Interpreting/constructing
- ➤ Histogram
  - ➤ Class, frequency
  - ➤ Interpreting/constructing
- Line graph
  - ➤ Comparing two lines on the same graph
  - Interpreting/constructing
  - ➤ Straight, curved, or broken

Graphing on the Cartesian Plane

- ➤ Cartesian plane, origin, x-axis, y-axis, quadrants, point, ordered pair
- ➤ x-intercept, y-intercept
- Plotting points
- ➤ Coordinate geometry, transformations
  - ➤ Translation
  - ➤ Preimage, image,
  - ➤ Rigid transformation
  - ➤ Reflection
- ➤ Slope
  - ➤ Rise, run,
  - ➤ Positive, negative, zero
  - ➤ Parallel and perpendicular slopes
- ➤ Graphing a line
  - ➤ Using two points
  - ➤ Using a point and a slope
  - ➤ Using a table of values
  - ➤ Using slope-intercept form
- ➤ Linear equations
  - ➤ Input, output, independent variable, dependent variable, equation
  - ➤ Slope-intercept form
- ➤ Direct Variation
  - ➤ Constant of variation
  - ➤ Proportional/nonproportional
  - ➤ Word problems

Intermediate Mathematics cont. p. 129

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Intermediate Mathematics* *cont.*

Algebra

- ➤ Variable, constant
- ➤ Notation
  - ▪ Raised dot, side-by-side, parentheses
  - ➤ Fraction bar
- ➤ Factors
  - ➤ Numerical coefficient
- ➤ Term
  - ➤ Constant term
  - ➤ Variable term
- ➤ Polynomial
  - ➤ Monomial, binomial, trinomial
- ➤ Evaluation
- ➤ Algebraic translation
- ➤ Polynomial arithmetic
  - ➤ Adding like terms
  - ➤ Multiplying/dividing like bases
  - ➤ Negative exponents
  - ➤ Raising a power to a power
  - ➤ Multiplying/dividing monomials
  - ➤ Multiplying a polynomial by a monomial
  - ➤ Dividing a polynomial by a monomial
  - ➤ Factoring out a monomial

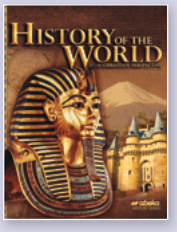
Radicals

- ▪ Perfect square, perfect cube
- ▪ Radical symbol, index (indices), radicand
- ▪ Square root, cube root
- ➤ Expressing a radical as a fractional exponent
- ➤ Finding rational roots using fractional exponents
- ➤ Estimating irrational roots

Equations/Inequalities

- ▪ Solving, isolating
- ➤ Inverse operation
- ▪ Solving equations
  - ➤ Addition property of equality
  - ➤ Multiplication property of equality
  - ➤ Both properties
- ➤ Word problems
  - ➤ Addition property of equality
  - ➤ Multiplication property of equality
  - ➤ Both properties
  - ➤ With multiple unknowns
- ▪ Proportions
  - ▪ Means, extremes
  - ▪ Cross multiplication
  - ▪ Scale drawings, maps
  - ▪ Word problems
- ➤ Similarity
  - ➤ Similar polygons
  - ➤ Word problems
- ➤ Pure quadratic equation
  - ➤ Pythagorean theorem
- ➤ Inequality graphing
  - ➤ <, >, ≤, ≥, ≠
  - ➤ Open dot, closed dot
  - ➤ Solution
  - ➤ Compound inequality
- ➤ Solving inequalities
  - ➤ Addition property of inequality
  - ➤ Multiplication property of inequality
  - ➤ Both properties
    - ➤ Compound
      - ➤ Addition property of inequality
      - ➤ Multiplication property of inequality

HISTORY & GEOGRAPHY: *World History*



History of the World is presented from a conservative, Christian perspective as part of a well-rounded program designed to give students a better understanding and a working knowledge of the geography of the Eastern Hemisphere. The interesting narrative style of the text and the many illustrations, maps, and photographs invite students to explore the past and learn about the people behind the events of world history.

The goal of the text is threefold: first, to show God's hand in the history of the world; second, to emphasize the role of individuals in history; and third, to teach the many lessons that can be learned from history. Above all, *History of the World* emphasizes the providence of God in the actions of men. It provides students with heroes to emulate and goals to fulfill by focusing on the individuals whose character, initiative, and hard work have made a positive impact on world history.

Added Enrichment

- ▪ Special feature boxes (42):
  - ▪ Highlight important people and events of history
  - ▪ Present fascinating facts and intriguing details from a Christian perspective
  - ▪ Introduce the foundations of history and place importance on knowing current history
- ▪ Maps correlating to text (62)

Evaluation

- ▪ Review quizzes (40)
- ▪ Reading quizzes (27)
- ▪ Current event reports (31; each presentation counts as quiz grade)
- ▪ Geography projects (13; each counts as quiz grade)
- ▪ Tests (8), 9-weeks exam (2)
- ▪ Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

World History cont. p. 130

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

Beginning of World History: The Ancient Middle East

- The beginning:
  - Creation
  - Fall of man:
    - ➤ Cain, Abel, Seth
    - ➤ Capital punishment
  - Flood
  - Dispersion
- From Sumer to Canaan
  - Sumerian civilization and religion
  - Call of Abraham
  - Hammurabi and Babylon
  - ➤ Patriarchs in Canaan
- Down to Egypt
  - Egyptian civilization
  - Hebrew exodus:
    - ➤ God's judgment through the plagues
- Israel in its land
  - Ten Commandments
  - Conquest of Canaan
  - ➤ Samuel
  - David and Solomon
  - ➤ Division of Israel
  - Phoenicians and Hittites

New Empires & Cultures

- Assyria, Babylon, and Persia
  - Assyrian Empire:
    - ➤ Shalmaneser V and Ashurbanipal
  - Chaldean Empire: Nebuchadnezzar
  - Persian Empire: Cyrus the Great:
    - ➤ Darius and the Royal Road
- Greece
  - Early Greek civilization:
    - ➤ Dorians
  - Homer and the Olympian gods
  - ➤ Greco-Persian Wars
  - Athens and Sparta:
    - Greek politics and philosophy
    - ➤ Peloponnesian War
  - Alexander the Great
- Rome before Christ
  - Foundation of Rome
  - Roman republic
  - Punic Wars
  - Julius Caesar
    - ➤ Roman drama
  - Caesar Augustus
  - ➤ Measuring time
- Rome after Christ
  - Gospel of Christ
  - Persecution of early church:
    - ➤ Claudian and Flavian emperors
  - Constantine the Great:
    - ➤ Edict of Milan
  - Fall of the Roman Empire
    - ➤ Understanding why the Roman Empire fell

The Middle Ages & the Distortion of Christianity

- Early church history
  - ➤ New Testament
  - Early church
  - ➤ Rise of Roman church and popes
- ➤ Islam and the Crusades
  - Mohammed and Islam
  - ➤ Europe's Crusades:
    - ➤ Christendom and Islam: checks and balances
- ➤ From empire to feudalism
  - ➤ Merovingian and Carolingian Kings:
    - ➤ Papal states
    - ➤ Charlemagne and his empire
    - ➤ Treaty of Verdun
  - ➤ Feudalism
- Age of Darkness
  - Distorted Christianity:
    - ➤ Doctrines of the Roman church
    - ➤ Scholasticism
  - Holy Roman Empire
  - Renaissance

Beginning of the Modern Age

- Protestant Reformation
  - Forerunners of the Reformation
  - John Wycliffe and John Huss
  - Inquisition
  - Gutenberg and the printing press
  - ➤ Erasmus
  - Martin Luther:
    - ➤ Luther's reforms
    - ➤ Zwingli and Calvin
    - ➤ Anabaptists and Mennonites
- Post-Reformation Europe
  - ➤ Peasant's Revolt
  - ➤ State churches: Peace of Augsburg
  - ➤ Counter-Reformation
  - ➤ Thirty Years' War: Peace of Westphalia
  - Seventeenth-century Europe:
    - ➤ Swiss Confederation
    - ➤ Franks and Capetian Dynasty
- English nation
  - Alfred the Great
  - Norman Conquest:
    - ➤ Domesday Book
    - ➤ Witan and the Great Council
  - Plantagenet kings:
    - ➤ Henry II, Richard I, John
    - ➤ Magna Carta and Parliament
  - ➤ Hundred Years' War and Wars of the Roses
  - Henry VIII
  - Scottish and English Reformation
  - Elizabethan Age: Spanish Armada
  - ➤ Great English Civil War
  - Restoration of the monarchy
  - ➤ Glorious Revolution
- ➤ Age of Exploration
  - Asia's mysterious land: India, China, and Japan

World History cont. p. 131

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

Beginning of the Modern Age *cont.*

- Time of discovery:
  - ➤ Effects of the Crusades
- New World: Christopher Columbus, Vasco da Gama, and Amerigo Vespucci
- Other nations explore: Portugal, France, England

- United States
  - Pilgrims
  - ➤ Philipp Spener
  - Wesleyan Revival and Great Awakening
  - War for Independence
  - Constitution of the United States
  - Expansion and progress
  - Rise as a world power
  - Revival and missions

Rise of Modern Europe

- France in the Modern Age
  - Huguenots:
    - ➤ Edict of Nantes
  - ➤ Reign of Louis XIV
  - ➤ Age of Enlightenment: Voltaire, Montesquieu, and Rousseau
  - French Revolution
  - ➤ Robespierre and Reign of Terror
  - Napoleon Bonaparte:
    - ➤ Battle of Nations and Battle of Waterloo
  - ➤ Congress of Vienna
  - ➤ July Revolution
- British Empire: Asia, Africa, and Australia
  - Victorian Age
  - British Empire:
    - ➤ Conflicts of England and Ireland
    - ➤ Christianity and charity
      - Missions
  - India and the Far East:
    - ➤ Sepoy Rebellion
  - Africa:
    - ➤ Slave trade
    - ➤ Samuel Adjai Crowther
  - Australia and Canada:
    - ➤ British North America Act
- Science and industry in the Modern Age
  - ➤ Failures of ancient and medieval science
  - Founders of modern science
  - Darwin and evolution:
    - ➤ Understanding evolution's threat to science
  - Agricultural advancement
  - Industrial Revolution:
    - ➤ Inventors and captains of industry
    - ➤ Triumph of capitalism

➤ New world of classics
- ➤ Ancient and modern classics
- ➤ Medieval music
- ➤ Post-Reformation music, art, and literature

An Era of Change

- World War I and the rise of Communism
  - Unification of Germany and Italy
  - World War I:
    - ➤ Battles: Verdun, Sommé, Jutland
    - ➤ Treaty of Versailles
  - Czarist Russia
  - Karl Marx and Communism:
    - ➤ Capitalism, socialism, and Communism
  - Bolshevik Revolution
  - Vladimir Lenin and Joseph Stalin:
    - ➤ Five Year Plan
    - Soviet Union
- Before and during World War II
  - ➤ Anti-Christian philosophies
  - Mussolini and Fascist Italy
  - Hitler's Third Reich
  - 1920s and the Great Depression
  - ➤ World War II:
    - ➤ Battle of Britain
    - American involvement: Pearl Harbor
    - ➤ War in Africa
    - ➤ European and Pacific Theater
      - Atomic bomb and the Holocaust

➤ Cold War Era:
- United Nations
- Cold War
  - NATO
  - Berlin Wall:
    - ➤ Operation Airlift
  - Space Age
- Communist takeovers
  - China
  - Korean War:
    - ➤ 38th Parallel
  - Communist Cuba
  - Vietnam Conflict:
    - ➤ Gulf of Tonkin Resolution
- Modern Middle East:
  - ➤ Balfour Declaration; independence for India and African nations
- Collapse of Soviet Union
  - Ronald Reagan
  - Gorbachev's influence: perestroika and glasnost
  - Tiananmen Square
- Toward a new millennium
  - ➤ New World Order
    - ➤ European Union
    - NAFTA
  - World Changes
    - Persian Gulf War
    - United States, Central and South America, Russia
  - ➤ Modern culture: literature, music, art, architecture
  - ➤ Changes in technology
- Change in the new millennium
  - 9/11 Attack: Osama bin Laden and al-Qaeda
  - War on Terror:
    - ➤ Operation Iraqi Freedom
    - ➤ Arab Spring
  - Change in politics
    - ➤ Nuclear nations
    - ➤ Israeli/Palestinian conflict
    - ➤ African Union
      - Kosovo, Venezuela, Cuba

World History cont. p. 132

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

An Era of Change *cont.*

- Economic world change
  - ➤ United States' financial crises
  - ➤ Asian economies
- Changes in the natural world
  - ➤ Environmentalism and global warming

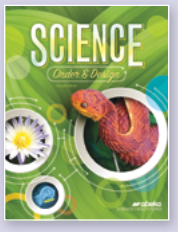
Geography

- Fertile Crescent
- The Modern Middle East
- Asia
- Ancient Empires
- Greek Lands
- Italy
- World Geography
- Europe
- The British Isles
- France
- Australia
- Africa
- Nations of the World

Prayer Time

➤ Learn to pray for our nation and for government officials

SCIENCE: *Science: Order & Design*



Many life science textbooks study the "simple" cell as the origin of life and discuss the "evolution" of life through the plant and animal worlds. *Science: Order and Design* uses a different approach.

This life science text begins with the more complex plant world and human anatomy and physiology. Evolutionary hypotheses are discussed and discarded as unscientific. Similarities between man and animals are explored and proved to be the result of a common Designer, laying a biblical foundation of origins.

A look at the complexity of the "simple" cell, the basis of all life, emphasizes the hand of the Creator in its design. A study of ecology shows God's providential design in the relationships between living things and their environments.

Added Enrichment

- Feature boxes with activities, puzzles, extra information, hands-on investigations for the classroom and at home
- Short articles highlighting God's design in Creation (16)
- Science Investigations (30)
- Challenging homework questions to provoke thinking more deeply about concepts taught (84)
- Thought-provoking review exercises (74)
- Highlighted fun facts (132)
- Review activities to prepare for tests (33)

Evaluation

- Reading quizzes (27)
- Review quizzes (40)
- Insect collection (counts as 3 quiz grades)
- In-class STEM project (counts as one quiz grade and one test grade)
- Tests (8), quarter exams (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Introduction to Life Science

- ➤ Introduction of basic terms: biology, organism, divisions of biology, characteristics of living things
- ➤ Symmetry in living things
- Observing nature: how to set up an observation notebook and observation kit
- Overview of environments: meadow, woodlands, freshwater, and marine
- Biological classification:
  - Pioneers in classification: John Ray and Carolus Linnaeus
  - Classification system:
  - Kingdom, phylum, class, order, family, genus, species, scientific name
  - ➤ Six-kingdom system
- ➤ Scientific method:
  - ➤ Six-step process
  - ➤ Explains process of the experimental method
  - ➤ Differentiate hypotheses, theories, and scientific laws
  - ➤ Differentiate experimental and control groups, types of variables
- ➤ Scientific reasoning, scientific models

Plants

- Purpose and design of flowers:
  - Functions and structures of flowers:
    - ➤ Style, anther, filament, receptacle
- Pollination and fertilization:
  - Process, provisions for fertilization, results, development:
    - ➤ Sperm cell, egg cell, embryo, endosperm, plumule, radicle
- Seed dispersal:
  - Fruit
  - ➤ Mechanical and agent dispersal
- Germination:
  - Requirements
  - ➤ Process
- Plant life expectancies
- ➤ Angiosperms vs. gymnosperms
- Familiar flower families:
  - ➤ Buttercup, mint, honeysuckle, parsley, milkweed, and amaryllis families
- ➤ Flower arrangements: spikes, umbels, racemes
- Monocots vs. dicots
- Leaf structure and arrangement:
  - Margins
  - ➤ Leaf arrangement, simple or compound leaves, venation
- Photosynthesis and respiration:
  - Structures, process, chemicals
  - ➤ Producers vs. consumers; uses of glucose

Science: Order & Design cont. p. 133

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Order & Design* *cont.*

Plants *cont.*

- Vascular system:
  - Roots
  - ➤ Vegetative reproduction
  - ➤ Xylem, phloem
  - ➤ Primary vs. secondary growth
  - ➤ Osmosis in plants
  - ➤ Capillarity
  - ➤ Transpiration
- ➤ Classifying the plant kingdom—with and without vascular systems (tracheophytes and bryophytes)

Human Anatomy & Physiology

- ➤ Outward divisions: head, trunk, appendages
- Cardiovascular system:
  - ➤ Arterioles, venules
  - ➤ Blood flow through veins
  - ➤ Pericardium
  - ➤ Pulmonary, coronary, and systemic circulation
- Respiratory system:
  - ➤ Nasal cavity, pleura
- Digestive system:
  - ➤ Enzymes, peristalsis, sections of small intestine, rectum, feces
- Excretory system:
  - ➤ Urinary system, ureters, urethra
- Lymphatic system:
  - ➤ Neutrophils, macrophages, phagocytes
  - ➤ Main types of lymphocytes; types of immunity
- Integumentary system:
  - ➤ Adipose tissue
- Skeletal system:
  - ➤ Axial and appendicular skeleton
  - ➤ Maxilla, mandible
  - ➤ Pelvis
  - ➤ Hinge joint, pivot joint, ball-and-socket joint
  - ➤ Fracture repair
- Muscular system:
  - ➤ Largest body system by weight
- Nervous system:
  - ➤ Impulses
- Endocrine system:
  - ➤ *Gland* defined, parathyroid glands, epinephrine
  - ➤ Types of diabetes mellitus
- ➤ Reproductive system: eggs, sperm
- ➤ Tissue types
- Prenatal growth and development:
  - Pictures and detailed descriptions of development at weekly intervals:
    - ➤ Conception, fertilization, uterus

A Healthy Life

- Proper nutrition:
  - Carbohydrates, fiber, protein, fats, vitamins, minerals, and water:
    - ➤ Amino acids, lipids
  - Calories, metabolism, healthy diet:
    - ➤ Basal metabolic rate
- Exercise:
  - ➤ Anaerobic
  - Aerobic, training heart rate, benefits
- Rest
- Outward appearance: cleanliness, grooming, sun exposure, acne, dental care
- Introduction to disease:
  - Bacteria, viruses
  - Infectious
  - ➤ Noninfectious
  - ➤ Spread of pathogens
  - Common diseases:
    - Common cold, AIDS, allergies
    - ➤ Cardiovascular disease, cancer
- Substance abuse:
  - Medications, abuse
  - Dependence, withdrawal
  - Narcotics, hallucinogens, stimulants, depressants, inhalants
- Personal safety: falls, electrical safety, fire and burns, poisons, power tools
- First aid: basic principles, sprains, strains, fractures, dislocations, wounds, choking, poisoning, burns
- ➤ Emotions: adolescence
- Spiritual health: Bible study and prayer

Creation & Science

- ➤ Design in nature: introduction, history, and evidence of design
- ➤ Homology: similar structures
- ➤ Information in living things: complexity, DNA, mutations
- ➤ Natural selection: kind, speciation vs. macroevolution, specific examples
- ➤ Three views of life: "tree of life"—evolution, "lawn view," "orchard view"—Creation science
- ➤ A Christian's faith: what I believe and why
- ➤ History of science:
  - ➤ Materialism, Aristotle, Middle Ages
  - ➤ General and special revelation
  - ➤ Protestant Reformation
- ➤ The Bible and science: advances in modern life science
- ➤ Law of biogenesis: experiments by Redi and Pasteur
- ➤ Worldviews and science: ordered or accidental, who determines truth, faith
- ➤ Development of modern evolutionary thought: Darwin, Lyell, uniformitarianism, missing links
- ➤ Evolution as a retreat from true science:
  - ➤ Abiogenesis, evolutionary relationships, phylogenetic trees
  - ➤ Recapitulation, vestigial organs, mutations
  - ➤ Evolution of horses, whales, humans
- ➤ Mutations: most are harmful or deadly, gradualism, punctuated equilibrium

Mammals

- Vertebrates and invertebrates
  - ➤ Characteristics of vertebrates
- Characteristics of mammals:
  - ➤ Four-chambered heart
  - Hair, mammary glands, endoskeleton, warm-blooded
- ➤ Orders of placental mammals: 16 orders taught with more than 90 specific example animals
- ➤ Marsupials: mammals with pouches
- Egg-laying mammals—monotremes
- Endangered animals

Science: Order & Design cont. p. 134

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Order & Design* *cont.*

Birds

- Internal anatomy:
  - Skeletal and muscular systems
  - ➤ Respiratory, cardiovascular, and digestive systems
- Senses:
  - Sight, hearing
  - ➤ Smell
- Feathers:
  - Flight and down feathers, structure, preening
  - ➤ Contour feathers, growth, molting
- ➤ Flight: motions, types of flight; airfoil, lift, thrust, drag
- Behavior:
  - Audible communication
  - ➤ Visual communication
  - Baths
  - ➤ Dusting, anting, mobbing, running, migration
  - Courtship, egg laying, nesting, incubation
- Identifying features: wings, tails, bills, feet, field marks
- ➤ Groups: perching, birds of prey, water, game, tropical, flightless

Fish, Reptiles & Amphibians (Cold-Blooded)

- Fish anatomy and groups:
  - External and internal structures of bony and cartilaginous fish:
    - ➤ Types of fins, types of scales, myomeres
    - ➤ Circulatory, digestive, excretory, nervous, and reproductive systems
- Reptile anatomy and groups:
  - External and internal structures, and characteristics:
    - ➤ Lizard and snake groups, snake movement, snake venom, tuataras
- ➤ Dinosaurs and similar creatures: descriptions of various types
- Amphibians:
  - ➤ Anatomy
  - Metamorphosis
  - Salamanders, frogs, and toads:
    - ➤ Salamander life cycles, estivation
  - ➤ Caecilians (limbless amphibians)

Insects

- Common characteristics of arthropods:
  - Basic common traits:
    - ➤ Open system of circulation
- Jean-Henri Fabre—entomologist
- Insect anatomy and life cycles:
  - Complete and incomplete metamorphosis
  - ➤ Structure of compound eyes
- Insect orders:
  - ➤ Detailed description and examples for each order
  - Coleoptera (sheathed wings), Hemiptera (half-wing)
  - Homoptera (same wings), Diptera (two wings)
  - Orthoptera (straight wings), Odonata (toothed)
  - ➤ Neuroptera (nerve wings)
  - Hymenoptera (membrane wings), Lepidoptera (scale-wing)
- ➤ Insects and man: helpful and harmful characteristics of insects
- Assorted Invertebrates
- Crustacean anatomy and orders (aquatic arthropods):
  - ➤ Common anatomy
  - Groups:
    - Decapods
    - ➤ Amphipods, copepods, branchiopods
    - Cirripedes
    - ➤ Krill
    - Isopods, includes woodlice
- Arachnid anatomy and groups:
  - Details of common anatomy
  - Spiders, daddy longlegs (harvestmen), scorpions
  - ➤ Pseudoscorpions
  - Mites, ticks
- Centipedes and millipedes: comparison and contrast of traits
- Non-arthropod invertebrates
  - Worms
    - ➤ Annelids, (segmented worm, platyhelminth (flatworm), nematode
  - Mollusks: bivalve, gastropod, cephalopod
    - ➤ Echinoderm, coelenterate
  - Sponges

Microbiology

- Cell theory: introduction to the cell, Robert Hooke
- Cell structure:
  - Basic structures and functions:
    - ➤ Plant cell structure and differences from human and animal cells
- ➤ Microscope parts and operation
- ➤ Genetics and heredity
  - ➤ Gene, allele, homozygous, heterozygous, genotype, phenotype
  - ➤ Asexual and sexual reproduction, mitosis, meiosis
  - ➤ Replication, transcription, translation
  - ➤ Laws of heredity, Punnett square, pedigree chart
  - ➤ Selective breeding, genetic engineering
- Algae:
  - Characteristics and types:
    - ➤ Classification; volvox, spirogyra
- Fungi:
  - Characteristics and types:
    - ➤ Classification
    - ➤ Rusts, smuts
    - ➤ Yeast reproduction
- Protozoa:
  - Leeuwenhoek, sarcodines, ciliates
  - ➤ Flagellates, sporozoa, vorticella, stentor
- ➤ Bacteria: eukaryotes and prokaryotes, characteristics, examples of helpful and harmful bacteria

Forestry

- Tree groups:
  - Basic traits of angiosperm and gymnosperm trees:
    - ➤ Cycads, ginkgoes
- Tree structure:
  - Details of roots, stems, branches, and leaves:
    - ➤ Bark and wood as vascular tissue
    - ➤ Pith
    - ➤ Bud structure and types
    - ➤ Nodes and lenticels
    - ➤ Sun and shade leaves, leaf pigments
- ➤ Locations of American forests: introduction and geographical description of North American forests
- ➤ Branches of forestry: introductory concepts regarding forestry
- ➤ Functions and resources of forests
- ➤ Using forests: harvesting methods and renewing the resources

Science: Order & Design cont. p. 135

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Order & Design* *cont.*

Forestry *cont.*

- Notable tree species: details and characteristics of 24 types of North American trees
- ➤ Forest conservation: Theodore Roosevelt, sustainability, reforestation, forest fires, disease, insects

Ecology

- ➤ Factors in an ecosystem:
  - ➤ Overview of factors affecting an ecosystem
  - ➤ Tolerance vs. optimum range
  - ➤ Limiting factor
  - ➤ Carrying capacity, overpopulation
  - ➤ Biodiversity
  - ➤ Biogeochemical cycles
  - ➤ Ecological succession
- ➤ Levels of ecology: biosphere, atmosphere, lithosphere, hydrosphere, community, population
- ➤ Types of biomes:
  - ➤ Overview of traits and communities of:
    - ➤ Tundra, boreal forest, temperate deciduous forest
    - ➤ Grassland, tropical rainforest
    - ➤ Aquatic biomes
- ➤ Nutrition types: traits and types of producers and consumers:
  - Food chains
  - ➤ Trophic levels
  - ➤ Energy pyramids
  - ➤ Food webs
  - ➤ Special nutritional relationships: predation, symbiosis, competition, and neutralism
- ➤ Dominion and stewardship: role of man in the environment, biblical stewardship
- ➤ Dangers of modern environmentalism: bias, pantheism
- Biblical conservation:
  - ➤ Bible examples

BIBLE: *Exodus*—(one semester)



Bible 7 consists of two semester courses: *Exodus* and the *Life of Christ*.

Exodus is designed to give students a basic overview of the way God miraculously delivered His people out of captivity and led them into the Promised Land.

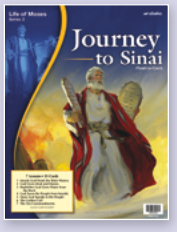
When we understand many of the Israelites' struggles and how God's people often turned away from His leading, it shows us how God will deal with us if we stray from trusting in His perfect plan. By studying *Exodus,* students will clearly see God's patience and mercy as He deals with His people.

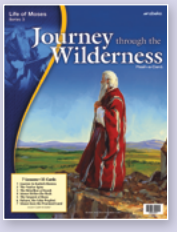
Evaluation

- Verses:
  - Verse quizzes (11)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - Quiz on the books of the Bible (1)
  - 9-weeks content exam (1)
  - Final content exam (1)











Lessons *142 Abeka Flash-a-Cards*

- Abraham through Joseph (14 lessons)
- Moses in Egypt (17)
- Journey to Sinai (15)
- Journey through the Wilderness (18)
- Tabernacle (6)

Music *37 songs*

- Hymns of the faith, choruses, holiday songs

Memory Work

- Passages (11 containing 34 verses) and the books of the Bible

Prayer Time

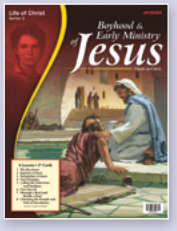
- Learn to pray for each other, our nation, those in authority over us

BIBLE: *Life of Christ*—(one semester)



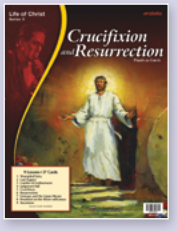
This second-semester course focuses on the many narratives in the Gospels and covers Christ's life from His birth through His ascension. The example that Christ set for believers, both then and now, helps us pattern our lives after our Savior. Christ's teaching and miracles show us what He valued and help us understand His earthly ministry in a more complete way.











Evaluation

- Verses:
  - Verse quizzes (13)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - 9-weeks content exam (1)
  - Tests (4)
  - Final content exam (1)

Lessons *178 Abeka Flash-a-Cards*

- First Christmas (8 lessons)
- Boyhood & Early Ministry of Jesus (17)
- Jesus Heals & Helps (13)
- Later Ministry of Jesus (12)
- Crucifixion and Resurrection (17)

Music *40 songs*

- Hymns of the faith, holiday songs, choruses

Memory Work

- Passages (13 containing 35 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

ENGLISH: *Grammar & Composition*



Two vital abilities, the ability to express one's ideas creatively as well as correctly and the ability to comprehend and interpret the written word skillfully, are built upon the elements which are included in English 8. *Grammar and Composition II* builds upon the skills learned in earlier grammar studies providing foundational practice of proper grammar and developing the basic composition skills used in outlining, summarizing, describing, researching, and creative writing. Students will also be introduced to new grammar rules and new writing techniques that will allow them to expand their writing skills.

Added Enrichment

- Review games
- Grammar Court procedures explained

Evaluation

- Grammar quizzes (22)
- Tests (8), quarter exams (2)
- Semester exam, final exam
- Compositions

Compositions

- Essay (Answer, Persuasive, Narrative)
- Summaries, Type Sketch, Dialogue
- Paragraph, Outline, Captions
- Limerick, Cinquain
- Book reports
- Research paper

➤ **RED** *indicates first introduction of content.*

Grammar

- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things:
      - ➤ Political and economic organizations and alliances
    - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection O
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period for declarative sentences and abbreviations
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - ➤ Participial phrase
        - ➤ Adjective and adverb clauses
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - Joined by:
        - Transitional words
        - Coordinating conjunction if clauses already contain commas
    - ➤ Between items in a series if the items contain commas
  - Colons:
    - Before a list of items
    - ➤ To introduce a formally announced statement or quotation
    - Between:
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
  - Italics:
    - For titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
    - ➤ For words, letters, numbers referred to as such
    - ➤ For foreign words or phrases
  - Hyphens:
    - To divide a word at the end of line
    - In compound numbers
    - In fractions
    - ➤ In prefixes before a proper noun or adjective
    - ➤ In prefixes *all-*, *ex-*, *self-* and suffix *-elect*
    - ➤ In compound adjectives before a noun
  - Quotation Marks:
    - In a direct quotation
    - To enclose:
      - Titles of short poems, songs, chapters, articles, and other parts of books or magazines
      - ➤ A quoted passage of more than one paragraph: at the beginning of each paragraph and at the end of the last paragraph
  - Apostrophes:
    - To form:
      - Possessive case of nouns
      - ➤ Individual possession within a group
      - ➤ Possessive case of compound words and words that show joint possession
      - ➤ Possessive case of indefinite pronouns
    - To show omissions from words
    - With s to form plurals of lowercase letters, numbers, signs, and words used as words
  - ➤ Dashes:
    - ➤ After a series of words or phrases giving details about a statement that follows
    - ➤ To indicate an abrupt change or break in a sentence

Grammar & Composition cont. p. 138

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

Grammar *cont.*

- ➤ To set off parenthetical elements or confidential comments
- ➤ Parentheses: to enclose parenthetical elements
- ➤ Ellipses: to indicate an omission, unfinished thought, or pause

- The sentence:
  - Recognizing eight parts of speech
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming compound subjects and verbs
  - Recognizing complements
  - Correcting fragments and run-on sentences
- Parts of speech:
  - Verbs:
    - Recognizing action, linking, and helping verbs:
      - ➤ Action: transitive and intransitive verbs
    - Distinguishing verbs from verbals
    - Using:
      - Principal parts of verbs
      - Regular verb endings, irregular verbs
      - Correct principal parts
    - Verb tenses:
      - ➤ Conjugation
      - ➤ Using progressive and emphatic forms
      - Using consistent verb tense
    - ➤ Using active and passive voice
    - ➤ Mood: indicative, imperative, subjunctive
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
  - Nouns:
    - Recognizing nouns: compound, collective, common, and proper
    - Keeping agreement of subject and verb:
      - ➤ Amounts may be singular or plural
      - ➤ Words ending in *-ics* as subjects may be singular or plural
    - Recognizing and diagramming nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address, and appositives
    - Gerunds
    - ➤ Gerund phrases
      - ➤ Diagramming gerund phrases
    - Infinitives
    - ➤ Infinitive phrases
      - ➤ Diagramming infinitive phrases
    - ➤ Noun clauses
      - ➤ Diagramming noun clauses
  - Pronouns:
    - Antecedents
    - Recognizing personal, interrogative, demonstrative, indefinite, compound (intensive and reflexive), relative
    - Keeping agreement of verbs and indefinite pronoun subjects
    - ➤ Making pronouns agree with their antecedents in number and in gender
    - Nominative case:
      - For subjects, predicate nominatives, appositives of subjects, and appositives of predicate nominatives
      - ➤ For appositives to subjects and appositives to predicate nominatives
    - Objective case:
      - For direct objects, indirect objects, and objects of prepositions and for appositives of direct objects, indirect objects, objects of prepositions
      - ➤ For appositives to direct objects, indirect objects, objects of prepositions
    - Possessive case
    - ➤ Using correct case for *who, whom, whoever,* and *whomever* and in incomplete clauses beginning with *than* or *as*
    - ➤ Avoid pronoun usage problems: double subject, possessive case before a gerund
  - Adjectives:
    - Recognizing and diagramming adjectives:
      - Participles and proper adjectives
      - ➤ Infinitives as adjectives
    - Distinguishing adjectives from nouns and pronouns
    - Recognizing and diagramming predicate adjectives:
      - Diagramming compound verbs with one predicate adjective and separate predicate adjectives
    - Using and diagramming:
      - Prepositional and participial phrases as adjectives
      - ➤ Infinitive phrases as adjectives
      - Adjective clauses
    - Placing and punctuating adjective modifiers
    - Using adjectives in comparison
    - Avoiding double comparison and double negatives:
      - ➤ Supplying necessary words in comparison
      - ➤ Differentiating between *this/that* and *these/those*
  - Adverbs:
    - Recognizing and digramming adverbs
    - ➤ Infinitives as adverbs
    - Distinguishing adverbs from adjectives
    - Using and diagramming:
      - Prepositional phrases as adverbs
      - ➤ Infinitive phrases as adverbs
      - Adverb clauses:
        - ➤ Elliptical clauses
    - Correct placement of adverb modifiers
    - ➤ Distinguishing dependent clauses
    - Using adverbs in comparison
  - Prepositions:
    - Recognizing prepositions, prepositional phrases, and objects of prepositions
    - Distinguishing between prepositions and adverbs
    - Using prepositions correctly
  - Conjunctions: recognizing coordinating, correlative, and subordinating conjunctions
  - Interjections
  - ➤ Diagramming interjections
  - Sentence structure:
    - Defining dependent and independent clauses
    - Recognizing and diagramming simple, compound, complex, and compound-complex sentences

Grammar & Composition cont. p. 139

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

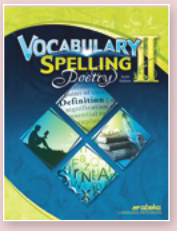
Grammar *cont.*

- Improving writing style
  - Correct a choppy or monotonous style:
    - Begin sentence with an adverb, adverb phrase, adverb clause, or participial phrase
    - ➤ Begin sentence with an adjective, participle, prepositional phrase, or infinitive phrase
    - Exact and vivid words

Composition

- Manuscript form: abbreviations, numbers, titles, hyphenation
- The Writing Process: plan, write, rewrite, edit
- Paragraphs:
  - Topic sentence
  - Summarizing sentence
  - Paragraph development
    - Development by examples, incidents, and reasons
  - Paragraph unity
  - Paragraph coherence: chronological order, order of importance, transitional expressions, space order, pronoun reference, and repetition
- Summaries: short and long works
- Essay answer (expanded)
- Outline
  - Topical and sentence outlines
  - Format of outline
  - Parallelism in an outline
  - Steps to preparing an outline
- Book Reports
  - Preparing
    - Written book reports including introduction, body, conclusion
    - Oral book reports: written preparation and oral presentation
- ➤ Creative dialogue: characters, setting, tone, dialogue, plot
- ➤ Persuasive essay: analyze audience, crafting argument, expanded thesis, providing supports
- Writing descriptions: type sketch, place
  - Steps: point of view, careful selection of details, arrangement of details, use of exact nouns and verbs
- Research paper:
  - Planning the paper: selecting subject, finding sources, writing bibliographies, making a preliminary outline, taking notes, writing notes, avoiding plagiarism
  - Writing the paper: introduction, body
  - Using parenthetical citations
  - Rewriting the paper: check organization, introduction, conclusion, unity, coherence, and citations
  - Editing the paper: check each paragraph, sentence, word; capitalization and punctuation
  - Preparing works cited page
  - Typing the paper
  - Documentation for research paper
- ➤ Writing poetry: limerick, didactic cinquain
  - ➤ Rhyme scheme, rhythm
- ➤ String-a-long Stories
- ➤ Personal narrative essay
- ➤ Writing captions
- The Library: Dewey Decimal System, Library of Congress classification system, using the catalog and reference section.

ENGLISH: *Vocabulary, Spelling, Poetry*



Vocabulary, Spelling, Poetry II emphasizes using an expanded vocabulary and applying spelling rules when analyzing challenging words. The goals of poetry memorization and recitation are an enjoyment and appreciation of poetic beauty and excellence.

Added Enrichment

- Spelling and vocabulary:
  - Spelling and vocabulary lists (28) including review list at end of each quarter:
    - Spelling words (560)
    - Vocabulary words (280)
    - Organized by spelling rules, suffixes, homonyms, compound words, and commonly misspelled words
    - Application exercises (56)
    - Review exercises (29)
  - Each vocabulary word includes:
    - Pronunciation, part of speech
    - Synonyms, antonyms, related forms
    - Definition, sample sentence
  - Pronunciation key
  - Teacher resource: vocabulary mastery sentences
- Poetry teacher resource: introductions for each poem

Evaluation

- Spelling and vocabulary quizzes:
  - Weekly (28)
  - Quarterly review (1 each quarter; each counts as 2 quiz grades)
- Poetry quizzes:
  - Written (7)
  - Oral (2)

➤ **RED** *indicates first introduction of content.*

Spelling & Vocabulary Skills Development

- ➤ Master spelling and vocabulary lists including:
  - ➤ Vocabulary words and definitions
  - ➤ Words that follow the spelling rules
  - ➤ Commonly misspelled words
  - ➤ Homonyms
- Use vocabulary words in sentences and in proper context
- Memorize vocabulary definitions
- Be able to identify commonly misspelled words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- Learn:
  - Synonyms and antonyms of vocabulary words

Vocabulary, Spelling, Poetry cont. p. 140

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Vocabulary, Spelling, Poetry* *cont.*

Spelling & Vocabulary Skills Development *cont.*

- To distinguish between homophones
- Practical spelling tips and suggestions by studying Keys to Good Spelling
- Spelling rules:
  - Use *i* before *e*, except after *c*, or when sounded like long *a*
  - Double a final consonant before adding a suffix beginning with a vowel
  - Change *y* to *i* when adding suffixes
  - Drop the silent *e* before adding a suffix beginning with a vowel
  - Learn exceptions to the spelling rules
  - Creating a compound word doesn't change the spelling of the two parts
  - Adding a prefix to a word doesn't change the word's spelling

Poetry Skills Development

› Memorize 9 lyrical poems

- Develop appreciation of poetry
- Lay foundation for future literature study
- Perform in front of an audience
- Recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

ENGLISH: *Literature*



Of Places uses young people's interest in other places to teach Christian character traits such as compassion, courage, and sacrifice. Not only will students gain exposure to people of different ages, nationalities, races, cultures, and economic levels through a variety of literary selections, but they will also learn to enjoy reading wholesome literature. Many of the selections in *Of Places* were written by famous authors and are well-known classics that are an important part of a student's education. *Of Places* features excerpts from classics such as *A Tale of Two Cities, The Jungle Book, Ben Hur, The Hiding Place,* and *The Legend of Sleepy Hollow.*

Literary Value

- 96 authors, including well-known authors such as Emily Dickinson, Mark Twain, Carl Sandburg, Booker T. Washington, and Nathaniel Hawthorne
- Prose selections (55), poems (57), and plays (3)
- Character-building themes such as personal sacrifice, humility, conquering sin, and hard-work ethics
- Literary terms such as the dramatic structure, irony, tone, dialect, metaphor, and assonance and consonance

Added Enrichment

- Footnotes define and explain unfamiliar words
- Comprehension and discussion questions after selections
- Character-building quotations and verses
- Introductory paragraphs for interest and background information
- Author biographies and photos for imporant authors to know
- Suggested compositions (descriptions, summaries, poems, narratives, and imaginative stories)

Evaluation

- Speed and comprehension quizzes (12)
- Homework reading quizzes (17)
- Tests (12), quarter exams (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Reading Skills Development

- Develop skills in reading speed and comprehension
- Further develop oral reading skills
- Be able to identify significant quotations and the selections in which they are featured
- Increase vocabulary
- Recognize basic literary devices in the selections

Comprehension, Discussion & Analysis Skills Development

- Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- Apply literary devices throughout the text
- Build appreciation for good literature and a love of reading

MATHEMATICS: *Pre-Algebra*



Pre-Algebra presents a brief yet complete review of arithmetic with applications to daily life. Once grounded in arithmetic, students can advance to other branches of mathematics. The topics of geometry, algebra, probability, statistics, and radicals are expanded, and trigonometry and systems of equations are introduced. These topics provide the foundation students need to enjoy success in future mathematics courses.

Practice and review problems in each lesson give sufficient opportunity for students to develop and maintain their skills while learning to work quickly and accurately. Word problems and problem-solving strategies throughout the text ensure that students can apply their mathematical skills to everyday situations and encourage students to connect varying types of mathematical knowledge. Level Up sections allow for further expansion of the concepts covered.

Features

- Flexible pacing options in curriculum: Level Up sections (32)
- Review exercises in every section (79)
- Mid-chapter reviews (17)
- Chapter reviews (12)
- Nine-weeks reviews (2)
- Semester review
- Final review

Evaluation

- Quizzes (44)
- Tests (8)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Numbers

- Arabic system
- Place value
  - Decimal system/powers of ten
  - Whole numbers up to 100 millions place
  - Decimals up to ten thousandths place
- Rounding: whole numbers, decimals, money
- Types of numbers
  - Counting (natural), whole, positive, negative, integer
  - Real
  - Rational/irrational numbers
  - Absolute value
- Comparing numbers
  - ➤ Law of trichotomy
- Number line
- Scientific Notation
  - Standard form
  - ➤ Metric: large, small
- Sequences, numerical
  - Arithmetic, geometric
  - Common difference
  - Common ratio
  - Finding the next term
  - ➤ Increasing difference
  - ➤ Exponential
- Sequences, visual

Factoring

- Rules of divisibility
- Prime Factoring
  - Prime/Composite numbers
  - Prime to each other
  - Fundamental theorem of arithmetic
  - Division by primes/Factor Tree
- Greatest common factor
- Least common multiple
- Exponent/base/power
- Factorial

Arithmetic

- Estimation
- Order of operation
  - Parentheses
  - Brackets, braces, fraction bar
- Addition
  - Addend, sum, annex
  - Whole numbers, fractions, decimals
  - Signed numbers
  - Additive inverse
  - ➤ Scientific notation
- Subtraction
  - Minuend, subtrahend, difference
  - Whole numbers, fractions, decimals
  - Signed numbers
  - ➤ Scientific notation
- Multiplication
  - Factor, partial product, product
  - Whole numbers, fractions, decimals
  - Powers of ten
  - Signed numbers
  - By zero
  - ➤ Scientific notation
- Division
  - Dividend, divisor, quotient, remainder
  - Whole numbers, fractions, decimals
  - Signed numbers
  - Powers of ten
  - ➤ Scientific notation
- Word problems
  - Problem Solving Strategies
- Properties of arithmetic
  - Commutative
  - Associative
  - Distributive
  - Applying properties
  - Estimation

Pre-Algebra cont. p. 142

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Pre-Algebra* *cont.*

Fractions
- Numerator, denominator
- Types:
  - Proper, improper, mixed number
  - Complex, reciprocal
- Addition, subtraction, multiplication, division
  - Least common denominator
- Simplifying complex fractions
- Changing a fraction to a decimal
- Word problems
- Ratios
  - Antecedent, consequent
  - Expressing/reading
  - Word problems

Decimals
- Types:
  - Terminating, repeating
  - Rational, irrational
- Changing a decimal to a fraction

Percent, Percentage, Base
- Expressing:
  - Percent as a decimal
  - Decimal as a percent
  - Fraction as a percent
  - Percent as a fraction
  - Fractional percent as a decimal
- Percentage
  - Simple interest
  - Discount and sale price
  - More or less in percent
- Percent
  - Rate of discount
  - Percent of change
- Base

Measures
- Linear
  - U.S. customary: inch, foot, yard, mile
  - Metric: millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer
- Capacity
  - U.S. customary: fluid ounce, cup, pint, quart, gallon, peck, bushel, teaspoon, tablespoon
  - Metric: milliliter, centiliter, deciliter, liter, decaliter, hectoliter, kiloliter
- Weight
  - U.S. customary: ounce, pound, ton
- Mass:
  - Metric: milligram, centigram, decigram, gram, decagram, hectogram, kilogram
- Historical Measures
  - Linear: cubit, span, palm, finger
  - Capacity: log, hin, bath, homer, measure, cor, ephah, omer
  - Weight: shekel, talent
  - Money: talent (gold), quadran (farthing), shekel (silver), denarius (penny), lepton (mite)
- Converting between U.S. customary measures
  - Single conversion factor
  - Multiple conversion factors
- Converting between metric measures
- Converting between square measures/cubic measures
- Time
  - Second, minute, hour, day, week, month, year, decade, score of years, century, millennium
  - solar year, calendar year, leap year
  - 24-hour time
  - Elapsed time
- Mixed measures
  - Express a mixed measure as a single measure
  - Add, subtract, multiply, divide
- Dimensional analysis
  - Express conversion factor as a ratio
  - Convert between U.S. customary or time measures
- Precision
- Accuracy
- Significant digits

Equations/Inequalities
- Solving, isolating
- Inverse operation
- Solving equations
  - Addition property of equality
  - Multiplication property of equality
  - Both properties
  - Eliminating fractions/decimals
  - Conditional, identity, contradiction
- Word problems
  - Addition property of equality
  - Multiplication property of equality
  - Both properties
  - With multiple unknowns
  - Mixture problems
- Proportions
  - Means, extremes
  - Fundamental property of proportions:
    - Cross multiplication
    - Scale drawings, maps
    - Word problems
- Similarity
  - Similar polygons
  - Word problems
- Pure quadratic equation
- Pure cubic equations
- Pythagorean theorem
  - Hypotenuse, leg
  - Finding hypotenuse, leg
  - Testing triangles
  - Distance on Cartesian plane
  - Word problems
- Inequality graphing
  - $<, >, \leq, \geq, \neq$
  - Open dot, closed dot
  - Solution
  - Compound inequality
- Solving inequalities
  - Addition property of inequality
  - Multiplication property of inequality
  - Both properties
- Compound inequalities
- Inequality word problems

Pre-Algebra cont. p. 143

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Pre-Algebra* *cont.*

Geometry

- Plane figure notation
- Plane figures
  - Plane, point, line, line segment, ray, angle
  - Intersecting, parallel, or perpendicular lines
- Polygon, closed figures
  - Side, vertex
  - Triangle, pentagon, hexagon, octagon, heptagon, nonagon, decagon
  - Quadrilateral, rectangle, square, rhombus, trapezoid
  - Regular, equilateral, equiangular
  - Similar polygons
- Congruent polygons
- ➤ SSS, SAS, ASA
- Line symmetry
- ➤ Rotational, symmetry
- ➤ Asymmetrical
- Perimeter: polygon, rectangle, square, any polygon with equal sides, unknown lengths
- Angles: acute, obtuse, right, straight, reflex
- Pairs of angles: vertical, adjacent, complementary, supplementary
- ➤ Transversal
  - ➤ Alternate interior, alternate exterior, corresponding
  - ➤ Parallel lines
- Measuring and drawing angles with a protractor
- ➤ Constructing equal line segments
- Constructing equal angles
- Triangles: acute, obtuse, right, equiangular, equilateral, isosceles, scalene
- Drawing triangles
  - ➤ ASA, SAS
- Triangles formed: 0, 1, 2, or infinitely many
  - Ambiguous case
  - ➤ Constructing triangles
  - ➤ SAS, ASA, SSS
- Circles
  - Center, radius, diameter, arc, semicircle, chord, central angle, subtended, sector
  - Sum of central angles: 360°
- Circumference with radius or diameter
- Area
  - rectangle, square, parallelogram, triangle, circle, trapezoid
  - using a grid and scale
  - Complex figures using addition or subtraction
- ➤ Polyhedra
  - Face, edge, base
  - Prisms, pyramids
  - ➤ Nets
- ➤ Three dimensional curved figures
  - Cylinder, cone, sphere, torus
  - Rectangular prism, cube, triangular prism, square pyramid, cylinder, cone, sphere
- Surface area
  - Rectangular prism, cube, square pyramid, cylinder, sphere
- Lateral surface area
  - Rectangular prism, cube, cylinder
- Volume
  - Rectangular prism, cube, cylinder, cone, pyramids, sphere
- Cross Sections

Graphing on the Cartesian Plane

- Cartesian plane, origin, *x*-axis, y-axis, quadrants, point, ordered pair
- *x*-intercept, *y*-intercept
- Plotting points
- Coordinate geometry, transformations
  - Translation
  - Preimage, image,
  - Rigid transformation
  - Reflection
  - ➤ Rotation: 90°, 180°
  - ➤ Dilation
  - ➤ Reduction, enlargement
  - ➤ Center of Dilation at origin
  - ➤ Superposition
- Slope
  - Rise, run,
  - Positive, negative, zero, undefined
  - Parallel and perpendicular slopes
- Graphing a line
  - Using two points
  - Using a point and a slope
  - Using a table of values
  - Using slope-intercept form
  - ➤ Writing equation from graph
- Linear equations
  - Input, output, independent variable, dependent variable, equation
  - Slope-intercept form
- Direct Variation
  - Constant of variation
  - Proportional/nonproportional
  - Word problems
- ➤ Functions
  - ➤ Relations
  - ➤ Domain, range
  - ➤ Mapping diagram
  - ➤ Vertical line test
  - ➤ Function notation
  - ➤ Evaluation
  - ➤ Linear, nonlinear
  - ➤ Increasing, decreasing
  - ➤ Continuous, discrete
  - ➤ Comparing functions by graphing
- ➤ Parabolas
  - ➤ Nonlinear
  - ➤ Graphing by tables

Probability and Statistics

- Counting
  - Outcome
  - ➤ Sample space
  - Exhaustive list, tree diagram
  - Fundamental theorem of counting
  - ➤ Permutation
- Basic probability
  - Outcome, event,
- Properties of probability
  - Each probability $0 \leq x \leq 1$
  - Sum = 1
  - Complement

Pre-Algebra cont. p. 144

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Pre-Algebra* *cont.*

Probability and Statistics *cont.*

- Compound probability
  - Compound events
  - Mutually exclusive
  - Independent
  - Dependent
- Theoretical probability
- Experimental probability
- Relative frequency table
- One way, two way
- Data, statistic, statistics
- Frequency table
- Population, sample, random sample
- Measures of center: Mean, median, mode
  - Range
  - Outliers, sensitive
  - Ranked data
  - Dot plot

Statistical Representation

- Chart title, scale, category label, axis title, major/minor gridlines, legend
- Bar graph, stacked bar graph
  - Interpreting
- Circle graph
  - Interpreting
- Box-and-whisker plot
  - Dispersion, range
  - Five-number summary
  - Finding five-number summary of data
  - Minimum, first quartile, median, third quartile, maximum
  - Interpreting/constructing
  - Comparing two plots
- Stem-and-leaf plot
  - Stem, leaf, class
  - Interpreting/constructing
- Histogram
  - Class, frequency
  - Interpreting/constructing
- Line graph
  - Comparing two lines on the same graph
  - Interpreting
  - Straight, curved, or broken

➤ Scatter plots
  ➤ Association: positive, negative, none
  ➤ Clustering, outlier
➤ Trend line
  ➤ Finding the equation
  ➤ Interpolation, extrapolation

Algebra

- Variable, constant
- Notation
  - Raised dot, side-by-side, parentheses
  - Fraction bar
- Factors
  - Numerical coefficient
- Term
  - Constant term
  - Variable term
- Polynomial
  - Monomial, binomial, trinomial
- Evaluation
- Algebraic translation
- Polynomial arithmetic
  - Combining like terms
  - Multiplying/dividing like bases
  - Power rule, quotient rule
  - Negative exponents
  - Raising a power to a power, product to a power, and quotient to a power
  - Multiplying/dividing monomials
  - Multiplying a polynomial by a monomial
  - ➤ Multiplying binomials
  - ➤ FOIL
  - Dividing a polynomial by a monomial
  - Factoring out a monomial
  - ➤ Factoring by grouping

Radicals

- Perfect square, perfect cube
- Radical symbol, index (indices), radicand
- Square root, cube root
- Expressing a radical as a fractional exponent
- Finding rational roots using fractional exponents
- Estimating irrational roots

➤ Product rule for radicals
➤ Finding irrational roots
➤ Like radicals
➤ Addition

Trigonometry

➤ Sine, cosine, tangent
➤ Opposite, adjacent
➤ Formulas

System of Equations

➤ Solving: Graphing, substitution, elimination
➤ Solutions: one, infinitely many, none
➤ Lines: parallel, intersecting, coinciding
➤ System: consistent, inconsistent
➤ Equations: dependent, independent
➤ Writing repeating decimals as fractions

HISTORY & GEOGRAPHY: *U.S. History*



America: Land I Love presents American history from a biblical perspective. This textbook uses biographical accounts to illustrate that history traces God's working through people to accomplish His will. As part of this course, students will also study the geography of the Western Hemisphere and the functions of the federal, state, and local governments.

Added Enrichment

- Special feature boxes (60)
  - Give in-depth study of people and events of history that have shaped the U.S.
  - Promote better understanding of U.S. history
  - Help students see lessons to be learned from history and grasp key concepts of U.S. history
- Lists: states and capitals, the U.S. presidents
- Maps correlating to text (46)

Evaluation

- Review quizzes (30)
- Document memorization quizzes (3)
- U.S. president quizzes (3)
- States and capitals quizzes (5)
- Reading quizzes (20)
- Current event reports (27; each presentation counts as quiz grade)
- Tests (8), Quarter exams (2)
- Semester exam, final exam
- *Geography Studies and Projects of the Western Hemisphere*
  - Includes historical and geographic projects (18; each counts as quiz grade)
  - Provides reference materials for each project
- *Civics Activity Book*
  - Study of national, state, and local governments
  - Includes an overview of the Constitution as well as studies of historical and cultural elements at the state and local levels

➤ **RED** *indicates first introduction of content.*

Exploration and Settlement in a New Land

- New world to explore
  - ➤ God's timing in discovery of America
  - Native American heritage
  - Christopher Columbus
  - Defeat of Spanish Armada
  - Spanish and French exploration
    - ➤ Robert Cavalier de La Salle
  - ➤ Spanish and French legacy
- First English colonies
  - English exploration and settlement
  - Jamestown
    - Failure of socialism and benefits of free enterprise
    - House of Burgesses
  - ➤ Scrooby Congregation in Leyden
  - Pilgrims and Plymouth
  - Representative government
    - ➤ General Court
  - Religious freedom
- New colonies
  - Advance of learning: Harvard College, Old Deluder Satan Act
  - Missionary efforts
    - ➤ Algonquian Bible
    - ➤ Mayhews
  - ➤ New England Confederation
  - King Philip's War
- Life in colonial America
  - Land of diversity in immigration, churches, and social classes
  - ➤ Advance of learning: schools, apprentices, and universities
  - Agriculture, landholdings, and slavery in the colonies
  - ➤ Contributions to science
  - ➤ Government in the colonies
- Preparation for independence
  - Great Awakening
    - ➤ Halfway Covenant
    - ➤ Results of Great Awakening
  - French and Indian War
    - ➤ Seven Years' War
  - ➤ Fundamental differences between the colonists and the British
  - British regulations on the colonists
    - ➤ Quartering Act, Declatory Act

Birth of the United States

- Home of the brave
  - Conflict with England
    - ➤ Townshend Acts
    - ➤ Committee of Correspondence
    - ➤ Intolerable Acts
  - First and Second Continental Congress:
    - ➤ Declaration and Resolves
    - ➤ Olive Branch Petition
  - Declaration of Independence
    - ➤ Richard Henry Lee
  - War for Independence
    - ➤ Help from Europe
    - Culper Spy Ring
    - ➤ Nathan Hale, Benedict Arnold, Joseph Brant
    - ➤ Battle of Kings Mountain
  - Treaty of Paris
- Land of the free
  - Articles of Confederation
  - Northwest Ordinance
  - Constitutional Convention
    - ➤ Virginia and New Jersey Plans, Connecticut Compromise
  - Structure and basis of American government
    - ➤ Balancing of powers
  - Bill of Rights
  - Presidents George Washington and John Adams
    - ➤ Cabinet
    - ➤ Rise of political parties
    - ➤ Jay Treaty and Pickney Treaty
    - ➤ Foreign affairs
    - Federalist Era
  - ➤ Constitution of the United States

U.S. History cont. p. 146

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *U.S. History* *cont.*

Building an American Character

- From the Appalachians to the Rockies
  - Daniel Boone
  - Northwest Territory
    - ➤ Treaty of Greenville
  - Louisiana Purchase
    - ➤ Zebulon Pike
  - War of 1812
    - ➤ Impressment and Embargo Act
    - ➤ Battles: Tippecanoe, Lake Erie, Thames River, Horseshoe Bend
    - ➤ Treaty of Ghent
  - Expansion
    - Acquisition of Florida
    - ➤ Missouri Compromise
    - ➤ Monroe Doctrine
- Jacksonian Era
  - President Andrew Jackson
    - ➤ States' rights
    - Trail of Tears, suffrage, and abolition
    - ➤ National Bank
  - ➤ Whig Party
  - ➤ Relations with Britain
- Innovation and inventions
  - Improved transportation and communication
  - Agricultural and industrial advancements
  - Christian influence on industry
  - ➤ Medicine
- Revival, education, and culture
  - Second Great Awakening
    - Circuit riders and camp meetings
    - Charles Finney
    - ➤ Other religious movements
  - Reform
    - Foreign missions movement
    - ➤ Reform movements
  - Education
    - Traditional education
    - American textbooks: *Blue-Backed Speller* and *McGuffey's Readers*
    - ➤ Sequoya
    - ➤ Public education: Horace Mann's normal schools
    - ➤ Higher education: University of North Carolina, Oberlin College, Wesleyan College
  - Culture
    - Literature, music, art
    - ➤ Romantic Era, John James Audubon, Augustus Washington
  - ➤ Life in the nineteenth century
- Expansion into the West
  - The Republic of Texas
  - Appeal of Oregon
    - ➤ Jedediah Smith and James Beckworth
    - Marcus Whitman
    - The Oregon Trail
    - ➤ John McLoughlin
  - The Mexican War
    - ➤ Bear Flag Revolt
    - ➤ Treaty of Guadalupe Hidalgo
  - California and the gold rush
    - Gadsden Purchase

Times of Testing and Triumph

- Civil War and Reconstruction
  - States' rights
  - Slavery
    - ➤ Dred Scott Case
  - Abraham Lincoln
  - Civil War
    - ➤ North and South differences
    - ➤ Anaconda Plan
    - ➤ Battles: Shiloh, Antietam, Fredericksburg, Chancellorsville, Chickamauga, Chattanooga
    - ➤ People: Farragut, McClellan, Meade
    - ➤ Cherokee Mounted Rifles
    - ➤ Financing the war
  - ➤ Reconstruction Era
    - ➤ Samuel C. Armstrong
    - Booker T. Washington, Hiram Rhodes Revels
- Age of Industry
  - Bell, Edison, Carver
  - ➤ Latimer, Sholes, Eastman
  - ➤ Wonders of technology: Brooklyn Bridge, Statue of Liberty, skyscrapers
  - ➤ Advances in medicine
  - Entrepreneurs
    - Carnegie, Rockefeller
    - ➤ Lyman Stewart
- Gilded Age
  - ➤ Immigration
  - Settlement of the Great Plains
    - ➤ Homestead Act, Dawes Act
  - ➤ Business and labor reform
    - ➤ Populist Movement
  - Presidencies of Garfield, Cleveland, Harrison, and McKinley
  - ➤ Evangelism and social reform
  - ➤ Atlanta Compromise
  - ➤ Literature and art of the Gilded Age
- Into the twentieth century
  - Spanish-American War
    - ➤ Venezuelan Boundary Dispute, de Lôme letter
    - ➤ Platt Amendment
  - U.S. territorial acquisitions
  - ➤ Progressive Era
    - ➤ Presidents Roosevelt, Taft, Wilson
  - ➤ Philosophies of the late nineteenth century

Times of Challenge and Promise

- In war and in peace
  - World War I
    - Selective Service Act
    - ➤ Battles: Cantigny, Marne, Belleau Wood, St. Mihiel, Argonne Forest
    - ➤ People: Pershing, Rickenbacker, York
    - ➤ Fourteen Points
  - Roaring Twenties
    - ➤ Age of the automobile and airplane
    - ➤ Culture
    - ➤ Tulsa Race Massacre
  - Religious and social reform
    - ➤ Billy Sunday and Prohibition
    - Evolution: Scopes Trial

U.S. History cont. p. 147

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *U.S. History* *cont.*

Times of Challenge and Promise *cont.*

- Presidents Harding and Coolidge
  - ➤ Foreign affairs
- ➤ Rise of big government
- ➤ Great Depression
  - ➤ President Herbert Hoover
  - ➤ Success of private relief
- ➤ President Franklin D. Roosevelt
- ➤ New Deal and rise of socialism in America
- A world at war
  - Steps to World War II
  - World War II in Europe and Asia
    - ➤ Lend-Lease Act
    - ➤ War efforts
    - ➤ Doolittle Raid
    - ➤ Fighting Red Tails
  - Cold War
    - Communism
    - ➤ Taft-Hartley Act
  - Korean War
    - ➤ Pusan Perimeter
- Postwar America
  - ➤ Progress and prosperity in the 1950s
  - President Dwight D. Eisenhower
    - ➤ McCarthy Era
  - ➤ President John F. Kennedy and the New Frontier
  - Civil rights movement
- A time of testing
  - ➤ Testing traditional values
  - President Lyndon B. Johnson and the Great Society
    - ➤ Civil Rights Act of 1964
  - Vietnam War
    - ➤ Tet Offensive
  - Presidents Nixon, Ford, and Carter
    - ➤ SALT talks
- Eve of the new millennium
  - President Ronald Reagan
    - Conservative movement of the 1980s
    - ➤ Thomas Sowell
    - ➤ Foreign affairs
    - ➤ Iran-Contra hearings
  - Information Age
  - End of Cold War
  - President George Bush
    - Persian Gulf War
    - ➤ Growing national debt
  - President Bill Clinton
    - ➤ Foreign affairs
    - ➤ Threats to America
- Into the new millennium
  - President George W. Bush
  - 9/11 and the War on Terror
    - ➤ Department of Homeland Security
    - Operation Iraqi Freedom, Saddam Hussein
  - Education, elections, appointments
  - ➤ Secure Fence Act
  - President Barack Obama
    - ➤ Affordable Care Act
    - Space exploration
    - ➤ Foreign affairs
  - Challenges and opportunities
  - President Donald Trump
    - Supreme Court appointments
    - ➤ American Health Care Act, Tax Cut and Job Act
    - ➤ Foreign affairs
    - Space Force
  - The COVID-19 Pandemic
    - ➤ WHO, CDC
    - ➤ Economic, political, social effects of COVID regulations
  - President Joe Biden
    - Breach at the Capitol
    - ➤ American Rescue Plan Act
    - ➤ Foreign affairs

Geography

- The Western Hemisphere
- North America
- The Thirteen Original Colonies
- Canada
- The War for Independence
- United States (physical)
- Washington, D.C.
- Eastern United States
- Central United States
- Westward Expansion
- Western United States
- Civil War
- Pacific United States
- Mexico
- Central America
- The West Indies
- South America
- United States (political)

Civics

- A study of national, state, and local government
  - Symbols
  - Flag etiquette
  - Symbolism of the flag-folding ceremony
  - Historical documents
  - The Constitution at a glance
  - Location of states
  - Geography
  - History
  - Government
  - County
  - City/Town
  - State profiles (for use with State Studies)

Prayer Time

- Learn to pray for our nation and for government officials

SCIENCE: *Science: Earth & Space*



Science: Earth and Space lays a foundation for future study of the nonliving world. The text begins "from the ground up," starting with soil science and geology. Students learn how geology and the fossil record support the biblical record of a worldwide Flood—not the hypotheses of evolution.

The exploration of the seas includes studying currents, tides, and ocean floor. An investigation of the atmosphere and processes that cause weather includes overviews of several weather phenomena and of measuring and forecasting the weather.

The solar system, stars, and galaxies are examined as the creation of God; evolutionary hypotheses of solar-system formation are briefly discussed and shown to be scientifically unsound. Students learn about man's study and use of astronomy, including an overview of manned and unmanned spaceflight.

The text concludes with a study of environmental issues, thus teaching students to be good stewards of the natural resources God has provided.

Added Enrichment

- Feature boxes with activities, extra information, hands-on investigations for the classroom and at home
- Short articles highlighting God's design in creation (5)
- Science Investigations (17)
- Challenging homework questions designed to provoke thinking more deeply about concepts taught (47)
- Thought-provoking review exercises (69)
- Highlighted fun facts (154)
- Review activities to prepare for tests (28)

Evaluation

- Reading quizzes (21)
- Review quizzes (39)
- In class STEM project (counts as 4 quiz grades and 1 test grade)
- Tests (8), quarter exams (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Introduction to Science

- Using the scientific method:
  - Three main components; hypotheses, theories, and laws; six steps; types of variables; experimental design
  - ➤ Falsifiability
- ➤ Engineering design process—criteria, constraints, prototype
- Scientific reasoning—deductive and inductive reasoning:
  - ➤ Hypothetical proposition, affirming the antecedent, denying the consequent
  - ➤ Method of difference, repeatability, reproducibility, post hoc fallacy
- Scientific models

Pedology: Soil Science

- Characteristics of soil:
  - Organic and mineral materials, humus
  - Topsoil, subsoil, bedrock
  - ➤ Texture: sand, silt, clay, loam
  - ➤ Colors: Munsell charts
  - ➤ Soil pH: pH scale
- Soil nutrients—nutrients and primary plant food elements:
  - ➤ Fertilizer composition: phosphates, nitrogen, potassium
  - ➤ Nitrogen:
    - ➤ Nitrogen cycle, nitrogen compounds
    - ➤ Nitrogen-fixing bacteria
    - ➤ Nitrifying bacteria, denitrifying bacteria
  - ➤ Phosphorus: cell division, growth, plant maturity
  - ➤ Potassium: general health of plant and disease resistance
- Air and water in the soil:
  - ➤ Ground air: pore spaces
  - Groundwater:
    - ➤ Saturated, water table, artesian well
    - Aquifer, capillarity

Geology

- Structure of the earth:
  - Introduction to geology: defined
  - Crust—outer layer:
    - Covered with sediment
    - ➤ Oxygen, silicon, aluminum, iron
  - Mantle—middle layer:
    - ➤ Seismic waves, upper mantle, transition zone, lower mantle
    - Moho
  - Core:
    - Outer and inner core
    - ➤ Core-mantle boundary
  - Movements of crust:
    - Plates, plate tectonics
    - ➤ Lithosphere, asthenosphere
    - ➤ Development of plate tectonics theory
    - ➤ Relationship of plate tectonics to biblical record; catastrophic plate tectonics
    - ➤ Rodinia, Pangea, types of faults and folds
    - ➤ Mountains: volcanic, domed, folded, fault-block
- Earthquakes:
  - Earthquakes and tremors:
    - Tectonic earthquakes, tsunamis, aftershocks
    - Seismology, faulting, elastic rebound theory
    - San Andreas Fault, hypocenter, epicenter
  - Earthquake zones: circum-Pacific belt, Alpide belt
  - ➤ Earthquake waves: P waves, S waves, surface waves, seismograph, seismogram, locating an earthquake's epicenter, earthquake early warning
  - Earthquake strength:
    - ➤ Modified Mercalli Scale
    - Richter magnitude scale
    - ➤ Moment magnitude scale

Science: Earth & Space cont. p. 149

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Earth & Space* *cont.*

Geology *cont.*

- ➤ Studying earthquakes:
  - ➤ Provide information about earth's interior
  - ➤ San Andreas Fault Observatory at Depth
  - Reducing earthquake damage:
    - ➤ Fixed-base, base-isolated, and energy-dissipating systems
- Volcanoes:
  - Magma, magma chamber, cone
  - ➤ Volcanology
  - Types of volcanoes: cinder-cone, shield, composite, active, dormant, extinct
  - Location of volcanoes: Ring of Fire
  - Volcanic eruptions and ejecta:
    - ➤ Types of lava
    - Pyroclasts:
      - Volcanic ash, lapilli, volcanic blocks, volcanic bombs
      - ➤ Difference between volcanic blocks and volcanic bombs, pyroclastic flows
  - Volcanic structures:
    - Calderas
    - ➤ Lava tunnels
    - ➤ Igneous intrusions: dikes, sills, laccoliths, batholiths
- Introduction to minerals:
  - Study of minerals:
    - Mineralogy, crystals
    - ➤ Groups of minerals (halides, sulfides, sulfates, oxides, carbonates, phosphates, silicates); faces
  - Identifying minerals:
    - Surface color, streak color, luster, hardness, Mohs scale
    - Cleavage, acid test
    - ➤ Specific gravity, special properties (fluorescence, phosphoresence)
- Notable minerals:
  - Metals:
    - Ore, useful metals
    - ➤ Metallurgy, Bayer process, Hall-Héroult process
    - Iron, alloy, precious metals
    - ➤ Blast furnace, direct iron reduction
  - Gemstones:
    - Precious stones, diamond pipes, semiprecious stones
    - ➤ Simulant and synthetic gemstones
    - ➤ Methods of synthesizing: flame fusion process, pulled method, hydrothermal synthesis
- Rocks—petrology:
  - Igneous rocks:
    - Intrusive and extrusive rock
    - Coarse-grained, fine-grained
    - ➤ Porphyritic (mixed-textured), amorphous, porous
  - Sedimentary rocks:
    - ➤ Concretions, stratum, law of superposition
    - Mechanical sediments:
      - Conglomerate rock
      - ➤ Clastic sedimentary rock
    - Chemical sediments:
      - ➤ Precipitate, evaporites, salt domes
    - Organic sediments:
      - Fossil fuel, types of coal, bitumen, surface mining
      - Underground mining:
        - ➤ Longwall, continuous, and retreat mining
  - Metamorphic rocks:
    - Metamorphism:
      - ➤ Contact and regional metamorphism
    - Foliated and nonfoliated rocks
    - ➤ Characteristics of metamorphic rocks
- Weathering:
  - Physical weathering:
    - ➤ Ice wedging, exfoliation
  - Chemical weathering:
    - ➤ Causes, rate
- Erosion:
  - Erosion by rain:
    - ➤ Runoff, sheet erosion
    - Gullying
  - Erosion by rivers:
    - ➤ Headwaters, load, drainage system, drainage basin, drainage divide
    - ➤ Tributary, floodplain, levees, meanders, oxbow lake, alluvial fan
  - Erosion by groundwater:
    - Caverns, stalactite, stalagmite, column, sinkhole
    - ➤ Dripstone, karst regions
  - Erosion by the sea:
    - Beaches, sea caves
    - ➤ Bars, barrier islands, promontories, sea cliff, sea arches, sea stack
  - Erosion by glaciers:
    - ➤ Continental glaciers, ice caps, valley glaciers, crevasses
    - ➤ Cirque, arête, horn, fjord, striae, till, moraine, drumlins
    - ➤ Outwash, kettles, Ice Age
  - ➤ Erosion by wind:
    - ➤ Eolian processes, deflation, sand and dust storms, sand dunes
    - ➤ Crescentic, parabolic, and transverse dunes
    - ➤ Abrasion
  - ➤ Erosion by gravity:
    - ➤ Mass wasting, soil creep, mudflows
    - ➤ Avalanche, landslides, rockfall
  - Preventing erosion:
    - Terracing
    - ➤ Strip-cropping, breakwaters

Interpreting the Fossil Record

- Conflicting views of the beginning:
  - Special creation, evolution:
    - ➤ Big bang, theistic evolution
  - ➤ Limitations of geology: principle of uniformity
  - ➤ Geology and the Genesis Flood
  - Uniformitarianism: Charles Lyell, problems with, Charles Darwin
  - ➤ Catastrophism: Georges Cuvier
- Paleontology:
  - Fossil formation
  - ➤ Geologic column:
    - ➤ Eons, eras, periods, epochs, index fossils
    - ➤ Imaginary arrangement, circular reasoning, anomalies
  - ➤ Radiometric dating: carbon-14 dating
  - ➤ Biblical explanation of the fossil record
- ➤ Evidence of a flood:
  - ➤ Quick deposition: massive "graveyards," polystrate fossils, unconformity
  - ➤ Living fossils: coelacanth, stasis

Science: Earth & Space cont. p. 150

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Earth & Space* *cont.*

Interpreting the Fossil Record *cont.*

- Evidence against evolution:
  - ➤ "Missing links":
    - ➤ *Seymouria, Archaeopteryx, Tiktaalik*
  - ➤ Cambrian explosion
  - ➤ Impossibility of intermediates
  - Natural selection and intermediates
  - Punctuated equilibrium
- Evolution of man—a mistaken belief:
  - ➤ Man vs. ape: body structure, upright posture, cranial capacity
  - Questionable intermediates:
    - *Ramapithecus,* Neanderthal man
    - ➤ Australopithecines, Lucy, *Homo habilis,* Skull 1470
    - ➤ *Homo erectus,* Java man, Peking man, Cro-Magnon man
  - True origin of man: created in God's image

The Seas

- Water of the seas—oceanography:
  - Characteristics of seawater:
    - Composition, salinity
    - ➤ Color, temperature, density, hydrostatic pressure
    - ➤ Ocean Resources
  - ➤ Ice of the seas: sea ice, icebergs, ice shelf
- Movement of the seas:
  - Ocean currents:
    - ➤ Surface currents, gyre
    - Gulf Stream, Peru Current
    - ➤ Subsurface currents: density current, turbidity current
    - ➤ Upwelling, countercurrent
  - Waves and related phenomena:
    - Crest, trough
    - ➤ Period, whitecaps, ocean swells, breaker, surf
    - ➤ Undertow, longshore current, rip current
    - ➤ Tsunami formation, propagation, and warning systems
  - Tides:
    - High, low, spring, neap tides
    - ➤ Diurnal, semidiurnal, mixed semidiurnal
- Geography of the seas:
  - Continental margin:
    - Continental shelf, continental slope
    - ➤ Shelf break, continental rise, submarine canyons
- Deep ocean floor:
  - Seamount, atoll, lagoon, mid-ocean ridge
  - ➤ Abyssal plain, Mid-Atlantic Ridge, hadal zone
- Study of the seas:
  - Introduction to oceanography:
    - Matthew Maury
    - ➤ H.M.S. *Challenger*
  - Vessels of the oceanographer:
    - Submersibles
    - ➤ Research vessel, bathyscaphe
    - ➤ Deep Submergence Vehicles, remotely operated vehicle
    - Manned undersea laboratories
  - Equipment of the oceanographer:
    - ➤ Oceanographic buoys, drift bottles, profiling floats
    - ➤ Niskin bottles, rosette, gravity corer, piston corer
    - Sonar, scuba

The Atmosphere

- Introducing the atmosphere:
  - Atmospheric composition:
    - ➤ Homosphere, heterosphere
    - Composition of air, water vapor, ozone
  - Layers by temperature:
    - Troposphere:
      - ➤ Temperature gradient, tropopause
    - Stratosphere, ozone layer:
      - ➤ Types of ultraviolet radiation
    - Mesosphere, thermosphere, exosphere:
      - ➤ Mesopause, thermopause
  - Ionosphere:
    - ➤ Cosmic rays, plasma
  - Magnetosphere:
    - Poles, magnetic field, auroras
    - ➤ Van Allen radiation belts
  - Atmospheric pressure: weight of air
- Heat and the atmosphere:
  - Balanced system:
    - ➤ Radiation, albedo
    - Insolation:
      - ➤ Factors affecting insolation
      - ➤ Perihelion, aphelion, energy budget
    - Greenhouse effect:
      - ➤ Greenhouse gases
  - Heat distribution in the atmosphere:
    - ➤ Conduction, convection, convection currents
    - Updrafts, downdrafts
    - ➤ Adiabatic heating and cooling
- Patterns of circulation:
  - Circulating currents:
    - Low pressure, high pressure, global winds
    - ➤ Convection cell, Hadley cell
  - Coriolis effect:
    - ➤ Inertia, cyclone, anticyclone
  - Earth's wind zones:
    - ➤ Intertropical Convergence Zone (ITCZ or doldrums), horse latitudes
    - Trade winds, polar easterlies, prevailing westerlies
    - ➤ Jet streams, Rossby waves
  - Local winds:
    - ➤ Monsoon effect
    - ➤ Sea, lake, land, and forest breezes
    - ➤ Anabatic, katabatic, fall winds
    - ➤ Foehns, Santa Ana winds

Weather

- Understanding weather—climate, meteorology:
  - Factors causing weather: heat energy, uneven heat distribution, water vapor
  - Atmospheric water vapor:
    - Melting, freezing, precipitation, condensation
    - Saturated, relative humidity
    - Dew and frost points:
      - Dew, frozen dew, frost
      - ➤ Condensation nuclei, frost point, deposition, supercooled, freezing nuclei

Science: Earth & Space cont. p. 151

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Earth & Space* *cont.*

Weather *cont.*

- Clouds and fog:
  - Naming clouds:
    - Based on:
      - Shape
      - ➤ Height
    - Cumulus, stratus, cirrus, and variations of these three
    - ➤ Lenticular, contrails
  - Fog:
    - Radiation and steam fog
    - ➤ Mist; advection, upslope, and freezing fog
    - ➤ Smog, photochemical smog
  - Precipitation—hydrologic cycle
  - Liquid precipitation:
    - Rain, raindrops, snowflakes, drizzle, freezing rain
    - ➤ Bergeron-Findeisen process, collision-coalescence process
  - Solid precipitation:
    - Sleet, snow, dendrite, hail
    - ➤ Flurries, snow squall, blizzard, whiteout, glaze, rime
  - ➤ Drought: conditions for; agricultural, hydrological, and socioeconomic droughts
- Air masses:
  - Types of:
    - Maritime tropical, continental tropical
    - Maritime polar, continental polar, Arctic
    - ➤ Antarctic air-mass weather
  - Fronts and weather:
    - Warm and cold fronts
    - ➤ Stationary and occluded fronts
    - ➤ Frontal cyclones
- Thunderstorms, lightning, and tornadoes:
  - Thunderstorms:
    - ➤ Stable and unstable air, stages of development
    - ➤ Downbursts, cells, supercell
    - Squall line
  - Lightning:
    - Formation, stepped leader, thunder
    - ➤ Return stroke, dart leader
    - Types:
      - ➤ Negative and positive cloud-to-ground, hot lightning, ground-to-cloud, ball lightning
  - Tornadoes:
    - Formation, dangers
    - ➤ Mesocyclone, condensation funnel, occurrence
    - ➤ Enhanced Fujita scale, waterspout, dust devil
- Hurricanes:
  - ➤ Life of a hurricane: tropical cyclone, tropical disturbance
  - ➤ Cyclone categories:
    - ➤ Tropical depression, tropical storm
    - ➤ Saffir-Simpson Hurricane Wind Scale
  - ➤ Hurricane structure: eye, eye wall
  - Hurricane dangers:
    - Wind, inland flooding
    - ➤ Storm surge
- Measuring and forecasting weather:
  - Measuring basics:
    - Thermometer:
      - ➤ Maximum-minimum, bimetallic strip, and electrical thermometers; thermograph
    - Barometer:
      - Bar
      - ➤ Aneroid barometer, millibars
    - Hygrometer:
      - Psychrometer
      - ➤ Wet-bulb depression, hair hygrometer
    - Weather vane
    - ➤ Anemometer
    - ➤ Rain gauge, Stevenson Screen
  - Modern measurements:
    - ➤ Automated instruments, automatic weather stations
    - ➤ Transmissometer, visibility
    - Weather balloons:
      - ➤ Radiosonde
    - ➤ Sounding rocket, ceilometers
    - Radar, weather satellite
  - ➤ Summarizing weather conditions: surface weather charts, station model, isobars, isotherms
  - Predicting weather conditions: weather forecasts, supercomputers
  - Do-it-yourself forecasting: predictable patterns, analyzing clouds

Astronomy

- Solar System:
  - Structure of the solar system:
    - Orbit
    - ➤ Geocentric, Aristotle
    - Ptolemy
    - Copernicus, Galileo, Kepler
    - ➤ Heliocentric
  - Planetary motions:
    - Elliptical paths, Kepler's three laws of planetary motion
    - Astronomical units
  - Gravity and the solar system:
    - Sir Isaac Newton, law of universal gravitation
  - ➤ Origin of the solar system: Creation vs. nebular hypothesis
  - Interplanetary space: vacuum
  - Planets:
    - Mercury: speediest planet
    - Venus:
      - Earth's twin, morning and evening star
      - ➤ Retrograde
    - Earth:
      - Life-sustaining planet
      - Moon, satellite, lunar month, maria
      - ➤ Terrae, rays
      - Phases of the moon, solar eclipse, lunar eclipse
    - Mars: red planet, Phobos, Deimos, Tharsis Bulge, Olympus Mons
    - Jupiter:
      - Largest planet, Great Red Spot, Galilean satellites
    - Saturn:
      - Second-largest, "shepherd moons," Titan, Iapetus, Mimas, Phoebe
      - ➤ Enceladus
    - Uranus:
      - Retrograde rotation
      - ➤ Titania, Oberon, Miranda, Cordelia, Ophelia
    - Neptune: discovered mathematically before seen
  - ➤ Planets vs. dwarf planets: Pluto and moons, Eris

Science: Earth & Space cont. p. 152

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Earth & Space* *cont.*

Astronomy *cont.*

- Asteroids: asteroid belt, Ceres, Trojan asteroids, near-earth asteroids
- Comets:
  - ➤ Edmond Halley
  - Halley's comet, nucleus, coma, tail
  - ➤ Short-period comet, long-period comet
  - Kuiper belt
- Meteoroids: meteor, meteor shower, meteorites

- Constellations:
  - ➤ Celestial sphere:
    - ➤ Horizon, distance between objects, celestial poles
    - ➤ Celestial equator, circumpolar
    - Polaris, zodiac
  - ➤ Modern definition of *constellation,* asterisms
  - Seasonal constellations:
    - ➤ Spring constellations
    - ➤ Summer constellations: Lyra, Vega, Summer Triangle
    - ➤ Autumn and winter constellations
    - Great Square
  - Southern constellations: Centaurus and Crux
- Sun, stars, and galaxies:
  - Sun:
    - Core, photosphere, granule, sunspots
    - ➤ Supergranules
    - Chromosphere, spicules, solar flares, solar prominence
    - ➤ Transition region
    - Corona, solar wind
  - Stellar measurements:
    - Light-year
    - ➤ Parallax, stellar parallax, parsec
  - Star magnitude: apparent magnitude, absolute magnitude
  - Star categories:
    - Temperature and color, temperature and magnitude
    - ➤ Hertzsprung-Russell diagram
    - Giants, supergiants, main sequence, white dwarfs
    - ➤ Red dwarfs
  - Stars in groups:
    - Binary star, optical double
    - ➤ Open clusters, globular clusters
  - Stellar explosions:
    - Nova, supernova, pulsar
    - ➤ Neutron star
  - Galaxies:
    - Milky Way, clusters, Local Group, Andromeda galaxy
    - Superclusters
    - Spiral, barred, elliptical, and irregular galaxies
    - ➤ Lenticular galaxies
  - ➤ Quasars
  - Nebulae

Man & the Universe

- Instruments of astronomy:
  - Visible light astronomy:
    - Telescope, refracting telescope, objective
    - Eyepiece, reflecting telescope
    - ➤ Resolution
  - Spectroscopy:
    - Visible spectrum, spectroscope, spectrogram
      - ➤ Redshift, blueshift
  - Radio wave astronomy:
    - Radio telescopes
    - ➤ Interferometry
- Astronomy and time:
  - ➤ Meridian and transits: zenith, nadir, meridian, transit
  - Day and night:
    - ➤ Sidereal day
    - ➤ Apparent solar day, mean solar day, equation of time
    - Standard solar time, summer time
  - Longer times: lunar month, solar year, week
  - Calendars:
    - Gregorian
    - ➤ Julian, Jewish
  - Ecliptic and climates:
    - ➤ Equinox, precession of the equinoxes, solstice
    - Climate zones
  - Seasons:
    - ➤ Relationship to equinoxes and solstices; lengths
    - Causes
- History of spaceflight:
  - Rockets: solid-fuel rocket, Robert Goddard, liquid-fuel rocket, Wernher von Braun
  - Race to the moon:
    - Sputnik 1, Explorer 1
    - Yuri Gagarin, Alan Shepard, John Glenn, Valentina Tereshkova
    - Gemini and Apollo Programs, Saturn V, Neil Armstrong
  - Manned space stations: Salyut program, *Skylab, Mir,* International Space Station
  - Space shuttle
  - Spaceflight today:
    - ➤ Nations in space
    - Private space flights
- Orbits and satellites:
  - Objects in orbit:
    - ➤ Apogee, perigee
    - Geostationary orbit, polar orbit
    - ➤ Sun-synchronous orbits, Hohmann transfer orbit
  - Unmanned satellites:
    - Astronomical, communications, weather, navigational
    - Earth observation, military satellites, GPS
  - Unmanned space probes:
    - ➤ Escape velocity

Environmental Science

- Environment and pollution:
  - Introduction to environmental science:
    - Biotic and abiotic factors, biogeochemical cycles
    - ➤ Preservationists, conservationists
    - Pantheism
  - Pollution basics
  - ➤ Land pollution: landfill, reclaimed, waste-to-energy incinerator, syngas
  - ➤ Air pollution:
    - ➤ Primary and secondary pollutants, formation and dangers of temperature inversion
    - ➤ Clean Air Acts
  - ➤ Water pollution: point and non-point sources, coliform bacteria
- ➤ Global change:
  - ➤ Acid rain

Science: Earth & Space cont. p. 153

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Earth & Space* *cont.*

Environmental Science *cont.*

- ➤ Ozone depletion:
  - ➤ Rowland-Molina hypothesis, freons, halons
  - ➤ Ozone-depleting substances, Montreal Protocol
  - ➤ Hydrochlorofluorocarbons, chlorofluorocarbons
  - Global warming: anthropogenic global warming, Medieval Climate Optimum, Little Ice Age
- Managing our resources:
  - Biblical commands
  - Examining our resources:
    - ➤ Non-renewable and renewable resources
    - Sustainable development, environmental technology
    - ➤ Water reclamation
    - Recycling programs
- Fossil Fuels
  - Petroleum—fractional distillation
  - ➤ Natural gas
  - ➤ Managing fossil fuels—hydraulic fracturing
- Renewable energy:
  - Biomass energy
    - Biofuels:
      - Ethanol
      - ➤ Wood gas, biogas
      - ➤ Management
  - Solar energy:
    - ➤ Active and passive solar power, photovoltaic cells, concentrating solar power
  - Wind power:
    - ➤ Aerogenerator, wind farm
  - ➤ Hydroelectric power
  - ➤ Nuclear power:
    - ➤ Nuclear chemistry, nuclear fission, nuclear chain reaction
    - ➤ Nuclear reactor, breeder reactor

BIBLE: *Book of Acts* (one semester)



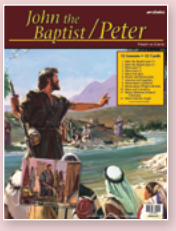
Bible 8 consists of two parts: *Book of Acts* and *Joshua and Judges.*

This first-semester course is designed to give students a basic overview of the life of Peter and Paul, the beginning of the church, and the spread of the gospel to the Gentiles and eventually to the world through Paul's missionary travels.

Through the *Book of Acts,* students may see the power of God at work in His willing servants. His servant Paul is a real person—a person with feelings just like anyone else. Yet Paul's reactions to the trials of life and his indomitable faith in the power of Christ separated him from the nominal Christian life. His life serves as an example for all believers to follow.

Evaluation

- Verses:
  - Verse quizzes (14)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - 9-weeks content exam (1)
  - Final content exam (1)









Lessons *129 Abeka Flash-a-Cards*

- John the Baptist/Peter (19 lessons)
- Crucifixion and Resurrection (16)
- Life of Paul Series 1 (14)
- Life of Paul Series 2 (21)

Music *44 songs*

- Hymns of the faith, choruses, holiday songs

Memory Work

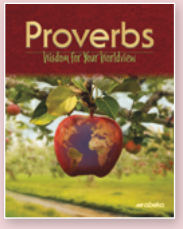
- Passages (14 containing 48 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

Bible cont. p. 154

BIBLE: *Proverbs* (one semester)



Bible 8 consists of two parts: Book of Acts and Proverbs.

The book of Proverbs gives us a guide for daily living as we develop a biblical worldview. This course begins with an in-depth look at the personification of Wisdom to learn about her character and instruction, leading us to a life characterized by wise choices. Well-known Bible examples such as Abraham, Ruth, Daniel, and the Proverbs 31 woman will show us why wise living is worth pursuing. This course also applies the "whatsoever things" principles from Philippians 4:8 to provide a topical study of the wisdom in Proverbs that informs our worldview. The study is enhanced with Grow in Wisdom prompts to encourage personal application of Scripture and Dig Deeper sections to provide further study of related topics.

Evaluation

- Verses:
  - Verse quizzes (15)
  - Quarter verses exam (1)
  - Final verses exam (1)
- Content:
  - Content quizzes (4)
  - Quarter content exam (1)
  - Quarter content exam (1)
  - Final content exam (1)

Lessons *68*

- An introduction to wisdom, the book of Proverbs and its purpose (8 lessons)
  - Solomon
- Wisdom's character and instruction teaches us to live wisely (21 lessons)
  - Abraham, David, Joseph
- Apply truth, honesty, justice, purity, loveliness, and a good report to worldview (25 lessons)
  - Daniel, Esther, Noah, Ruth, Samuel
- Additional *Dig Deeper* Topics
  - Biblical Worldview of Inspiration
  - Poetic Devices in Proverbs
  - Proverbs Literary Character Sketches
  - From Simple to Wise
  - Practicing Trust in God Publicly
  - Understanding False Views of Truth
  - Dangers of the Pursuit of Worldliness
  - Peer Pressure

Music *40 songs*

- Hymns of faith, choruses

Memory Work

- Passages (15 containing 56 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us
- Learn to pray Scripture

Additional Option

BIBLE: *Joshua & Judges* (one semester)



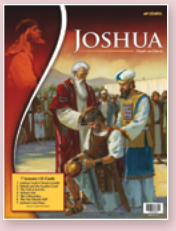


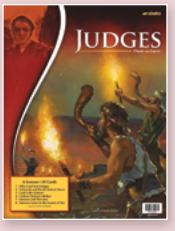
Joshua and Judges focuses on the nation of Israel after their triumphant exodus from Egypt. The exciting, dramatic account of the conquering of the Promised Land will remind the student of the power of God and the provision for His people. This course begins with the anointing of Joshua and ends with the rule of Israel's judges.

Evaluation

- Verses:
  - Verse quizzes (14)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - 9-weeks content exam (1)
  - Final content exam (1)















Lessons *154 Abeka Flash-a-Cards*

- Joshua (16 lessons)
- Judges (19)
- Ruth (5)
- Life of Samuel (9)
- Esther (8)
- Ezra and Nehemiah (15)

Music *40 songs*

- Hymns of the faith, holiday, choruses

Memory Work

- Passages (14 containing 44 total verses)

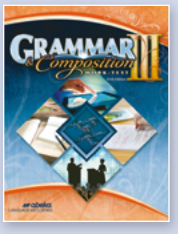
Sword Drill *85 verses*

- Old and New Testament

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

ENGLISH: *Grammar & Composition*



Two vital abilities, the ability to express one's ideas creatively as well as correctly and the ability to comprehend and interpret the written word skillfully, are built upon the elements studied in English 9. *Grammar and Composition III* provides foundational practice of proper grammar and develops the basic composition skills utilized in outlining, researching, and composing a variety of rhetorical expositions and creative writing.

Added Enrichment

- Review games
- Grammar Court procedures explained

Evaluation

- Grammar quizzes (26)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam
- Compositions:
  - Book reports: full (2), short (1), oral (1)
  - Paragraph (1)
  - Research paper (1)
- Optional (graded at teacher discretion):
  - Outline
  - Essays: short formal, full formal, comparison and contrast, literary
  - Literary dramatization
  - Short story

➤ **RED** *indicates first introduction of content.*

Grammar

- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things
      - Political and economic organizations and alliances
    - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection *O*
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period:
      - For declarative sentences and abbreviations
      - ➤ For indirect question and polite request
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - Participial phrase
        - Adjective and adverb clauses
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - Joined by:
        - Transitional words
        - Coordinating conjunction if clauses already contain commas
    - Between items in a series if the items contain commas
  - Colons:
    - Before a list of items
    - To introduce a formally announced statement or quotation
    - Between:
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
  - Italics:
    - For titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
    - For words, letters, numbers referred to as such
    - For foreign words or phrases
  - Hyphens:
    - To divide a word at the end of line
    - In compound numbers
    - In fractions used as adjectives
    - In prefixes before a proper noun or adjective
    - In compound adjectives before a noun
  - Quotation marks:
    - In a direct quotation
    - To enclose:
      - Titles of short poems, songs, chapters, articles, and other parts of books or magazines
      - A quoted passage of more than one paragraph: at the beginning of each paragraph and at the end of the last paragraph
  - Apostrophes:
    - To form:
      - Possessive case of nouns
      - Individual possession within a group
      - Possessive case of indefinite pronouns
    - To show omissions from words
    - With *s* to form plurals of letters, numbers, signs, and words used as words
  - Dashes:
    - After a series of words or phrases giving details about a statement that follows
    - To indicate an abrupt change or break in a sentence
    - To set off parenthetical elements or confidential comments
  - Parentheses:
    - To enclose:
      - Parenthetical elements
      - ➤ Brief confirmatory information

Grammar & Composition cont. p. 156

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

Grammar *cont.*

- The sentence:
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming compound subjects and verbs
  - Recognizing complements
  - Correcting fragments and run-on sentences:
    - Correcting run-ons by comma and coordinating conjunction
    - ➤ Correcting run-ons by semicolon or subordination
  - Sentence structure:
    - Defining dependent and independent clauses
    - Recognizing and diagramming simple, compound, complex, and compound-complex sentences
    - Recognizing noun clauses used as subjects of independent clauses
  - ➤ Consistency of subject, tense, or voice
- ➤ Improving communication
  - ➤ Conciseness and subordination
  - ➤ Business letters and memos
  - ➤ Proofreading skills
  - ➤ Effective listening
  - ➤ Avoiding gobbledygook
  - ➤ Word choice
  - ➤ Parallel structure
  - ➤ Presentations
  - Exact and vivid words
- Parts of speech:
  - Recognizing eight parts of speech
  - Verbs:
    - Recognizing action (transitive and intransitive), linking, and helping verbs
    - Distinguishing verbs from verbals: participles, gerunds, and infinitives
    - Using principal parts of verbs
    - Regular verb endings
    - Irregular verbs
    - Using correct principal parts
    - Verb tenses:
      - Progressive and emphatic forms
      - ➤ When to use the tenses
    - Using consistent verb tense
    - Active and passive voice
    - Mood: indicative, imperative, subjunctive
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
    - Use exact and vivid verbs
  - Nouns:
    - Recognizing nouns
      - Compound, common, proper, and collective
      - ➤ Concrete and abstract
    - Keeping agreement of subject and verb
    - Recognizing and diagramming nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address, and appositives
    - ➤ Using nominative absolutes
    - Using exact and vivid nouns
  - Pronouns:
    - Antecedents
    - Recognizing personal, interrogative, demonstrative, indefinite, compound, relative
    - Keeping agreement of verbs and indefinite pronoun subjects
    - Making pronouns agree with their antecedents in number and in gender:
      - ➤ Using expressions that agree with the object of the preposition such *as one of those who (which, that)*
    - Nominative case:
      - For subjects, predicate nominatives
      - For appositives of subjects, appositives of predicate nominatives, appositives to subjects, and appositives to predicate nominatives
    - Objective case:
      - For direct objects, indirect objects, objects of prepositions
      - For appositives of direct objects, indirect objects, objects of prepositions
      - For appositives to direct objects, indirect objects, objects of prepositions
    - Possessive case
    - Using correct case for *who, whom, whoever,* and *whomever* and in incomplete clauses beginning with *than* or *as*
    - Avoid pronoun usage problems: double subject, possessive case before a gerund
  - Adjectives:
    - Recognizing and diagramming adjectives: participles and proper adjectives and infinitives as adjectives
    - Distinguishing adjectives from nouns and pronouns
    - Recognizing and diagramming predicate adjectives
    - Using and diagramming:
      - Prepositional, participial, and infinitive phrases as adjectives
      - Adjective clauses
    - Placing and punctuating adjective modifiers
    - Using adjectives in comparison
    - Avoiding double comparison and double negatives
    - Using exact and vivid adjectives
  - Adverbs:
    - Recognizing and diagramming adverbs
    - Infinitives as adverbs
    - Distinguishing adverbs from adjectives
    - Using and diagramming:
      - Prepositional and infinitive phrases as adverbs
      - Adverb clauses
    - Correct placement of adverb modifiers
    - Distinguishing dependent clauses:
      - ➤ Advanced technique to determine dependent clauses as noun, adjective, or adverb
    - Using: adverbs in comparison, exact and vivid adverbs
  - Prepositions:
    - Recognizing prepositions, prepositional phrases, and objects of prepositions
    - Distinguishing between prepositions and adverbs
    - Using prepositions correctly

Grammar & Composition cont. p. 157

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

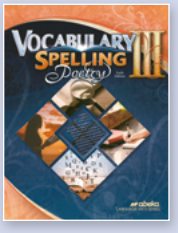
Grammar *cont.*

- Conjunctions:
  - Recognizing coordinating, correlative, and subordinating conjunctions
- Interjections:
  - Definition
  - Punctuation with interjections
  - ➤ Other parts of speech used as interjections
  - Diagramming interjections

Composition

- The Writing Process: plan, write, rewrite, edit
- Paragraph
  - Introduction to the paragraph
  - Paragraph structure
  - Paragraph unity
  - Paragraph coherence
- Essay answer
- Outline
  - Using proper outline form
  - Steps to preparing an outline
  - Making an outline
- ➤ Critical book reviews
  - ➤ Preparing written book reviews
  - ➤ Preparing short form book reviews
  - ➤ Giving oral book reviews
- Research paper:
  - Planning the paper: selecting subject, finding sources, writing bibliography cards, making a preliminary outline, taking notes, writing note cards, avoiding plagiarism
  - Writing the paper: introduction, body
  - Using parenthetical citations
  - Rewriting the paper: check organization, introduction, conclusion, unity, coherence, and citations
  - Editing the paper: check each paragraph, sentence, word; capitalization and punctuation
  - Preparing works cited page
  - Typing the paper
  - Documentation for research paper
- The Library: Dewey Decimal System, Library of Congress Classification System, using the catalog and reference section
- Writer's Corners
  - Crafting a thesis sentence
  - ➤ Rhetoric: persuasion by logic
  - ➤ Compare-contrast paragraph and essay
  - ➤ Literary dramatization
  - ➤ Short story
  - ➤ Literary essay

ENGLISH: *Vocabulary, Spelling, Poetry*



The lists of challenging words in *Vocabulary, Spelling, Poetry III* emphasize the application of several spelling rules, the addition of specific suffixes, and the necessity of learning frequently misspelled words. To expand students' vocabulary, words and definitions are taken from *Themes in Literature* and other ninth-grade subjects. The goals of poetry recitation and memorization are an enjoyment and appreciation of poetic beauty and excellence.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (32) including review list at end of each 9 weeks:
    - Spelling words (560)
    - Vocabulary words (336)
    - Organized by spelling rules, suffixes and prefixes, compound words, homophones, and commonly misspelled words
    - Practice exercises (140)
  - Each vocabulary word includes:
    - Pronunciation, part of speech
    - Definition, sample sentence
    - Synonym, antonym, related form
  - Pronunciation key
  - Teacher resource: vocabulary mastery sentences
- Poetry: footnotes define and explain unfamiliar words

Evaluation

- Spelling and vocabulary quizzes:
  - Weekly (28)
  - Quarterly review (1 each 9 weeks; each counts as 2 quiz grades)
- Poetry quizzes: written (8), oral (2)

➤ **RED** *indicates first introduction of content.*

Spelling & Vocabulary Skills Development

- ➤ Master spelling lists including:
  - ➤ Vocabulary words and definitions
  - ➤ Words that follow the spelling rules
  - ➤ Sound-alike suffixes
  - ➤ Commonly misspelled words
  - ➤ Homonyms
- Use vocabulary words in proper context
- Memorize vocabulary definitions
- Be able to identify commonly misspelled words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- Learn:
  - ➤ Synonym, antonym, and related forms of vocabulary words
  - To distinguish between homophones
  - Practical spelling tips and suggestions by studying Keys to Good Spelling
  - Spelling rules:
    - Use *i* before *e*, except after *c*, or when sounded like long *a*
    - Double final consonant before adding suffix beginning with vowel

Vocabulary, Spelling, Poetry cont. p. 158

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Vocabulary, Spelling, Poetry* *cont.*

Spelling & Vocabulary Skills Development *cont.*

- Change *y* to *i* when adding suffixes
- Drop the silent *e* before adding a suffix beginning with a vowel
- Learn exceptions to the spelling rules
- Creating a compound word doesn't change the spelling of the two parts
- Adding a prefix to a word doesn't change the word's spelling

Poetry Skills Development

- Memorize 10 lyrical poems
- Develop appreciation of poetry
- Lay foundation for future literature study
- Perform in front of an audience
- Recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

ENGLISH: *Literature*



Themes in Literature reflects these twelve themes: truth and wisdom, courage, power of words, humility, beauty, love, justice, temperance, joy and peace, perseverance, faith and hope, and time and eternity. As the student becomes familiar with classics such as *The Wind in the Willows, The Three Musketeers, Don Quixote,* and *The Adventures of Tom Sawyer,* he learns to appreciate a well-written presentation of a theme. This appreciation not only aids in increased enjoyment of literature but also provides the foundation needed to critically analyze it. This then can serve as a stimulus for corresponding creative essays.

Literary Value

- 94 authors, including well-known writers such as Mark Twain, Nathaniel Hawthorne, Helen Keller, William Shakespeare, Edgar Allan Poe, and Leo Tolstoy
- Prose selections (57), poems (49), and plays (5)
- Literary terms such as comic relief, static and dynamic characters, romanticism, realism, paradox, aside, and allegory

Added Enrichment

- Footnotes define and explain unfamiliar words
- Comprehension and discussion questions after selections
- Character-building quotations and verses
- Introductory paragraphs for interest and background information
- Author biographies and photos for important authors to know
- Suggested compositions (descriptions, summaries, poems, plays and imaginative stories)

Evaluation

- Assigned homework reading quizzes (18)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Reading Skills Development

- Develop skills in reading speed and comprehension
- Further develop oral reading skills
- Be able to identify significant quotations and the selections in which they are featured
- Increase vocabulary
- Recognize basic literary devices in the selections

Comprehension, Discussion, & Analysis Skills Development

- Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- Build appreciation for good literature and a love of reading
- Recognize the character-building and life-enriching themes that divide units
- Develop an understanding of people's motives and feelings while recognizing consequences of particular actions
- Learn to analyze literature while studying selections
- Comprehend and appreciate the basic elements of a work of literature
- Learn to appreciate the rhyme, rhythm, and figurative language of poetry

MATHEMATICS: *Algebra 1*



Algebra 1 provides a foundation that students need to enjoy success in future mathematics courses and includes topics such as polynomial arithmetic, factoring, equations, inequalities, graphing, statistics, rational expressions, radicals, functions, and quadratic equations. Algebra supplies the language and patterns of reasoning used in the sciences and other branches of knowledge.

Practice and review problems in each lesson give sufficient opportunity for students to develop and maintain their skills while learning to work quickly and accurately. Word problems, problem-solving strategies, and critical thinking throughout the text ensure that students can apply their mathematical skills to everyday situations and encourage students to connect varying types of mathematical knowledge. Build Up sections allow for further expansion of the concepts covered.

For this grade level, see also *Algebra 2* on p. 176.

Features

- Flexible pacing options in curriculum:
- Build Up sections (8)
- Review exercises for every section (75)
- Mid-chapter reviews (14)
- Chapter reviews (12)
- Nine-weeks reviews (2)
- Semester review
- Final review

Evaluation

- Quizzes (49)
- Tests (8)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Foundations of Algebra

- Classification of numbers
  - Real numbers
  - Natural, whole, positive, negative, integer
  - Rational/irrational numbers
  - Law of trichotomy
  - Comparing numbers
  - Absolute value
- Signed numbers
  - Addition, subtraction, multiplication, division
- Algebraic terminology
  - Variables, terms, factors
  - Variable term, constant term
  - Monomial, binomial, trinomial, polynomial
  - Like terms
- Properties of real numbers
  - Commutative
  - Associative
  - Distributive
  - ➤ Identity
  - ➤ Inverse
  - Additive inverse, multiplicative inverse
  - ➤ Zero product
- Algebraic translation

➤ Writing formulas

Linear Equations in One Variable

- Properties of equality
  - Solutions
  - Addition property
  - Isolating the variable
  - Multiplication property
  - Word problems using either property
- Solving equations
  - Both properties
  - Conditional, identity, contradiction
- Clearing equations of fractions and decimals

➤ Absolute value equations

- ➤ Isolating the absolute value expression
- ➤ Solving absolute value equations
- ➤ Distance problems

➤ Literal equations

- Dependent variable (subject)
- Independent variable
- Evaluating literal equations
- ➤ Distance formula
- ➤ Simple interest
- ➤ Solving literal equations

- Word problems with multiple unknowns
- Percent equations
  - Percent, percentage, base
  - Word problems
- Equations in retail
  - Retail, markup, discount
  - Sales tax, sales tax rate
- Mixture problems
  - Making a table
  - Solving mixture word problems

Linear Equations in Two Variables

- Cartesian plane, origin, *x*-axis, *y*-axis, quadrants, point, ordered pair
- Plotting points
- Graphing a linear equation by plotting points (table)
- Intercepts
  - *x*-intercept, *y*-intercept
  - ➤ Standard form
  - ➤ Graphing by finding intercepts
  - Lines with only one intercept
- Slope
  - Negative slope, positive slope
  - Slope formula
  - Find slope from graph
  - Graph with a point and slope
- Slope-intercept form
  - Write equation from graph in slope-intercept form
  - Graph from slope-intercept form
- Arithmetic sequences
  - Sequence, common difference
  - ➤ Recursive formulas
  - Finding the next term, formula
  - ➤ General term formula
  - ➤ Check sequence by graphing

➤ Point-slope formula

- ➤ Write equation from a point and a slope
- ➤ Write equation from two given points
- ➤ Write the equation from the graph

- Parallel and perpendicular lines
  - Determine if lines are parallel, perpendicular

Algebra 1 cont. p. 160

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Algebra 1* *cont.*

Linear Equations in Two Variables *cont.*

- Negative reciprocals
- ➤ Write equation if lines parallel and through a point
- ➤ Write equation if lines perpendicular and through a point

Linear Inequalities

- Inequality notation
  - <, >, ≤, ≥, ≠
- Graphing simple inequality on number line
  - Closed dot, open dot
- Graphing compound inequalities on number line
  - ➤ Conjunction
  - ➤ Disjunction
- Solving inequalities
  - Addition property of inequality
  - Multiplication property of inequality
- Solving compound inequalities
  - ➤ Conjunction, disjunction
  - ➤ All real numbers, no solution
- Inequality word problems

➤ Absolute value inequalities
- ➤ Solve absolute value inequalities
- ➤ Graph absolute value inequalities on a number line

➤ Linear inequalities in two variables
- ➤ Solve linear inequalities in two variables
- ➤ Graph linear inequalities in two variables

Systems of Equations

- System of linear equations
  - Consistent and inconsistent systems
  - Dependent and independent equations
  - Point of intersection
- Solve a system of linear equations:
  - Graphing
  - Substitution
  - Elimination

➤ Solve word problems with systems of equations
- ➤ Systems of inequalities
- ➤ Graph system on Cartesian plane
- ➤ Determine overlap region
- ➤ Systems of inequalities word problems
- ➤ Linear programming
- ➤ Feasible solution region

Polynomial Arithmetic

➤ Degree of polynomial
- Addition/subtraction of polynomials
- Multiplying monomials
  - Product rule for exponents
- Dividing monomials
  - Quotient rule for exponents
- Negative exponents
- Zero exponent rule
- Scientific notation
  - Addition/subtraction
  - Multiplication/division
- Exponent rules
  - Power raised to a power
  - Product raised to a power
  - Quotient raised to a power
  - Multiple rules
- Multiplying polynomials
  - Polynomial by monomial
  - FOIL
  - Larger polynomials
  - ➤ Squaring a binomial
  - ➤ Multiplying conjugates

➤ Binomial theorem
- ➤ Pascal's triangle
- ➤ Expanding a binomial raised to an exponent

- Dividing polynomials
  - Polynomial by a monomial
  - ➤ Polynomial by a binomial

Polynomial Factoring

- Greatest common factors
  - Common monomial
- Factoring:
  - Factor a common factor from a polynomial
  - ➤ General trinomials (a=1)
  - ➤ By grouping
  - ➤ General trinomials (a≠1)
  - ➤ Trinomials with a second variable
  - ➤ Perfect square trinomial
  - ➤ Difference of squares
  - ➤ Factoring strategies

Radical Expressions and Equations

- Square root
- Radical, radicand, index
- Perfect square, perfect cube
- Principal root
- Approximating irrational roots
- Fractional exponents
- Product rule for radicals
- Simplifying radicals
  - Rational roots
  - Irrational roots
- Adding and subtracting radicals

➤ Solving radical equations
- Like radicals

➤ Multiplying radical expressions

➤ Dividing radical expressions
- ➤ Quotient rule for radicals
- ➤ Rationalizing the denominator
- ➤ Rationalizing two term denominators
- ➤ Conjugate

Quadratic Equations

- Pure quadratic

➤ Solve quadratic equations by:
- ➤ Extracting the root
- ➤ Factoring
- ➤ Completing the square
- ➤ Quadratic formula

- Pythagorean theorem:
  - Hypotenuse, legs

➤ Distance formula
- ➤ Find distance between two points from formula

➤ Discriminant
- Graphing parabolas
  - ➤ Vertex form
  - ➤ Axis of symmetry
  - ➤ Finding the vertex
  - ➤ Finding zeros

Algebra 1 cont. p. 161

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Algebra 1* *cont.*

Radical Expressions and Equations

- Radicals
  - Square root, cube root
  - Perfect square, perfect cube
  - Radical, index (indices), radicand
  - ➤ Principal root
  - Approximating irrational roots
  - Expressing a radical as a fractional exponent
  - Finding rational roots using fractional exponents
- Simplifying radicals
  - Product rule for radicals
  - Rational roots
  - Irrational roots
- ➤ Exponents rules with rational exponents
- Solving radical equations
  - ➤ Extraneous solutions
- Like radicals
  - Identifying like radicals
  - Combining like radicals
- ➤ Multiplying radical expressions
  - ➤ Distributive
  - ➤ FOIL
  - ➤ Conjugates
  - ➤ Squaring a binomial
- ➤ Dividing radical expressions
  - ➤ Quotient rule for radicals
  - ➤ Rationalizing one-term denominators
  - ➤ Rationalizing two-term denominators
  - ➤ Rationalizing denominators with larger indices

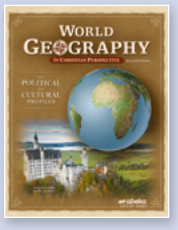
Functions

- Functions
  - ➤ Sets
  - ➤ Element
  - ➤ Set notation
  - Relation, function
  - Domain, range
  - Mapping diagram
  - Sets of ordered pairs
  - Vertical line test
  - Function notation
  - Determine if an equation is a function
  - Evaluation
- Domain of functions
  - ➤ Notation
  - ➤ Radical, reciprocal
- ➤ Graphs of parent functions
  - ➤ Polynomial, constant, linear, quadratic, cubic
  - ➤ Radical, square root, cube root
  - ➤ Absolute value, reciprocal
- Geometric sequences
  - Finding the next term, formula
  - ➤ General term formula
- ➤ Exponential functions
  - ➤ Exponential growth
  - ➤ Compound interest
- Trigonometric functions
  - Legs, opposite, adjacent, hypotenuse
  - Sine, cosine, tangent
  - ➤ Finding the missing side of a right triangle

Probability & Statistics (updated)

- Probability
  - Theoretical probability
  - Outcome, event, sample space
  - Finding simple probability
  - Properties of probability
  - Complement
  - Mutually exclusive, not mutually exclusive
- ➤ Venn diagrams
- Counting
  - Fundamental counting principle
  - Tree diagram
  - Factorial
  - Permutations
  - ➤ Combinations
- Conditional probability
  - Independent events
  - Dependent events
- Measures of Center
  - Data, statistics
  - Arithmetic mean
  - Outlier
  - Median
  - Resistance
  - Mode
- Box-and-whisker plot
  - Five-number summary
  - Minimum, Q1, median, Q3, maximum
  - ➤ Skewness
- Statistical representations
  - Bar graphs, simple, segmented, clustered
  - Circle graphs
  - Line graphs
- Frequency distributions
  - Frequency tables
  - Dot plots
  - Histograms
  - ➤ Symmetrical or asymmetrical distribution
  - Two-way frequency table
  - Joint and marginal frequencies
  - Grand total
  - Relative frequencies
  - ➤ Conditional relative frequency
- ➤ Normal distribution
  - ➤ Bell curve
  - ➤ Standard deviation
  - ➤ 68-95-99.7 rule
- Scatterplots
  - ➤ Bivariate data
  - Association, positive, negative, none
  - ➤ Causation
  - ➤ Fallacy of false cause
  - Trend lines
  - Interpolation, extrapolation
- Direct variation
  - Constant of variation
- ➤ Inverse variation

HISTORY & GEOGRAPHY: *World Geography* (one semester)



World Geography presents a physical-cultural study of the earth and mankind from a conservative, Christian perspective. Basic to this perspective is the conviction that God is the Creator of the earth and of man. By applying to the study of geography their knowledge of the Creation, the Flood, the beginning of nations at Babel, and God's dealing with mankind throughout the ages, students can better understand the physical features of the earth as well as the cultures of its people.

While most geography texts approach world geography from the globalist perspective, *World Geography in Christian Perspective* recognizes and discusses the national identities of individual countries. Building on what students have previously learned, this text presents a deeper, more thorough study of the religions, languages, customs, historic backgrounds, resources, and industries to expand the students' knowledge of each continent, region, and country presented.

Added Enrichment

- Special feature boxes (75):
  - Give in-depth look at the continent being studied
  - Present details about the vegetation and wildlife of the region
  - Show diversity of the country's culture and spotlight the history of the country
  - Look at heroes of the mission field
  - Explore the wonders of the world, concepts to consider, and strategic geography of a location
- Maps correlating to text (30)

Evaluation

- Reading quizzes (11)
- Review quizzes (22; includes labeling 12 maps)
- Map projects (8; each counts as quiz grade)
- Current events (15; each counts as quiz grade)
- Tests (4), mid-semester test (1)
- Final exam

➤ **RED** *indicates first introduction of content.*

Introduction to Geography

- ➤ The earth:
  - ➤ The importance of understanding geography in the Christian perspective
  - ➤ Location and topography
  - ➤ Weather and climate
  - ➤ Natural resources and wildlife:
    - ➤ Renewable and nonrenewable resources
- ➤ Mankind:
  - ➤ Culture and the Christian perspective
  - ➤ Cultural characteristics: religion, language, forms of government, economic systems
  - ➤ The geographer's craft: working with and understanding maps, statistics, charts, and graphs

Asia

- ➤ Middle East:
  - ➤ Fertile Crescent: Cradle of Civilization
  - ➤ Arabian Peninsula: Al-Saud family
  - ➤ Northern Plateaus and Transcaucasia
- ➤ Central Asia
- ➤ Southern Asia:
  - ➤ Indian subcontinent: Hinduism, Mount Everest, Buddhism
- ➤ Far East:
  - ➤ Chinese sphere: Communism, Great Wall of China, Great Silk Road, Taiwan
  - ➤ Northeast Asia: Korean War
  - ➤ Southeast Asia: Vietnam War, Roman Catholicism

Europe

- ➤ Mediterranean Europe: Alexander the Great, Greek Orthodoxy, Mount Vesuvius, Vatican City
- ➤ Central Europe: Gauls, Franks, Protestant Reformation, Berlin Wall
- ➤ The Low Countries: Dutch, The Hague, European Union
- ➤ The British Isles: Angles, Normans, Church of England, Scottish Highlands, the British Empire
- ➤ Scandinavia: Lutheranism, geothermal energy
- ➤ Eastern Europe: Ivan the Terrible, Bolshevik Revolution, USSR, Lech Walesa, John Huss

Africa

- ➤ Northern Africa: Sahara, Maghreb, Sahel, French Sahel, Sudan
- ➤ Tropical Africa: Western, Central, and Eastern Africa, hunger and disease
- ➤ Southern Africa: David Livingstone

Australia, the Pacific & Antarctica

- ➤ Australia: Western Plateau, Central Lowlands, Eastern Highlands, Uluru Rock, Great Barrier Reef, Abel Tasman, Captain James Cook, Matthew Flinders, Australian Gold Rush
- ➤ The Pacific: Oceania, New Zealand, Papua New Guinea, Easter Island, Challenger Deep
- ➤ Antarctica: Vinson Massif, Captain Robert F. Scott, Richard E. Byrd, Antarctic Treaty

North America

- ➤ Canada: Leif Ericson, "New France," Henry Hudson, Acadia
- ➤ United States: Native Americans, independence
- ➤ Middle America: Mexico, Central America, the West Indies

South America

- ➤ Northern Andean countries: Simón Bolívar, Auca, José de San Martín, Incas
- ➤ Brazil and the Guianas: the Amazon, Pedro Cabral, environmentalism in the rain forest
- ➤ Southern countries

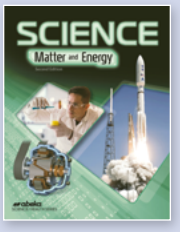
Geography

- Geography projects (8) correlating to chapters in text, featuring maps, both physical and political, and review questions:
  - Introduction of geography
  - Asia
  - Europe
  - Africa
  - Australia and the Pacific
  - North America
  - South America
  - Nations of the world

Prayer Time

- Learn to pray for our nation and for government officials

SCIENCE: *Science: Matter & Energy*



Science: Matter and Energy builds a foundation for future studies in physics, chemistry, and other fields. The Christian perspective of this text naturally rejects the unproven hypothesis of evolution, recognizing special creation as the only reasonable explanation for the universe's origin. This position is presented throughout the text and highlighted in a chapter on origins, which provides evidence *against* evolution and *for* the reality of the Genesis Creation account.

Science: Matter and Energy also recognizes God's command for man to have dominion over creation. Thus the purpose of science becomes the application of scientific knowledge for mankind's benefit. From physics to chemistry, the goal is to learn how man might extend his "dominion" and make better use of creation. With man's dominion over the earth comes a responsibility to tend, manage, and conserve resources. However, the ultimate purpose of creation must not be forgotten—the earth was made for man to inhabit, and its resources were made for man to use.

Added Enrichment

- Feature boxes with extra information, articles highlighting God's design in creation
- Laboratory exercises (29)
- Critical thinking questions to encourage students to think more deeply about concepts (200)

Evaluation

- Reading quizzes (17)
- Review quizzes (34)
- Complete STEM project (counts as 6 quiz grades and 1 test grade)
- Tests (8), Quarter exams (2)
- Semester Exam, Final Exam

➤ **RED** *indicates first introduction of content.*

Introduction to Physical Science

- Scientific method:
  - 3-step process; theories, laws
  - Predictions: falsifiability, repeatability, reproducibility
  - ➤ Causality
  - ➤ Limitations of science: scope, assumptions, bias, approximations
  - ➤ Biblical reasons to study science
- Basics of matter and energy:
  - Inertia, force
  - Properties of matter:
    - ➤ Physical and chemical changes
    - Mass, weight, volume, density, state, temperature
  - ➤ Branches of physical science: physics and chemistry
- Scientific reasoning:
  - Deductive reasoning:
    - Propositions, inferences
  - Inductive reasoning:
    - Method of difference
    - ➤ Method of concomitant variation
  - Reasoning and the scientific method
  - Fallacies:
    - ➤ Invalid deductive inferences, circular reasoning
    - Post hoc fallacy
    - ➤ Equivocation, ad hominem and authority
- Engineering design:
  - Three steps: defining the problem, designing the solution, evaluating the solution
  - ➤ Safety, societal concerns, subproblems, tradeoffs

Matter and Motion

- Measuring matter:
  - ➤ Mathematics in science
  - ➤ Accuracy, precision, and significant figures
  - Scientific notation
  - Units:
    - Systems of measurement:
      - ➤ Need for systems of measurement
    - Metric system/SI:
      - ➤ Definition of units: meter, liter, kilogram, second
      - Celsius temperature scale
      - ➤ Kelvin temperature scale
  - Volume, density, and specific gravity:
    - ➤ Measuring volume by fluid displacement
- Describing motion:
  - ➤ Brief history of physics
  - ➤ Scalar and vectors, distance and displacement, simple vector addition
  - Speed
  - ➤ Velocity
  - ➤ Acceleration
- Newton's laws of motion:
  - ➤ Second and third laws
- Forces in nature:
  - ➤ Quantitative treatment of gravity
  - ➤ Circular motion: centripetal and centrifugal force
  - ➤ Pendulums
  - Friction:
    - ➤ Causes and types of friction
    - ➤ Quantitative treatment
- Work:
  - ➤ Quantitative treatment
- ➤ Power, momentum
- Simple machines:
  - ➤ Mechanical advantage, efficiency
  - Types of simple machines:
    - Lever, wheel and axle, inclined plane
    - Pulley, wedge, screw
- Fluid Mechanics:
  - ➤ Kinetic theory of matter:
    - ➤ Cohesion, kinetic theory and states of matter
    - Liquids:
      - ➤ Adhesion
      - Surface tension
      - Capillarity:
        - ➤ Meniscus

Science: Matter & Energy cont. p. 164

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Matter & Energy* *cont.*

Matter & Motion *cont.*

- Pressure in liquids:
  - ➤ Mathematical definition; SI units
  - ➤ Gravitational pressure, Pascal's principle
  - ➤ Hydraulic press
- Gases:
  - ➤ Gas laws: Boyle's, Charles's, Amontons's
  - Atmospheric pressure:
    - Barometers:
      - ➤ Physical principles
    - ➤ Applications: straws, breathing
- ➤ Fluid displacement:
  - ➤ Archimedes' principle, buoyancy
  - ➤ Buoyancy in liquids: floating, neutral buoyancy
  - ➤ Buoyancy in air
- ➤ Fluid dynamics
  - Drag:
    - ➤ Factors affecting, streamlining
  - Lift:
    - Airfoil
    - ➤ Cause, factors affecting, Magnus effect
  - ➤ Bernoulli effect

- Energy:
  - ➤ SI unit
  - Forms:
    - ➤ Mechanical
  - Energy changes:
    - ➤ Conservation of mass and energy
  - Kinetic energy:
    - ➤ Forms; calculation of translational kinetic energy; relationship to momentum
  - Potential energy:
    - ➤ Fundamental forces: relationship to potential energy
    - ➤ Types: gravitational and electric fields
    - ➤ Calculation of gravitational potential energy
  - Heat and thermal energy:
    - ➤ Factors affecting thermal energy
    - ➤ Thermal equilibrium
    - ➤ Heat capacity and specific heat
    - ➤ Calorimetry
    - Thermal expansion:
      - ➤ Explained
    - Heat transfer: conduction, convection, radiation:
      - ➤ Direction
      - ➤ Applications: Dewar flask, indoor heating
    - ➤ Thermodynamics: laws of thermodynamics; mechanical equivalent of heat, Carnot engine, entropy, perpetual motion
    - State changes:
      - ➤ Freezing point depression, latent heat, heat of fusion
      - ➤ Volatile, nonvolatile
      - ➤ Scientific definition of boiling; boiling point elevation, heat of vaporization
      - ➤ Vapor pressure: relationship to boiling point; critical temperature
      - ➤ Heat pumps
      - ➤ Sublimation, deposition

- Waves and energy:
  - Medium, structure of waves
  - ➤ Types of waves
  - Measurement of wave properties:
    - Wavelength, frequency
    - ➤ Period, amplitude, speed
  - ➤ Wave behavior
- Sound waves:
  - Nature and transmission of sound waves
  - History of understanding of sound waves
  - ➤ Intensity, loudness, sound intensity level
  - Pitch:
    - ➤ Audible, infrasonic, and ultrasonic sounds
    - Doppler effect
  - ➤ Quantitative treatment of speed, shock waves
  - Behavior of sound waves:
    - Reflection:
      - ➤ Echoes
      - Sonar
      - ➤ Minimizing reflection: acoustics
    - ➤ Refraction, diffraction, interference
  - ➤ Music:
    - ➤ Scientific definition
    - ➤ Interference in music:
      - ➤ Consonance, dissonance, interval
      - ➤ Beats, harmonic series, timbre
    - ➤ Resonance

Light & Color

- Nature of light:
  - History of theories of light
  - ➤ Quantitative relationship between wavelength and frequency
  - Dual nature of light
  - Color:
    - ➤ Relationship to frequency and wavelength; additive and subtractive mixing, primary colors
- Behavior of light:
  - ➤ Reflection, refraction, mirage, scintillation, rainbow formation
  - ➤ Spectroscopy, interference, diffraction, doppler effect, polarization
- Electromagnetic radiation:
  - Electromagnetic spectrum
  - ➤ Properties of radio waves, microwaves, infrared, ultraviolet, x-rays, and gamma rays
  - ➤ Relationship between frequency and energy
  - ➤ Laser light formation, properties, and uses
- Speed of light:
  - ➤ Constant
  - ➤ Brief overview of Einstein's special and general relativity

Electricity & Magnetism

- Electricity:
  - Electrostatics
    - ➤ Brief history of electrostatics
    - Electric charge and fields, law of electric charges
    - ➤ Quantitative treatment of law of electric force
    - ➤ Transferring charges:
      - ➤ Conduction, conservation, grounding
      - ➤ Induction
      - ➤ Nature of current in gases, liquids, solids
      - ➤ Electroscope

Science: Matter & Energy cont. p. 165

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Matter & Energy* *cont.*

Electricity & Magnetism *cont.*

- ➤ Electric current:
  - ➤ Moving charges, direct and alternating current, voltage
  - ➤ Current, power, kilowatt-hours
  - ➤ Resistance, Ohm's law:
    - ➤ Reducing resistance, resistors
  - ➤ Joule heat, superconductors
- ➤ Electric circuits:
  - ➤ Components of a circuit, closed/open circuits
  - ➤ Short circuits, fuses and breakers
  - ➤ Series and parallel circuits
- ▪ Magnets and magnetism:
  - ▪ Brief history, law of magnetic poles, magnetic fields
  - ➤ Quantitative treatment of law of magnetic force
  - ➤ Permeability
  - ➤ Electron spin, domains
  - ➤ Types of materials: diamagnetic, paramagnetic, ferromagnetic
  - ➤ Methods of magnetization
  - ▪ Electromagnets:
    - ➤ Left-hand rule, strength
  - ▪ Demagnetization
  - ➤ Magnetic deflection
  - ▪ Magnetic earth:
    - ➤ Compass, dipping needle
    - ➤ Magnetic declination, isogonic lines
    - ➤ Magnetic inclination, isoclinic lines
    - ▪ Magnetosphere
    - ➤ Celestial magnets
  - ▪ Applications of electrostatics
    - ➤ Electrostatic generators:
      - ➤ Principles of operation
    - ▪ Lightning:
      - ▪ Lightning rods
    - ➤ Leyden jar, capacitor
  - ➤ Using static electricity
- ➤ Using electricity:
  - ➤ Incandescent, fluorescent, and neon lamps
  - ➤ CFLs and LEDs
  - ➤ Solenoid, telegraph, relay, and loudspeaker
  - ➤ Basic structure and motions of electric motors
- ➤ Producing electricity:
  - ➤ Voltaic cells:
    - ➤ Batteries in series and parallel
  - ➤ Electromagnetic induction:
    - ➤ AC and DC generation
    - ➤ MHD generators, transformers
- ▪ Electronics:
  - ➤ Foundations of electronics:
    - ➤ Vacuum tubes, cathode-ray tubes, picture tubes, x-ray tubes
    - ➤ Thermionic emission, diodes, triodes
  - ▪ Semiconductor electronics:
    - ➤ How a semiconductor works, doping
    - ➤ Diodes, transistors
    - ▪ Photovoltaic cells
    - ➤ LED, semiconductor lasers
    - ➤ Integrated circuit production and application
  - ➤ Electronic computers:
    - ➤ History of the computer: ENIAC and UNIVAC I
    - ➤ Analog v. digital
    - ➤ Binary and hexadecimal number systems, ASCII logic gates
    - ➤ Hardware, software
    - ➤ Modern computers: PCs, servers, mainframes, and supercomputers
    - ➤ Robotics

Chemistry

- ▪ Foundations of chemistry:
  - ▪ Chemistry and matter:
    - ➤ Brief history
    - ▪ Definition, characteristics of matter, atomic theory
    - ▪ Elements and compounds
    - ➤ History of atomic symbols
  - ▪ Inside the atom:
    - ▪ Nucleus with protons and neutrons, atomic number, electrons:
      - ➤ Quarks, electron shells, types of ions
    - ➤ Mass number, atomic mass
    - ▪ Atomic models:
      - ➤ Quantum theory, uncertainty principle, quantum numbers, Pauli exclusion principle
  - ▪ Nuclear chemistry:
    - ➤ Nuclear decay
    - ▪ Fission and fusion
      - ➤ Details of process
  - ▪ Electrons and chemical properties:
    - ▪ Valence electron, periodic table of elements:
      - ➤ Periods and groups
    - ▪ Alkali metals, alkaline earth metals
    - ➤ Transition metals, inner transition metals
    - ➤ Groups 13–16
    - ▪ Halogens, noble gases
- ▪ Molecules and chemistry:
  - ▪ Compounds and mixtures:
    - ➤ Molecular mass, isomers
    - ➤ Pure substance, homogeneous, heterogeneous
    - ➤ Solutions, colloids
  - ▪ Chemical bonds:
    - ▪ Covalent bonds:
      - ➤ Single, double, triple; Lewis structures
      - ➤ Polar and nonpolar; electronegativity, partial charge
      - ➤ Covalent network, formula unit
    - ▪ Ionic bonds:
      - ➤ Polyatomic ions; ionic crystals
    - ➤ Metallic bonds
    - ➤ Basic chemical nomenclature; types of chemical formulas
  - ➤ Intermolecular forces:
    - ➤ Types, characteristics, and relative strength
    - ➤ Effects on physical properties: solid structure, state changes
  - ▪ Solution chemistry:
    - ➤ Formation of solutions
    - ➤ Solubility: saturated, precipitate, factors affecting
    - ➤ Solution concentration: mole, amount concentration (molarity), molality
    - ➤ Diffusion
    - ▪ Osmosis
- ▪ Chemical reactions:
  - ➤ Reactants, products, evidence
  - ▪ Chemical equations, conservation of mass:
    - ➤ Balancing equations
  - ➤ Types of chemical reactions
  - ➤ Chemical thermodynamics:

Science: Matter & Energy cont. p. 166

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Science: Matter & Energy* *cont.*

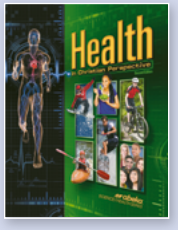
Chemistry *cont.*

- ➤ Endothermic and exothermic reactions
- ➤ Entropy in chemical reactions
- ➤ Chemical kinetics: activation energy, factors affecting reaction rates; catalysts
- ➤ Chemical equilibrium: Le Châtelier's principle
- Salts
- ➤ Chemistry of acids and bases: dissociation, strong v. weak, neutralization, relationship of pH to concentration, buffers
- ➤ Redox reactions and electrochemistry:
  - ➤ Basic terms
  - ➤ Types and chemistry of electrochemical cells
- ➤ Organic chemistry:
  - ➤ Uniqueness of carbon, hydrocarbon nomenclature
  - ➤ Alkanes, alkenes, alkynes
  - ➤ Aromatics, substituted hydrocarbons, soaps, and polymers
- Biochemistry:
  - Carbohydrates, lipids:
    - ➤ Disaccharides, glycogen, structure of fats, types of cholesterol
  - ➤ Chemistry and structure of proteins, types and structure of nucleic acids
- Metabolism:
  - ➤ Cellular respiration chemistry of ATP

Science vs. Evolution

- Biblical view of origins:
  - ➤ Origin of time, space, matter, and energy
- History of evolutionary philosophy:
  - Darwin, Lyell, *Origin of Species*, uniformitarianism
  - ➤ Thomas Huxley
  - ➤ Movement to the U.S.: Asa Gray, James Dana
  - Theistic evolution
  - ➤ Neo-Darwinism defined; evolution and secular humanism
  - ➤ Compromise views of origins
- Evolutionary views of origins:
  - Abiogenesis and big bang theory
  - ➤ Stanley Miller's experiment
  - ➤ "Evidence" of the big bang theory
- Modern opposition to evolution:
  - Rise of Creation science
  - ➤ Notable figures and organizations
- Notable scientists who believed in Creation:
  - Isaac Newton
  - ➤ William Gilbert, Samuel Morse
- ➤ Evidences against evolution from chemistry and physics:
  - Impossibility of chemical evolution
  - ➤ DNA complexity, interpretation of DNA
  - Radiometric dating
  - ➤ Inverse square laws, second law of thermodynamics, decay of earth's magnetic field
  - ➤ Complexity of the human brain; bat echolocation; electric fish

SCIENCE: *Health* (one semester)



Health in Christian Perspective will enable students to gain a deeper knowledge of the anatomy and physiology of the human body. They will be encouraged to reach out to others and to live a happy, healthy life as they maintain a consistent walk with the Lord. They will learn how to maintain their physical health through good nutrition and fitness with an emphasis on cardio-respiratory and musculoskeletal health.

A study of the nervous system in light of biblical principles encourages students to maintain good mental and emotional health. Practical aspects of safety and first aid are included in the middle of the course. Students will also learn how the immune system works to prevent disease, how to avoid drug abuse, and how to pursue a right relationship with God and others.

Added Enrichment

- Sidebars containing extra health facts, checklist for personal health, and applications of health information (185)
- Feature boxes including biblical discernment, medical careers, and articles on health-related issues (20)
- Atlas of human anatomy

Evaluation

- Reading quizzes (12)
- Review quizzes (16)
- Tests (4)
- 9-weeks exam, final exam

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Developing a Healthy Body

- Growth and development:
  - Fetus development from conception to birth
  - Infancy
  - ➤ Adolescent development
  - Endocrinology:
    - Endocrine glands and hormones:
      - ➤ Somatotropin, antidiuretic hormone, aldosterone, estrogens, testosterone, melatonin
    - Regulating metabolism, physical changes, and sleep
- Nutritional needs:
  - Gastroenterology: digestion; anatomy and physiology of organs in the digestive system
    - ➤ Gingiva, root canal, uvula, chyme
  - Macronutrients:
    - Carbohydrates, dietary fiber, proteins, fats and oils:
      - ➤ Essential amino acids; triglycerides
  - Micronutrients: vitamins, minerals, electrolytes, water
- Healthful food choices:
  - Energy from food:
    - ➤ Kilocalorie/calorie, basal metabolism, food guide pyramid
  - Nutritional balance: acceptable weight range, weight control

Health cont. p. 167

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Health* *cont.*

Maintaining Personal Health

- Cardiorespiratory fitness:
  - Cardiology: anatomy and physiology of organs in the cardiovascular system:
    - ➤ Septum
    - Blood pressure and heart rate:
      - ➤ Radial and carotid pulse, stroke volume
  - Pneumology: anatomy and physiology of organs in respiratory system:
    - ➤ Lung capacity
- Musculoskeletal health:
  - Osteology: anatomy and physiology of skeletal system:
    - ➤ Divisions of the backbone
    - ➤ Arm and leg bones, periosteum
    - ➤ Compact and spongy bones
    - ➤ Gliding, saddle, and ellipsoid joints
  - Myology: anatomy and physiology of muscular system:
    - ➤ Fast-twitch and slow-twitch muscle fibers
    - ➤ Flexors and extensors
    - Review 7 muscles and groups
    - ➤ Learn 10 muscles and groups
- Exercise and fitness:
  - Aerobic and anaerobic exercise
  - ➤ Strength training
  - Assessing physical fitness:
    - ➤ Cardiorespiratory endurance
    - Muscular strength and endurance
    - Measuring flexibility, body fat content
  - Total workout: warm-up, work out (training heart rate), cool down, overload
  - ➤ Energy for exercise:
    - ➤ Aerobic and anaerobic processes
    - ➤ Energy efficiency, sports nutrition, maintaining hydration
  - Benefits of exercise
- Personal hygiene:
  - Your protective covering: skin, below the dermis, throughout the dermis, above the dermis
  - Good grooming:
    - Basic skin care, clear complexion, hair that flatters
    - Healthy nails, healthy smile
  - UV protection and skin cancer prevention:
    - ➤ Types of skin cancer
  - ➤ Consumer awareness

Keeping a Sound Mind

- Nervous system:
  - Neurology: anatomy and physiology of organs in the nervous system:
    - ➤ Neuron anatomy and types
    - Central nervous system, peripheral nervous system
    - ➤ Limbic system, somatic and autonomic nervous system
  - Sensory receptors:
    - ➤ Senses of the skin: pain, mechanoreceptors, and thermoreceptors
    - ➤ Senses of smell and taste: chemoreceptors
  - Sense of sight:
    - Anatomy of the eye, vision (rod and cone cells)
    - ➤ Defective vision
  - Sense of hearing:
    - Anatomy of the ear
    - Hearing damage:
      - ➤ Decibels, sensorineural (nerve) deafness
  - Brain and the mind
- ➤ Recognizing mental disorders:
  - ➤ Kinds of mental disorders: eating, anxiety, depression
- Good mental health:
  - ➤ Managing stress: kinds of stress, stress and body systems
  - Mental and emotional well-being:
    - Benefits of exercise, sufficient sleep, thinking right thoughts, controlling emotions, exercising your brain
- ➤ Practicing biblical discernment: biblical discernment and suicide

Practicing Personal Safety

- Household hazards:
  - Electrocution, falls, firearms
  - Fires and burns: fire and burn prevention, fire precautions
  - Poisoning:
    - ➤ Ingested, inhaled, and absorbed toxins
  - Reducing risks:
    - Self protection
    - ➤ Protection of others, protection at work
- Recreational safeguards:
  - Sport safety:
    - ➤ Dehydration
    - Heat exhaustion, heat stroke
  - Water sports:
    - ➤ Swimming safety
    - ➤ Boating basics PWCs (personal watercraft)
    - Water rescue techniques
  - ➤ Skating
  - Wilderness recreation:
    - Poisonous plants and animals: dermatitis, poisonous snakes
    - ➤ Wilderness supplies and precautions
    - ➤ Hunting
  - Winter sports:
    - Frostbite
    - ➤ Specific safety tips
  - ➤ Recreational vehicles: snowmobiles, ATVs (all-terrain vehicles)
- Safety on the road:
  - Bicycle basics
  - ➤ Mopeds and motorcycles: determining risks, developing skills
  - ➤ Motor vehicle safety:
    - ➤ Traffic accidents
    - ➤ The leading cause of accidental deaths in the United States
    - ➤ Safe actions, courteous driving
    - ➤ Alcohol and traffic safety
- Environmental safety:
  - Natural disasters:
    - ➤ Blizzards, floods
    - Earthquakes, hurricanes, lightning, tornadoes
  - Environmental hazards:
    - Man's responsibility, pollution problems, radical environmentalism
    - ➤ Checks and balances, assessing risks, proper balance

Health cont. p. 168

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Health* *cont.*

Administering First Aid

- Emergency preparedness:
  - Knowing priorities:
    - Check, call, care
    - Check airway, breathing, and severe bleeding
    - ➤ Vital signs
  - Respiratory emergencies:
    - Head-tilt and chin-lift position
    - ➤ Rescue breathing
    - Choking:
      - ➤ Unconscious victim, self, infant
    - ➤ Drowning
  - Circulatory emergencies:
    - ➤ CPR (cardiopulmonary resuscitation) instructions
    - Severe bleeding-care instructions
    - ➤ Shock-care instructions
  - ➤ Recovery position
- First aid procedures:
  - Care instructions for burns:
    - First-, second-, and third-degree burns
    - Chemical burns (eye injury care)
  - Care instructions for:
    - ➤ Convulsions, fainting
    - Dislocations, electric shock
    - Fractures: closed and open
    - Frostbite
    - Hyperthermia: heat cramps, heat exhaustion, heat stroke
    - ➤ Hyperventilation
    - Hypothermia, nosebleeds
    - Poisoning:
      - Ingested toxins
      - ➤ Inhaled and absorbed toxins
    - Snakebites: pit vipers (hemolitic), coral snake (neurotoxin)
    - Stings and bites:
      - ➤ Animal bites (rabies and tetanus)
      - Insect stings, tick bites (lyme disease)
    - Strains and sprains:
      - Strain: muscle or tendon stretch or tear
      - Sprain: ligament stretch or tear
    - Wounds:
      - ➤ Closed wound or contusion, internal bleeding, open wound
      - Incisions, abrasions
      - ➤ Lacerations, punctures

Preventing Diseases

- Immunology:
  - White blood cells: leukocytes (phagocytes and lymphocytes)
  - Antibodies
  - Lymphatic system: tissue fluid, lymph vessels, lymph nodes
  - Other body defenses:
    - ➤ Bone marrow, brain, colon, lacrimal glands, liver, lungs
    - Mucous membranes, skin, stomach, tonsils and adenoids
- Infectious diseases and defenses:
  - Classification of diseases:
    - Infectious diseases, noninfectious diseases
    - ➤ Acute, chronic
    - Communicable and noncommunicable
  - Causes of infectious diseases:
    - Bacteria, viruses
    - ➤ Protozoa, fungi, parasitic worms
  - Spread of infectious diseases:
    - Airborne pathogens, contaminated surfaces, direct contact
    - Infected animals, contaminated food or water
  - Immunity against disease:
    - ➤ Gaining immunity (activated lymphocytes and antibodies)
    - ➤ Acquired, inborn, and species immunity
  - Medical defenses: vaccines, drugs, and antibiotics
- Noninfectious diseases and disabilities:
  - Leading causes of death (listed in a chart)
  - Degenerative diseases:
    - Osteoporosis
    - ➤ Dementia, Parkinson's disease
  - ➤ Biblical discernment and euthanasia
  - Genetic and congenital diseases
  - Hormonal diseases: diabetes mellitus
  - ➤ Biblical discernment and abortion
  - Immunological diseases:
    - Allergies
    - ➤ Asthma, autoimmune diseases:
      - ➤ Selected autoimmune diseases: Grave's, lupus, multiple sclerosis, psoriasis, rheumatoid arthritis
  - ➤ Nutritional diseases
  - ➤ Psychosomatic diseases
  - ➤ Diseases caused by harmful substances
  - Cancer:
    - Causes
    - ➤ Types, development
    - Treatment
  - ➤ Disabilities: impaired mobility, hearing, speech, sight
- Systemic diseases and disorders:
  - Cardiovascular diseases—leading cause of death:
    - ➤ Hypertension, arteriosclerosis
    - Atherosclerosis, coronary artery disease
    - ➤ Angina
    - Heart attack, arrhythmia
    - ➤ Ventricular fibrillation, congestive heart failure, stroke, aneurysm
  - Dermatopathy:
    - Acne
    - ➤ Athlete's foot, dandruff, warts
  - ➤ Endocrinopathy: ketoacidosis, hyperglycemia, hypoglycemia
  - Gastrointestinal diseases and disorders:
    - Dental caries, periodontitis
    - ➤ Gingivitis, appendicitis
    - ➤ Colorectal cancer
    - Dysentery
    - ➤ Food-borne illnesses: salmonella, *E. coli,* and staphylococcus poisoning; botulism
    - Peptic ulcer

Health cont. p. 169

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Health* *cont.*

Preventing Diseases *cont.*

- ➤ Hemopathy: anemia
- ➤ Hemophilia
- ➤ Hepatopathy: hepatitis, viral hepatitis
- Immune-deficiency and lymphatic diseases:
  - AIDS, HIV
  - ➤ Mononucleosis
- ➤ Musculoskeletal diseases: arthritis, osteoarthritis, rheumatoid arthritis, bursitis, back pain
- Nervous system diseases and disorders:
  - Concussion
  - ➤ Amnesia, coma, meningitis, encephalitis, shingles, cerebral palsy, epilepsy
- Pneumopathy:
  - Common cold
  - ➤ Bronchitis, influenza, pneumonia, tuberculosis
- ➤ Uropathy: kidney failure, kidney stones
- ➤ Biblical discernment and organ donation

- Personal health care:
  - ➤ Medical examination: medical history, general health, physical exam
  - Disease prevention

Avoiding Drug Abuse

- Drug use and medicines:
  - Drugs as medicine: drug, medicine, OTC, prescription, antibiotics
  - Pain relievers:
    - Anesthetics
    - Analgesics:
      - ➤ Aspirin, acetaminophen, ibuprofen
  - ➤ Other common medicines: antihistimines
  - Use medicines responsibly
- Drug abuse and the body systems:
  - Effects of drug use:
    - ➤ Psychoactive drugs, physical vs. psychological dependence
    - Addiction, tolerance
  - Narcotics:
    - Opiates:
      - ➤ Morphine, codeine
      - Heroin
    - ➤ Opioids
  - Hallucinogens:
    - ➤ Psychedelic drugs, LSD, flashback, PCP, MDMA, ketamine
  - Stimulants:
    - Cocaine, crack
    - ➤ Amphetamines
    - Methamphetamine
  - Depressants:
    - ➤ Barbiturates, benzodiazepines (valium, rohypnol)
  - Marijuana and related drugs:
    - ➤ Cannabinoids
  - Inhalants
  - ➤ Steroids
  - ➤ Long-term effects of drug abuse
  - Preventing drug abuse
- Alcohol and health:
  - Alcohol is the most widely abused drug in the world
  - Forms of alcohol
  - Immediate effects:
    - On the brain, liver, and other organs
    - Depressant
    - ➤ Alcohol poisoning
  - Long-term effects:
    - Alcoholism
    - ➤ Delirium tremens
    - Liver and cardiovascular disease
    - Gastrointestinal disorders
  - Alcohol and society:
    - ➤ Crimes
    - Accidents
    - ➤ Fetal alcohol syndrome
  - ➤ Why people drink
- Tobacco and health:
  - Tobacco as a drug: nicotine
  - Effects of smoking:
    - Heart disease, respiratory problems, emphysema, cancer risks
  - Effects on nonsmokers
  - Smokeless tobacco
  - ➤ Biblical discernment and substance abuse

Pursuing Right Relationships

- Putting God first:
  - ➤ Becoming spiritually fit: continuous workout, resting in Him
  - Maintaining spiritual fitness:
    - Essential nutrition, power through prayer
    - ➤ Exercise forgiveness
- Thinking of others:
  - ➤ Maturing relationships: responsible behavior, effective communication, wholesome associations
  - ➤ Family interactions: parent-child relationships, sibling relationships
  - Close friendships: friendship qualities, influence from peers

BIBLE: *Kings of Israel*



Kings of Israel charts the course of Israel's history. First semester covers the lives of Saul, David, and Solomon–the kings of the United Kingdom of Israel–up to the division of the kingdom between Israel and Judah. Second semester covers the kings of Israel and Judah, the Assyrian and Babylonian captivities, and the return of the Jewish people to Jerusalem.

Information is given in an easy-to-follow outline format. Numerous applications are given for nearly every outline to help students understand how these portions of Scripture relate to the temptations and problems they face every day.

Evaluation

- Verses:
  - Verse quizzes (28)
  - 9-weeks verses exams (2)
  - Semester verses exam (1)
  - Final verses exam (1)
- Content:
  - Quizzes (10)
  - Quizzes on the books of the Bible (2)
  - 9-weeks exams (2)
  - Semester exam (1)
  - Final exam (1)

➤ **RED** *indicates first introduction of content.*

Lessons *137*

- Samuel: God directs Samuel to choose a king for Israel
- Saul:
  - Saul is chosen to be king
  - Saul disobeys God
- David:
  - Chosen to be king
  - His faith in God when fighting Goliath
  - Flees from Saul
  - Davidic kingdom established
  - Sin committed with Bathsheba and repentance
  - Importance of proper friendships: David and Jonathan
  - Absalom's rebellion and defeat
  - Sin and consequences in taking census
  - Character of David
- ➤ Psalms:
  - ➤ Decision and destiny
  - ➤ Praising the Lord
- Solomon:
  - Asks for God's wisdom
  - Monarchy of Israel with Solomon as king
  - ➤ Christian and civil authority
  - ➤ Building and dedication of the Temple
  - ➤ Sunset of Israel's Golden Age
- ➤ Proverbs: selected topics such as truths about your heart, communicating with others, work, honesty, correction, money, and relationships
- ➤ The Divided Kingdom: contrasts in North and South
- Elijah:
  - Elijah proclaims drought
  - Mount Carmel contest with Ahab and false prophets
  - Discouraged by Jezebel's letter
  - ➤ Jehoshaphat and Ahab demonstrate need for Christian separation
  - Elijah enters Heaven
- Elisha: his calling and miracles
- ➤ Countdown to captivity
- ➤ Hezekiah: prayer and test
- ➤ Isaiah: prophet of God
- ➤ Josiah: last good king
- ➤ Last kings of Judah witness destruction of Jerusalem
- Daniel:
  - Nebuchadnezzar's dream of world empires
  - Nebuchadnezzar exalted and humbled
  - Belshazzar sees handwriting on wall
- Esther boldly stands before the king
- Ezra: children of Israel return to rebuild the Temple
- Nehemiah shows leadership skills in building wall and working with people

Music *91 songs*

- Choruses, hymns of the faith, holiday songs

Memory Work

- Passages (28 containing 97 verses)
- Books of the Bible

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

ENGLISH: *Grammar*



Grammar IV builds upon the grammar foundation established in previous years and introduces new concepts to further enhance the students' knowledge of basic grammar.

Added Enrichment

- Review games

Evaluation

- Grammar quizzes (21)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Grammar

- Mechanics:
  - Abbreviations
  - Using numbers in a sentence
- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things:
      - Political and economic organizations and alliances
    - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection *O*
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period for declarative sentences, indirect question, and polite request
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - Participial phrase
        - Adjective and adverb clauses
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - Joined by:
        - Transitional words
        - Coordinating conjunction if clauses already contain commas
    - Between items in a series if the items contain commas
  - Colons:
    - Before a list of items
    - To introduce a formally announced statement or quotation
    - Between:
      - Independent clauses when second clause further explains first one
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
- Italics:
  - For titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
  - For words, letters, numbers referred to as such
  - For foreign words or phrases
- Hyphens:
  - To divide a word at the end of line
  - In compound numbers
  - In fractions used as adjectives
  - In prefixes before a proper noun or adjective
  - In compound adjectives before a noun
- Quotation marks:
  - In a direct quotation
  - To enclose titles of short poems, songs, chapters, articles, and other parts of books or magazines
  - To enclose a quoted passage of more than one paragraph: at the beginning of each paragraph and at the end of the last paragraph
- Apostrophes:
  - To form:
    - Possessive case of nouns
    - Individual possession within a group
    - Possessive case of indefinite pronouns
  - To show omissions from words
  - With *s* to form plurals of letters, numbers, signs, and words used as words
- Parentheses:
  - To enlcose:
    - Parenthetical elements
    - Brief confimatory information
- Ellipses:
  - To indicate:
    - A word, phrase, or whole portion of text omitted from a quotation
    - An unfinished thought, pause, or silence
- Dashes:
  - After a series of words or phrases giving details about a statement that follows
  - To indicate an abrupt change or break in a sentence
  - To set off parenthetical elements or confidential comments

Grammar cont. p. 172

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar* *cont.*

Grammar *cont.*

- The sentence:
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming compound subjects and verbs
  - Recognizing complements
  - Correcting fragments and run-on sentences:
  - Sentence structure:
    - Defining dependent and independent clauses
    - Recognizing and diagramming simple, compound, complex, and compound-complex sentences
    - Recognizing noun clauses used as subjects of independent clauses
  - ➤ Clear and effective diction
- Parts of speech:
  - Recognizing eight parts of speech
  - Verbs:
    - Recognizing action (transitive and intransitive), linking, and helping verbs
    - Distinguishing verbs from verbals: participles, gerunds, and infinitives
    - Using:
      - Principal parts of verbs
      - Regular verb endings, irregular verbs
    - Using correct principal parts
    - Verb tenses:
      - Using progressive and emphatic forms
      - When to use the tenses
    - Active and passive voice
    - Mood: indicative, imperative, and subjunctive
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
  - Nouns:
    - Recognizing nouns:
      - Compound, common, proper, and collective
      - Concrete and abstract
    - ➤ Substantives
    - Keeping agreement of subject and verb
    - Recognizing and diagramming:
      - Nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address
      - Nouns as appositives
    - ➤ Recognizing and diagramming objective complements
    - Using and diagramming:
      - Gerund phrases
      - Noun clauses
  - Pronouns:
    - Antecedents
    - Recognizing personal, interrogative, demonstrative, indefinite, compound, relative
    - Keeping agreement of verbs and indefinite pronoun subjects
    - Making pronouns agree with their antecedents in number and in gender
    - Nominative case:
      - For subjects, predicate nominatives
      - For appositives of subjects, appositives of predicate nominatives, appositives to subjects, and appositives to predicate nominatives
    - Objective case:
      - For direct objects, indirect objects, objects of prepositions
      - For appositives of direct objects, indirect objects, objects of prepositions
      - For appositives to direct objects, indirect objects, objects of prepositions
    - Possessive case
    - Using correct case for *who, whom, whoever,* and *whomever* and in incomplete clauses beginning with *than* or *as*
    - Avoid pronoun usage problems: double subject, possessive case before a gerund
  - Adjectives:
    - Recognizing and diagramming adjectives: participles and proper adjectives and infinitives as adjectives
    - Distinguishing adjectives from nouns and pronouns
    - Recognizing and diagramming predicate adjectives
    - Using and diagramming:
      - Prepositional and participial phrases as adjectives
      - Infinitive phrases as adjectives
      - Adjective clauses
    - Using adjectives in comparison
    - Avoiding double comparison and double negatives
  - Adverbs:
    - Recognizing and diagramming adverbs
    - Infinitives as adverbs
    - Distinguishing adverbs from adjectives
    - Using and diagramming:
      - Prepositional phrases as adverbs
      - Infinitive phrases as adverbs
      - Adverb clauses
    - Distinguishing dependent clauses:
      - Advanced technique to determine dependent clauses as noun, adjective, or adverb
    - Using: adverbs in comparison
  - Prepositions:
    - Recognizing prepositions, prepositional phrases, and objects of prepositions
    - Distinguishing between prepositions and adverbs
    - Using prepositions correctly
  - Conjunctions:
    - Recognizing coordinating, correlative, and subordinating conjunctions
  - Interjections:
    - Definition
    - Punctuation with interjections
    - Other parts of speech used as interjections
    - Diagramming interjections
- Word study:
  - ➤ Usage and diction:
    - ➤ Glossary of diction

ENGLISH: *Composition with Vocabulary and Spelling IV*



Focused on advancing students' writing and spelling skills, *Composition with Vocabulary and Spelling IV* features lessons demonstrating the importance of clarity and logic. Annotated project examples guide students through the process of drafting concise and coherent compositions. Throughout twenty units, students also apply spelling rules and etymology while learing vocabulary terms from fields of history, fine arts, science, and business.

Added Enrichment

- Spelling and vocabulary
  - Spelling words (400)
  - Vocabulary words (240)
- Spelling lists (20)
  - Organized by spelling rules, common prefixes or roots, history, fine arts, science, or business themed words, and countries and territories
- Vocabulary lists (20)
  - Organized by words to know, prefixes and roots, and highlights in history, fine arts, science, or business
  - Each vocabulary word includes:
    - Pronunciation
    - Part of speech and definition
    - Sample sentence
    - Synonyms and antonyms
    - Related forms of the word
- Practice exercises (80)
- Vocabulary chart showing:
  - Prefixes (52), suffixes (48)
  - Greek and Latin roots and meanings (108)
- Guidelines for solving analogy questions
- Pronunciation key

Evaluation

- Compositions:
  - Compare-contrast essay
  - Process essay
  - Critical book review (2)
  - Description paragraph
  - Personal narrative
  - Research paper and author project
  - Formal oral presentation
  - Online review
  - Literary essay
- Optional (graded at teacher's discretion):
  - Cultivating Creativity (12)
  - Freewriting (9)
- Spelling and vocabulary quizzes:
  - 20 list quizzes
  - Quarterly review (1 each 9 weeks; each counts as 2 quiz grades)

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Composition

- The Writing Process
  - The thesis
  - Improving Writing Style: parallelism
  - The outline
    - Preparing and writing topical and sentence outlines
- The Paragraph
  - Planning and writing the paragraph
  - Rewriting the paragraph with Improving Writing Style: unity, coherence, subordination, stringy style, choppy style, monotonous style, conciseness
  - Editing the paragraph
- Expository writing
  - The Compare-Contrast Essay
    - Planning (Reading with Purpose charts), writing, rewriting, and editing the compare-contrast essay
  - Improving Writing Style: point of view
  - The Process Essay
    - Planning, writing, rewriting, and editing the process essay
- The Critical Book Review
  - Reading and evaluating a work
  - Planning (Reading with Purpose charts) and writing the critical book review
  - Citing sources
    - Using quotations, paraphrases, and summaries
  - Rewriting and editing the critical book review
- Narrative Writing
  - The Description Paragraph
    - Planning, writing, rewriting, and editing the description paragraph
  - Improving Writing Style: correct tense sequence, active voice, and using a consistent subject
  - The Personal Narrative
    - Planning the personal narrative
      - Developing plot structure
      - Creating believable dialogue
      - Implementing dialogue tags
      - Incorporating voice
    - Writing, rewriting, and editing the personal narrative
- The Author Project
  - The Critical Book Review
    - Reading and evaluating a work
    - Planning (Reading with Purpose charts), writing, rewriting, and editing the critical book review
  - The Author Research Paper
    - Planning the research paper (Reading with Purpose charts)
      - Creating a working bibliography
      - Organizing a preliminary outline
      - Taking notes over outside sources
      - Finalizing the outline for the composition
    - Writing, rewriting, and editing the research paper
    - Finalizing the research paper
      - Title page
      - Pledge page
      - Finalized bibliography page
- Applied Writing
  - Formal Oral Presentation
    - Planning the oral presentation
    - Planning the visual
    - Delivering the presentation
  - Improving Writing Style: gobbledygook, jargon, triteness, levels of usage, exact and vivid words, placing and punctuating modifiers
  - ➤ The Online Review
    - ➤ Planning and writing the online review

Composition with Vocabulary and Spelling cont. p. 174

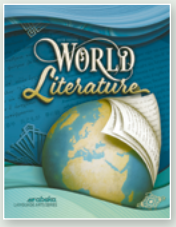
Composition *cont.*

- The Literary Essay
  - Planning (Reading with Purpose charts), writing, rewriting, and editing the literary essay
- ➤ Cultivating Creativity
  - ➤ Writing prompts and freewriting exercises throughout each unit of the book
- Resource Material
  - The Library
  - The Dictionary
  - Documentation
    - Footnotes, endnotes, and parenthetical citations

Spelling & Vocabulary Skills Development

- Master spelling lists including:
  - Vocabulary words and definitions
  - Words that follow spelling rules
  - Prefixes and roots
  - ➤ Themed words in the topics of history, fine arts, science, and business terms
  - ➤ Countries and territories
  - Words to know
- Use vocabulary words in proper context
- Memorize vocabulary definitions
- Be able to identify commonly misspelled words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- Develop ability to solve analogy questions
- Master 60 roots and 40 prefixes
- Learn more than 1,000 synonyms, antonyms, and related forms for vocabulary words
- Analyze word meanings based on their prefixes, roots, and suffixes
- Learn spelling rules
  - *i* before *e* except after *c* or when sounded like *a* as in *neighbor* and *weigh*
  - Double the final consonant before a suffix beginning with a vowel if the word has only one syllable or is accented on the last syllable and if the word ends in a single consonant preceded by a single vowel.
  - Do *not* double the final consonant before a suffix if the last syllable is not accented.
  - Do *not* double the final consonant before a suffix if the word does not end in a single consonant preceded by a single vowel.
  - For words ending in *y* preceded by a consonant, change the *y* to *i* before all suffixes except those beginning with *i*.
  - In adding a suffix to a word ending in silent *e*, retain the *e* if the suffix begins with a consonant, but drop the *e* if the suffix begins with a vowel.
  - Drop the final *e* when *-ment* is added to words ending in *dge*.
  - Retain the final *e* in words ending in *ce* or *ge* when *-able* or *-ous* is added.
  - When two words are compounded (put together as one), the spelling of the two parts does not change.
  - When a prefix is added to a word, the spelling of the word itself does not change.
  - Spell by syllables and say the word aloud or in your mind as the word will be written, not as it may be pronounced.
  - Learn to distinguish between homophones.
  - Learn lists of commonly misspelled words.

ENGLISH: *Literature*



In previous years, students read mostly for enjoyment, but now they will learn about analysis of literature by studying a variety of literary and rhetorical terms and devices. Students will read classics from the literary canon which reflect the historical and cultural viewpoints of authors from around the world analyzed through a biblical worldview.

Art appreciation is also an important part of the literature study in English 10. As the author uses words to paint visual images in our minds, the artist uses his brush to paint a story. *World Literature* includes great works of art that reflect each unit.



Literary Value

- 113 works from around the world
- Prose selections (45), poems (59), essays (8), dramas (5), and novel (1)

Added Enrichment

- Footnotes define and explain unfamiliar words
- Pronounciation guides for foreign words
- Comprehension and discussion questions after selections
- Introductory paragraphs for literary, historical, and cultural information
- Review games
- Author biographies
- Literary terms, themes, and significant structures identified throughout
- Reading strategies at the beginning of each selection

Evaluation

- Comprehension quizzes (16)
- Homework reading quizzes (41)
- Optional reading quizzes (78)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

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Reading Analysis Skills Development

- Develop skills in analysis and comprehension
- Be able to identify significant quotations and the selections in which they are featured
- Increase vocabulary
- ➤ Further develop writing skills
- ➤ Learn various literary genres, including short story, essay, novel, and lyric, narrative, and dramatic poetry
- ➤ Learn meaning and use of literary terms and devices such as theme, plot, imagery, figurative language, point of view, dramatic structure and denouement
- ➤ Learn meaning and use of rhetoric (*logos*, *pathos*, and *ethos*) and rhetorical devices such as rhetorical questions, anaphora, and antithesis
- ➤ Study the development of plot, theme, setting, and character

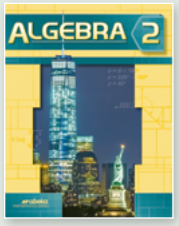
Comprehension, Discussion & Analysis Skills Development

- Read entire works: *The Scarlet Pimpernel* and *Julius Caesar*
- Study drama and learn about Elizabethan and Greek theaters
- Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- Build appreciation for good literature and a love of reading
- ➤ Learn to analyze literature while studying selections
- ➤ Comprehend and appreciate the basic elements of a work of literature
- ➤ Learn to appreciate the rhyme, rhythm, and figurative language of poetry

Poetry Skills Development

- ➤ Memorize 10 lyrical poems
- Develop appreciation of poetry
- Lay foundation for future literature study
- Perform in front of an audience
- Recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

MATHEMATICS: *Algebra 2*



Algebra 2, building from a foundation of basic algebra, develops confidence in problem-solving strategies through application of in-depth algebraic skills. Students will gain thorough exposure to algebraic techniques applied in many branches of mathematics. Concepts such as matrices, linear programming, and hypothesis testing will pique student interest in mathematical application. An increased understanding of algebraic concepts will result in thorough preparation for further study in mathematics.

Algebra 2 builds from mathematical ideas to practical problem solving with applications in business, science, sports, medicine, and statistics. Students will learn to analyze results and make informed decisions for everyday life.

For this grade level, see also *Plane Geometry* on p. 194.
Also available: *Consumer Mathematics* and *Business Mathematics* on Electives pp. 226–230.

Features:

- Flexible pacing options in curriculum
- Review exercises for every section (83)
- Mid-chapter reviews (12)
- Chapter reviews (12)
- Word problem review
- Quarter reviews (2)
- Semester Review
- Final Review

Evaluation:

- Quizzes (42)
- Tests (8)
- Quarter Exams (2)
- Semester Exam
- Final Exam

➤ **RED** *indicates first introduction of content.*

Basic Algebra

- Order of operations
- Algebraic properties
- Exponent properties
- Negative exponents
- Words as Algebraic Expressions
- Addition and Subtraction of Polynomials
- Multiplication and Division of Polynomials
- Special Cases of Multiplication
- Factoring Special forms
- Sum and Difference of Odd and Even Powers
- Factoring by Grouping

Equations and Inequalities

- Equations in one variable
  - Absolute value
  - Literal
  - Quadratic
    - Zero Factor property
    - Extracting the root
    - Completing the square
    - Quadratic formula
    - Discriminant
  - Rational
    - Cross-multiplication
    - LCD
  - Radical
- Inequalities
  - ➤ Interval Notation
  - Linear
  - Compound
  - Absolute Value
- ➤ Complex numbers
  - ➤ Imaginary unit
  - ➤ Powers of i
  - ➤ Standard form
  - ➤ Arithmetic
  - ➤ Quadratic with complex solutions

Polynomial Equations and Inequalities

- ➤ Rational Zero Theorem
- ➤ Factor Theorem
- ➤ Remainder Theorem
- ➤ Synthetic Division
- ➤ Solving a polynomial equation
- ➤ Equations of the quadratic form
  - ➤ Integer exponents
  - ➤ Rational exponents
- ➤ Nonlinear absolute value equations
- ➤ Polynomial Inequalities
  - ➤ Critical number
  - ➤ Rational inequalities

Functions and The Cartesian Plane

- Two-variable linear equation
- Distance formula
- ➤ Midpoint formula
- Slope formula
- Intercepts
- Graphing with slope and point
- Standard form
- Slope-intercept form
- Point-slope form
- Parallel and Perpendicular lines
- Direct variation
- Inverse variation
- Functions
  - Vertical line test
  - ➤ Algebraic test
  - Notation
  - Evaluation
  - Domain
  - Range
  - Types of functions
    - Quadratic
    - Constant
    - Absolute value

Algebra 2 cont. p. 177

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MATHEMATICS: *Algebra 2* *cont.*

Functions and The Cartesian Plane *cont.*

- Types of functions cont.
  - Radical
  - Rational
- ➤ Combination of Functions
- ➤ Composition of Functions
- *Translational* Graphing
  - Parent function
  - Standard graphing form
  - Rigid and Nonrigid Transformations
- Parabola Vertex Formula

System of Equations and Inequalities

- Intersecting, parallel, and coincident lines
- Substitution method, Elimination method
- ➤ Parameter
- ➤ Three-variable linear systems
- ➤ Elementary row-operations
- Two-variable inequalities
- System of two-variable inequalities
  - ➤ Intersection
  - ➤ Unbounded, bounded
  - ➤ Boundary line
- Linear programming
  - Objective function
  - Constraints
  - Feasible solution

Matrices

- ➤ Definition
- ➤ Parts and types of matrices
- ➤ Arithmetic with matrices
- ➤ Matrix multiplication
- ➤ Identity matrix
- ➤ Inverse matrix
- ➤ Elementary row operations
- ➤ Gaussian elimination
  - ➤ Augmented matrix
  - ➤ Triangular form
- ➤ Gauss-Jordan elimination
  - ➤ Diagonal form
- ➤ Determinants
- ➤ Diagonal
- ➤ Antidiagonal
- ➤ Cramer's rule
- ➤ Matrix inversion
- ➤ Solving by matrix inversion
- ➤ Adjugate matrix

Exponential and Logarithmic Functions

- ➤ Finding inverse of a function
- ➤ One-to-one function
- ➤ Horizontal line test
- Evaluating exponential functions
- ➤ Translational graphing of exponential functions
- ➤ Logarithmic functions
  - ➤ Common logarithmic function
  - ➤ Natural logarithmic function
- ➤ Converting between exponential and logarithmic form
- ➤ Properties of logarithms
  - ➤ Expanding logarithmic expressions
  - ➤ Condensing logarithmic expressions
- ➤ Change of base formula
- ➤ Solving exponential and logarithmic equations
  - ➤ Inverse properties, exponentiation, taking logarithm of both sides
- ➤ Application of logarithms
  - ➤ Bacteria growth, Interest formula, Newton's law of cooling, Sound level

Trigonometry

- Angle properties
- Classification of angles
- Sum of angles
- Right triangle properties
- ➤ Right triangle setup
- Similar polygons
- Trigonometric functions
- ➤ Trigonometric reciprocal functions
- ➤ Using calculator
  - ➤ Inverse
  - ➤ Reciprocal
- ➤ Radian
- ➤ Special triangle
  - ➤ 30°-60°-90° triangle
  - ➤ 45°-45°-90° triangle
- ➤ Angles on the Cartesian plane
  - ➤ Reference angle
  - ➤ Reference triangle
  - ➤ Coterminal angles
  - ➤ ASTC
- ➤ Trigonometric Equations
- ➤ Unit Circle

Sequences, Series, and Counting

- Arithmetic Sequences
- ➤ Series
  - ➤ Summation notation
  - ➤ Series formulas: constant, consecutive integers, consecutive squares
- ➤ Mathematical induction
- Geometric Sequences
  - ➤ Converging, Diverging
- ➤ Finite Geometric Series
- ➤ Infinite Geometric Series
- Counting
- Permutation
- Combination
- Binomial Theorem

Probability

- Relative frequency
- Mutually and non-mutually exclusive events
- Probability of multiple events
  - Independent and dependent events
- Frequency distribution
- Relative frequency distribution
- ➤ Probability density function
- ➤ Uniform probability distribution
- ➤ Geometric probability

Algebra 2 cont. p. 178

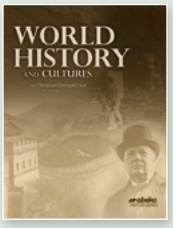
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MATHEMATICS: *Algebra 2* *cont.*

Statistics

- Descriptive and inferential statistics
- Measures of center
  - Mean, median, mode
- Measure of dispersion
  - Range
  - › Mean deviation
  - Standard deviation
  - › Variance
- Normal distribution
- › Standard normal distribution
- › Calculating z-score
- › Sampling Distribution
- › Central Limit Theorem
- › Hypothesis Testing

HISTORY & GEOGRAPHY: *World History*



World History and Cultures is written and taught from the Christian perspective. Basic to this perspective is the conviction that God is the Creator of the universe and the Controller of history. Because the focal point of history is the birth of Christ, *World History and Cultures* takes the view that all history is either pointing toward the birth of Christ or looking back to it. Students study how God used events before the birth of Christ to prepare the world for His coming. Then, after His birth, they trace the impact of Christianity on the events of world history.

The Christian perspective of *World History and Cultures* helps students see the sovereign hand of God in history, as well as the consequences of man's choices. The Providence of God has guided history for His glory. Yet each person is free to choose whether to obey God and be used by Him, or to disobey and suffer the consequences. Thus world history also illustrates the truth of Proverbs 14:34: "*Righteousness exalteth a nation: but sin is a reproach to any people.*"

Added Enrichment

- Special feature boxes (56):
  - Provide a framework for understanding the concepts in history
  - Explore language and writing through the ages
  - Give insight to the people and events of history
- Maps correlating to text (84)

Evaluation

- Reading quizzes (30)
- Review quizzes (40)
- Geography map projects (8; each counts as quiz grade)
- Current events (32; each counts as quiz grade)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Foundations for Studying History

- Creation versus evolution
- Capital punishment
- Beginning of languages, nations, and races: Nimrod and Babel

Asia and Africa: The Beginning of Civilization

- Cradle of Civilization: Fertile Crescent and Mesopotamia (c. 2300–1800 B.C.):
  - Sumer:
    - Cuneiform, culture, civilization, education, architecture, trade, society, religion
    - › Mathematics, government
  - › Settlements: Eridu, Uruk, Ur
  - › Golden Age of Ur, Epic of Gilgamesh
- Middle East (c. 1800 B.C.–A.D. 700s):
  - Old Babylonian Empire:
    - Hammurabi and the law
    - › Place-value notation, Babylonian Genesis
  - Hittite Empire
  - Assyrian Empire: Tiglath-pileser I, Nineveh
  - New Babylonian Empire: Nebuchadnezzar and Daniel
  - Persian Empire: Cyrus the Great, Darius I, and Xerxes I
  - Israel: Patriarchs, Exodus, Moses, Decalogue, theocracy, David, and Divided Kingdom
  - › Hebrew and Arabic language
  - Rise of Islam: Byzantine Empire, Constantinople, and Mohammed
  - Missionary efforts:
    - › Ion-Keith Falconer and Samuel Zwemer
- Other Asian cultures (c. 2000 B.C.–A.D. 1800s):
  - India: Indus River, Hinduism, caste system, and Buddhism
  - Ancient Chinese dynasties
  - › Chinese language
  - Japan: Shinto religion
- Egypt—Gift of the Nile (c. 2300 B.C.–A.D. 1700s):
  - History and language: Herodotus and the Rosetta Stone
  - › Religion: *Book of the Dead*
  - › Thebes
  - Old, Middle, and New Kingdom
- Other African cultures (c. 2300 B.C.–A.D. 1700s):
  - › Land of Phut and Cush
  - Ethiopia:
    - Kingdom of Aksum and Ethiopian Orthodox Church:
      - › Piankhi, Ebed-melech
  - Early Christianity in North Africa: Simon of Cyrene, Tertullian, Clement of Alexandria, Athanasius, and Augustine
  - Other empires and kingdoms:
    - Ghana, Mali, Songhai, and Kongo:
      - › Mansa Musa and King Ewuare

World History cont. p. 179

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

Europe: Beginnings of Western Civilization

- Greece (c. 2000–30 B.C.):
  - Minoans and Mycenaeans
  - Civilization: Homer, Greek gods, city-states, Olympics
  - Greco-Persian Wars:
    - ➤ Ionian Revolt, Battle of Plataea
  - Types of government
  - ➤ Draco's Code
  - ➤ Court of Areopagus
  - ➤ Peisistratus and Cleisthenes
  - Sparta and Athens: Peloponnesian War
  - Macedonia:
    - Alexander the Great
    - ➤ Battle of Ipsus
  - Classical Greece:
    - Writing and philosophy
    - ➤ Hellenic Age, education and architecture, art and science
  - Hellenistic Age:
    - ➤ Stoics and Epicureans
  - ➤ Language of the New Testament: Koine Greek
- Rome (c. 753 B.C.–A.D. 476):
  - Early people:
    - Latins, Etruscans, Magna Graecia, Carthage, and Gauls
    - ➤ Italis
  - ➤ Society: family, religion, education, and government
  - Punic Wars:
    - Hannibal and Scipio
    - ➤ Battle of Cannae
  - ➤ Civil Wars: reforms of Gracchi
  - Pax Romana
  - Emperors:
    - Claudian, Flavian, "Five Good Emperors," "Barracks Emperors," Diocletian
      - ➤ Hadrian's wall
    - Christian emperor: Constantine I
  - Fall of Rome:
    - ➤ Romulus Augustulus
  - ➤ Legacy of Rome: language, literature, law
- Early church history (A.D. 30–476):
  - Apostolic church: the New and Old Testaments
  - ➤ Persecuted and imperial church
- Byzantine Empire (c. A.D. 324–1453):
  - ➤ Age of Justinian: Hagia Sophia, Justinian Code, and Theodora
  - ➤ Fall of Byzantium
  - ➤ Byzantine contributions: Eastern Orthodox, Greek liturgy, Byzantine text

The Middle Ages: From the Ancient to the Modern

- Dark Ages (c. A.D. 500–1500):
  - Church of Rome:
    - Petrine Theory, Pope Leo I, Gregory I
    - ➤ Patrick of Ireland
  - Doctrine of Romanism
  - Other teachings: John Wycliffe, Vulgate, Peter Waldo, Council of Toulouse
  - Charlemagne's empire:
    - ➤ Division: Lothar, Charles, Louis
    - Lorraine
    - Saxons
    - ➤ Salians, Hohenstaufens
    - ➤ Investiture Controversy
    - ➤ Decline of the papacy: Babylonian Captivity of the papacy and the Great Schism
- Medieval culture (c. A.D. 500–1500):
  - Feudal society and chivalry
  - Crusades:
    - Check and balance results
    - ➤ Bernard of Clairvaux, Frederick Barbarossa, Philip Augustus
  - ➤ Pre-Reformation Europe
  - Universities and scholasticism:
    - Thomas Aquinas and William of Ockham
    - ➤ Trivium and quadrivium, scholasticism
  - Forerunners of the Reformation:
    - John Wycliffe, Roger Bacon, and John Huss
    - ➤ Gerhard Groote and Savonarola
  - Italian Renaissance:
    - Humanism
    - ➤ Petrarch, Boccaccio, Giotto
  - Johann Gutenberg: Gutenberg Bible
- Rise of modern nations (c. 850–1300):
  - Ancient Britain: Stonehenge, Celts, Angles, Saxons, Jutes, and *Beowulf*
  - Alfred the Great
  - Norman Conquest:
    - ➤ Charter of Liberties and Exchequer
  - Plantagenet kings:
    - ➤ Eleanor of Aquitaine, House of Lords, and House of Commons
  - Hundred Years' War, Wars of the Roses
  - Feudal France:
    - Hugh Capet and Estates-General
    - ➤ House of Valois
  - Spain:
    - Moorish culture, the Reconquista, Spanish Inquisition
    - ➤ El Cid, Antonio de Nebrija
  - Portugal:
    - Prince Henry
    - ➤ Alfonso Henriques
  - ➤ Age of Exploration
  - Native civilizations: Arawaks, Mayas, Incas, and Aztecs
  - France: Northwest Passage

The Reformation Era: The Modern Age Begins

- Protestant Reformation (c. 1517–1600):
  - Renaissance in Germany, England, and France:
    - ➤ Johann Reuchlin, Philipp Melanchthon, John Colet, Thomas Moore
  - Martin Luther:
    - Charles V, Edict of Worms, popular education
    - ➤ Katharina von Bora
  - Switzerland:
    - Ulrich Zwingli, John Calvin, Conrad Grebel, Anabaptists
    - ➤ Guillaume Farel
- Post-Reformation Europe (c. 1517–1650):
  - ➤ Augsburg Confession
  - Counter-Reformation:
    - The Inquisition, Loyola
    - ➤ The Index, Council of Trent

World History cont. p. 180

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

The Reformation Era: The Modern Age Begins *cont.*

- Reformation in the Netherlands: Council of Blood and William the Silent
- English Reformation:
  - Tudor rulers, Spanish Armada
  - ➤ Act of Supremacy, Lady Jane Grey
- Scottish Reformation: Mary Stuart vs. John Knox
- Reformation in France: Huguenots and St. Bartholomew's Day Massacre
- Thirty Years' War:
  - Peace of Westphalia
  - ➤ Count of Tilly, Albrecht Wallenstein
  - ➤ Battle of Lützen, results of Thirty Years' War
- Post-Reformation science and culture (c. 1517–1800):
  - Founders and progress of modern science
  - Classics: music and art

The Age of Ideas: Revolution, Revival, and Reform

- France—road to revolution (c. 1640–1815):
  - ➤ Age of Absolutism: War of the Spanish Succession
  - Enlightenment:
    - ➤ Diderot
  - ➤ Reasons for the revolution: religious, economic, and social turmoil
  - French Revolution
  - Reign of Terror:
    - Atheism, deism
    - ➤ Directory
  - Tyranny of Napoleon: Continental System, Battles of Leipzig and Waterloo
- England and America: quest for freedom (c. 1600–1800):
  - James I: Puritans, Separatists, KJV, Jamestown, and Plymouth
  - ➤ National Covenant, Long Parliament, Grand Remonstrance
  - English Civil War:
    - Oliver Cromwell
    - ➤ Rump Parliament, Battle of Marston Moor, Battle of Naseby, Treaty of Dover
  - Glorious Revolution
  - Pietism in Germany:
    - Philipp Spener
    - ➤ Count von Zinzendorf
  - Great Awakening in America: Jonathan Edwards and George Whitefield
  - ➤ Age of Reason: John Locke and David Hume
  - Wesleyan Revival: John and Charles Wesley
  - Rise of modern missions:
    - William Carey and Adoniram Judson
    - ➤ John Howard
  - French and Indian War
  - American War for Independence
- Age of Industry (c. 1760–1900):
  - Protestant work ethic
  - Agricultural advancements: better use of land and tools
  - Industrial Revolution: Enclosure Movement and domestic and factory system
  - Transportation and communications:
    - ➤ Guglielmo Marconi
  - ➤ Science: Dalton, Faraday, Kelvin, Maxwell, Curie, Jenner
  - United States' rise to power: capitalism and the Spanish-American War
  - Blessings of capitalism: John D. Rockefeller, Andrew Carnegie, J. P. Morgan, philanthropy, and Adam Smith
- Victorian Era: England's Age of Progress (1837–1901):
  - Great English statesmen: William Pitt the Younger and Sir Robert Peel
  - Victorian England: William Gladstone and Benjamin Disraeli
  - China and Japan missions:
    - ➤ Treaty of Amity and Commerce, Neesima
  - Christianity and charity
  - ➤ British imperialism:
    - Crimean War and British North America Act
  - India: Sepoy Rebellion, William Carey and Amy Carmichael
- Victorian Era: England's Age of Progress (1837–1901) cont.:
  - Africa:
    - David Livingstone, Robert Moffat, and Samuel Adjai Crowther
    - ➤ Khama
  - South Africa:
    - Afrikaners and Boer War
    - ➤ Cecil Rhodes, Paul Kruger, Louis Botha
  - ➤ Beginning of Britain's decline: Charles Darwin, Thomas Henry Huxley, Christian Socialists, Fabian Society, utilitarians, and modernism
- Unbelief and revolution in 19th-century Europe (c. 1800–1900):
  - ➤ German philosophy and liberal Christianity: romanticism, idealism, relativism, dialectic thinking, "Higher Criticism," modernists, and Darwinism
  - Age of Metternich
  - Revolutions of the 1830s: France, Belgium, and Central Europe
  - Revolutions of 1848: Louis Napoleon, Austria, and German states
  - Franco-Prussian War:
    - Otto von Bismarck and Wilhelm II
    - ➤ Third French Republic
  - ➤ Rise of modern socialism

Twentieth Century: A World at War

- World War I (1914–1918):
  - Road to war: spiritual decay
  - Fronts:
    - Eastern, western, Balkans, and Italian
    - ➤ Pétain, von Ludendorff
  - Bolshevik Revolution
  - American involvement:
    - *Lusitania* and the Zimmermann Note
    - ➤ Weimar Republic
  - ➤ Providence of God in History
  - Aftermath of war: Wilson's Fourteen Points, Treaty of Versailles, and League of Nations
- Rise of Communism (1848–1939):
  - Roots of Communism: Karl Marx, dialectical materialism, bourgeoisie, proletariat, Frederich Engels, *Communist Manifesto, Das Kapital*
  - Early Russian history of the czars
  - Bolshevik Revolution: Vladimir Lenin, Leon Trotsky, Red Guards, Cheka
  - Lenin's Russia:
    - Third International, new economic policy, USSR
    - ➤ Central Committee
  - Stalin's Russia: Five-Year Plan, collectivization, genocide
  - ➤ *Why Communism Kills*

World History cont. p. 181

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *World History* *cont.*

Twentieth Century: A World at War *cont.*

- ➤ Twentieth-century liberalism (c. 1900–1940):
  - ➤ Defining liberalism and conservatism
  - ➤ Liberal pseudo-sciences and philosophies
  - ➤ Liberalism in education versus traditional education
  - ➤ Religious liberalism: modernism, social gospel, and ecumenism
  - ➤ Christian witness
  - ➤ Liberalism and conservatism in the arts
  - Prosperity of the Twenties: Paris Peace Pact
  - Great Depression: easy credit, risky investment, and government involvement
- World War II (1939–1945):
  - Ideologies and dictatorships
  - Aggressors on the march:
    - ➤ Munich Pact, Siegfried and Maginot Lines
  - European Theater:
    - Battle of Britain, Winston Churchill, and Erwin Rommel
    - ➤ Invasion of Scandinavia
  - Invasion of Russia
  - American involvement:
    - Neutrality Act, Lend-Lease Act, Pearl Harbor, and D-Day
    - ➤ Panay Incident
  - European Theater: Operation Torch, Italian Campaign
  - Key battles in the Pacific Theater:
    - Bataan Death March, Doolittle's raid, Midway, Coral Sea, Guam, Saipan, Iwo Jima, Okinawa, and kamikazes
    - ➤ Battle of the Java Sea, Guadalcanal, the Aleutians, the Gilberts, the Marianas
  - Manhattan Project:
    - ➤ Fermi, Teller, Oppenheimer
  - Holocaust
  - ➤ Aftermath: wartime conferences
- Cold War Era (c. 1945–1989):
  - ➤ Forming, framework, and failure of the UN
  - Communist subversion: Rosenbergs, Klaus Fuchs, and Joseph P. McCarthy
  - Response of the West:
    - Truman Doctrine, containment, Marshall Plan, and NATO
    - ➤ Warsaw Pact
  - Fall of Nationalist China: Chiang Kai-shek, George C. Marshall, and Taiwan
  - Communist China:
    - Mao Tse-tung, cultural revolution, Red Guards
    - ➤ Five-Year Plan
  - Korean War:
    - MacArthur vs. containment
    - ➤ Inchon
  - International changes:
    - Communist Cuba
    - ➤ South America: Isabel Perón and Salvador Allende
    - ➤ Asia:
      - ➤ Conflicts in Israel, Lebanon, Iran, and Iraq
      - Conflict in India
    - Africa
  - Vietnam War:
    - ➤ Ngo Dinh Diem
    - ➤ Nuclear freeze movement
  - Space Age
  - Rise of conservatism in the West
  - Margaret Thatcher, Ronald Reagan, Falkland Islands, Reagan Doctrine, SDI:
    - ➤ KAL 007, Chernobyl
  - Changes in Eastern Europe: perestroika, glasnost, Berlin Wall falls, Poland, Hungary
  - Tiananmen Square Massacre
- Rise of globalism (c. 1990s–present):
  - Persian Gulf War
  - Rise of Islamic terrorism: 9/11 attacks and Bush Doctrine
  - ➤ Pakistan and Kashmir
  - Changes in Western Europe:
    - Gordon Brown, Jacques Chirac, Angela Merkel
    - ➤ Maastricht Treaty
  - Eastern Europe: Bosnia, Slobodan Milosevic, Kosovo, Dayton Peace Accords
  - Russia after the Cold War:
    - Boris Yeltsin, Dmitri Medvedev
    - ➤ Chechnya
  - ➤ North Korea: Kim Jong Un
  - New leaders in African nations
  - Cuba and Raul Castro
  - ➤ South America: Daniel Ortega
  - ➤ Canada: Pierre Trudeau, Kim Campbell
  - ➤ United States: GATT
  - Asia and the Pacific:
    - Japan
    - ➤ Taiwan and Lee Teng-hui
    - ➤ South Korea and Kim Young Sam
    - Southeast Asia
  - Israel and the PLO:
    - Road map for peace
    - ➤ Operation Defensive Shield
  - ➤ Intelligent Design
  - Bioethics
  - Environmentalism and globalism

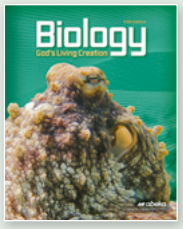
Geography

- Geography projects (8) featuring maps, both physical and political:
  - The World
  - The Middle East
  - Asia
  - Africa
  - Europe
  - North America
  - South America
  - Australia and New Zealand

Prayer Time

- Learn to pray for our nation and for government officials

SCIENCE: *Biology*



Biology: God's Living Creation deals with one of the most fascinating subjects known to man. Students begin with a combination of field, text, and lab work to take a closer look at plants. They will use the microscope and dissections as they study the Creator's provision for plants and animals. A detailed study of the anatomy and physiology of the human body will lead students to understand that they are "fearfully and wonderfully made."

Students will look deeper into the micro-cosmos as they learn some of man's latest discoveries about the most complicated structure in all of creation: the living cell. They will see the intricate detail that God has built into living things and His master plan for transmitting information within an organism and from one generation of organisms to the next. Students will also understand just how far man still has to go to gain a complete understanding of God's living creation.

Added Enrichment

- Feature articles with information about God's design, provision, and the wonders of His creation (72)
- Laboratory exercises (25); field-study projects (3)
- Application and Critical Thinking questions for every chapter

Evaluation

- Reading quizzes (16)
- Review quizzes (37)
- STEM project (counts as 6 quiz grades and 1 test grade)
- Tests (8), Quarter Exam (2)
- Semester Exam, Final Exam

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Botany

- Angiosperms:
  - Introduction to biology: definition and major fields of study
  - Parts of a green plant: flowers, leaves, stems, roots
  - Nitrogen cycle
  - Families of angiosperms:
    - Composite, mint, parsley, rose, pea, lily
    - ➤ Mustard, nightshade, cashew
  - Monocots and dicots:
    - Types of angiosperms: characteristics of monocots and dicots
  - Grasses:
    - Cereal crops
    - ➤ Turf grasses, other grasses
  - Broadleaf trees:
    - Observing trees, characteristics of trees
    - ➤ Guide to familiar American broadleaf trees by groups—bark, leaves, fruits, and crown shapes are pictured and explained
- Leaves:
  - ➤ Systems and organs in plants
  - External structure of leaves:
    - Leaf shapes
    - Parts of a leaf:
      - ➤ Stipule
    - Simple and compound leaves
  - Arrangement of leaves on stems:
    - Nodes, opposite, alternate, whorled, and rosette
    - Phototropism
  - ➤ Three types of plant tissues: structural, vascular, and meristematic
  - Structure of leaves:
    - ➤ Epidermis, mesophyll
    - Veins, parts of plant cells
  - Photosynthesis:
    - ➤ Thylakoids, light and dark reactions
    - Products of photosynthesis
    - ➤ Factors that influence photosynthesis
  - Fall coloration of leaves and special leaves:
    - Leaf pigments, abscission layer
    - ➤ Cellulase
  - ➤ Water pressure and wilting
- Flowers, fruits, and seeds:
  - Flower parts:
    - Sepals, petals, stamen, pistil
    - ➤ Complete and incomplete flowers
    - ➤ Monoecious vs. dioecious
  - ➤ Factors affecting flowering: photoperiodism
  - Development of fruits and seeds: pollination, fertilization
  - Formation, types, and function of fruits:
    - ➤ Simple, aggregate, and multiple fruits
    - Seed dispersal
  - Structure of seeds: parts of the embryo, germination
- Stems and roots:
  - External structure of woody stems:
    - Buds, scales, bud-scale scars, growth
    - ➤ Bundle scars
  - Internal structure of woody stems:
    - Bark, pith
    - Wood:
      - Heartwood, sapwood, annual rings
      - ➤ Tracheids
  - ➤ Herbaceous stems: dicots and monocots
  - Vegetative reproduction:
    - ➤ Asexual reproduction, cutting, layering, grafting, budding, culturing
  - Special stems: bulbs, corms, rhizomes, stolons, tendrils, tubers, thorns
  - ➤ Plant hormones
  - Root systems:
    - Taproots, fibrous roots
    - Structure:
      - Root hairs, root cortex
      - ➤ Epidermis, central vascular cylinder
    - Primary and secondary growth
  - Root's absorption and transportation of water:
    - Diffusion, osmosis, capillarity
    - ➤ Sap stream

Biology cont. p. 183

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Biology* *cont.*

Botany *cont.*

- Variety in the world of plants:
  - Classification:
    - Linnaeus, John Ray
    - Kingdom, phylum, class, order, family, genus, species, scientific name
    - ➤ Domains, phylogeny
  - Conifers and other gymnosperms:
    - Characteristics and reproduction of conifers, cycads, and ginkgo trees
    - ➤ Gnetophytes
  - Ferns, club mosses, and horsetails:
    - Spores
    - ➤ Structures and life cycle of ferns; alternation of generations
    - Club mosses, horsetails
    - ➤ Lycopodium
  - Mosses and liverworts:
    - Structures of moss
    - ➤ Uses, types and life cycle of mosses
    - Liverwort characteristics
  - Algae:
    - Characteristics
    - Green algae:
      - ➤ Desmids
    - Brown algae:
      - ➤ Gulfweed
    - Yellow, red, and blue-green algae
    - ➤ Dinoflagellates
    - ➤ Eutrophication
  - Fungi:
    - Importance
    - Club fungi:
      - ➤ Rust life cycle
    - Molds:
      - ➤ Parasitic molds
    - Sac fungi
    - ➤ Slime molds
    - Lichens

Human Anatomy & Physiology

- Fearfully and wonderfully made:
  - Wonders of the human body: the crown of God's creation
  - Introduction to body cavities:
    - ➤ Cranial, spinal
    - Thoracic, abdominal
  - Body systems: introduction to eleven systems
    - ➤ Homeostasis and feedback mechanisms
  - Tissues:
    - Four main types
    - Tissue fluids
    - ➤ Membranes: four main types
    - Cells
    - ➤ Matrix
  - Vestigial organs: brief discussion
- Bones and muscles:
  - ➤ Detailed discussion of axial skeleton
  - ➤ Detailed discussion of appendicular skeleton
  - Bones:
    - Classification
    - Structure:
      - ➤ Diaphysis, epiphysis, medullary cavity
    - ➤ Tissues
    - Bone growth and development:
      - ➤ Maintenance
      - Nutrition
      - Exercise:
        - ➤ Wolff's law
      - ➤ Construction
      - Fracture and repair
  - Joints:
    - ➤ Synovial fluid
    - Ligaments, types of joints, problems with joints
  - Muscles:
    - Types
    - ➤ Specific muscles for moving different parts of the body
  - Structure of skeletal muscles:
    - ➤ Fascia, tendons, fibers, and neuromuscular junction; muscle control
  - Muscles and exercise: hypertrophy, atrophy, red and white fibers
- The nervous system:
  - Divisions of the nervous system:
    - Central nervous system:
      - ➤ Glial cells, gray and white matter, myelin, ganglia, plexus, poliomyelitis
    - Peripheral nervous system:
      - ➤ Mixed nerves
    - Autonomic nervous system
  - ➤ Nerves: median nerve, Schwann cells, multiple sclerosis
  - How neurons work:
    - ➤ Action potential
    - Synapse, neurotransmitter
    - ➤ Inhibitors
    - Parkinson's disease
  - Reflex action:
    - ➤ Reflex arc
  - Parts of the brain:
    - Cerebrum:
      - Hemispheres
      - ➤ Corpus callosum
      - Cerebral cortex, lobes, cerebral palsy
    - Cerebellum:
      - Location
      - ➤ Structure
      - Function, purpose
    - Brain stem: medulla oblongata, pons, midbrain, reticular formation
    - Limbic system:
      - Thalamus, hypothalamus
      - ➤ Hippocampus, amygdala
  - The mind and the brain:
    - ➤ Behaviorism
  - Neurological health:
    - Caring for the nervous system:
      - ➤ REM sleep
    - Importance of avoiding alcohol:
      - ➤ Neuritis

Biology cont. p. 184

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Biology* *cont.*

Human Anatomy & Physiology *cont.*

- Injuries to the nervous system:
  - ➤ Sciatica
  - Stroke, concussion, amnesia, coma
- Neurological diseases:
  - Tetanus, Alzheimer's disease, epilepsy
  - Dementia:
    - ➤ Acute confusion, senile dementia
    - Arteriosclerotic dementia
- Senses:
  - ➤ Somatic vs. special senses
  - Skin sensations
  - Chemical senses (taste and smell):
    - ➤ Taste bud structure
    - ➤ Primary odors
- Hearing:
  - ➤ Malleus, incus, stapes
  - ➤ Tinnitus
- Vision:
  - Protection of the eye: socket, eyelid, lacrimal glands
  - ➤ Eye movement
  - Eye structure and function:
    - Sclera
    - Uvea:
      - ➤ Choroid, ciliary body
      - Iris, pupil
    - Retina:
      - ➤ Fovea
      - ➤ Structure and function of rod and cone cells; rhodopsin; color vision, persistence of vision
      - ➤ Blind spot
      - ➤ Aqueous humor, vitreous humor
    - Lens
- Defective vision:
  - Nearsightedness, farsightedness, astigmatism, night blindness
  - ➤ Presbyopia, colorblindness
- ➤ Glaucoma
- Nutrition and digestion:
  - Nutrients and energy:
    - Calories, metabolism
    - ➤ Obesity
    - Macronutrients
      - Carbohydrates, proteins, lipids
    - Micronutrients
      - Vitamins, minerals and water:
        - Coenzymes
        - Edema
  - Beginning of the digestive system:
    - Alimentary canal, digestion, enzymes, glands
    - Oral cavity:
      - ➤ Palate, bolus, papillae
      - ➤ Wisdom tooth, impacted, mastication
    - Esophagus: peristalsis, epiglottis
  - Stomach and intestines:
    - Stomach structure and function:
      - ➤ Hunger contractions
      - Gastric juice, hydrochloric acid, chyme
      - ➤ Intrinsic factor
      - ➤ Cardiac and pyloric sphincters
    - The liver and pancreas in digestion:
      - Bile, gallbladder
      - ➤ Bile salts, emulsification, common bile duct
      - Pancreatic juice
      - ➤ Sodium bicarbonate production by the pancreas
    - Small intestine:
      - Primary organ of digestion and absorption
      - Divisions of the small intestine
      - Villi
      - ➤ Microvilli, lacteal
      - Insulin, glucagon
      - ➤ Urea
    - Large intestine: function and structure
      - ➤ Divisions of the large intestine
  - Gastrointestinal disorders:
    - Food poisoning
    - ➤ Dyspepsia
    - Ulcers, effects of alcohol
    - ➤ Constipation, diarrhea
    - Dysentery, colon cancer
- Circulation and respiration:
  - Blood: cardiovascular system, arteries, veins, capillaries
  - Composition of blood:
    - Plasma, red blood cells, white blood cells, platelets:
      - ➤ Plasma proteins, circulatory shock
      - ➤ Red blood cell production, leukemia
  - ➤ Blood types: antigens, ABO blood group, universal donors and recipients, Rh blood group
  - Design of the heart:
    - Structure:
      - ➤ Layers, valves, and skeleton
    - Blood flow:
      - Through the heart
      - ➤ To the heart
  - ➤ Detailed structure and function of cardiac muscle, electrical system, heart beats
  - ➤ Types, symptoms, and treatment of heart failure
  - Circulation of blood:
    - Arteries, veins, and capillaries:
      - ➤ Structure of blood vessels
    - Atherosclerosis
    - ➤ Branches of systemic circulation
    - Pulmonary circulation
    - Blood pressure and pulse
  - Cardiovascular health: leading cause of death
  - Anatomy and function of respiratory system:
    - ➤ Types of respiration: external, internal, and cellular
    - Organs of respiration:
      - ➤ Nasal meatuses
      - Throat structures
      - Trachea, bronchi
      - Lungs:
        - Bronchitis, pneumonia, bronchial asthma
        - Pleural membrane:
          - ➤ Pleurisy
      - Diaphragm

Biology cont. p. 185

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Biology* *cont.*

Human Anatomy & Physiology *cont.*

- The breathing process:
  - ➤ Role of intercostal muscles
  - ➤ Control by the medulla oblongata
  - Lung capacity:
    - Vital capacity
    - ➤ Tidal volume
- Respiratory diseases:
  - Common cold, influenza, tuberculosis, emphysema, lung cancer
  - ➤ Cystic fibrosis
- Integumentary, excretory, endocrine, and reproductive systems:
  - ➤ Introduction: body's design for maintaining homeostasis
  - Integumentary system:
    - Purpose
    - Structure:
      - ➤ Psoriasis, keratin in skin, skin pigments
    - Tanning, sunburn
    - ➤ Hair structure
    - Sebaceous glands
    - ➤ Details of sweat glands
  - Excretory system:
    - Kidneys:
      - ➤ Function, regulation, structures, failure, dialysis
  - Endocrine system:
    - ➤ Endocrine vs. exocrine glands
    - Hormones:
      - ➤ Hormone receptors
    - Pituitary gland:
      - Hypothalmus, somatotropin
      - ➤ Disorders: pituitary gigantism, pituitary dwarfism, acromegaly
      - ➤ Gonadotropins
    - Thyroid and parathyroid glands:
      - Thyroxine
      - Thyroid disorders:
        - ➤ Cretinism, hypothyroidism, hyperthyroidism
        - Simple goiter
    - Pancreas (endocrine function): islets of Langerhans, insulin, glucagon, diabetes mellitus
    - Adrenal glands: epinephrine, steroid hormones, cortisol, aldosterone
    - Pineal gland: melatonin
  - Reproductive system
    - ➤ Gametes
    - Gonads:
      - Endocrine function: adolescence, puberty, secondary sex characteristics
    - ➤ Major organs
      - Prenatal development
      - ➤ Gestation, trimesters, primary germ layers, chorion, digestive tube, neural plate, labor
      - Sexual morality
- Disease and the body's immune system:
  - Introduction: disease, microbes, pathogen, infectious and noninfectious, acute, chronic
  - Noninfectious diseases: degenerative, immunological, hormonal, congenital and genetic, nutritional, harmful substances, cancer
  - Infectious diseases:
    - Communicable and noncommunicable
    - Bacteria:
      - Structure:
        - ➤ Plasmids
      - ➤ Types, variations and shapes, reproduction
      - ➤ Disease:
        - ➤ Germ concept of disease, Koch's postulates
        - ➤ Pathogenic activity
    - Viruses:
      - ➤ Replication, diseases
    - Protozoa, fungi, parasites
  - How infectious diseases are spread:
    - ➤ Droplet infection, carrier
    - Vector, sexually transmitted diseases
    - ➤ Incubation
  - Preventing the spread of disease: epidemic, pandemic, vaccination
  - Immune system:
    - Overview, white blood cells
    - ➤ Histamine, interferon
    - Antibodies
    - ➤ Specific vs. nonspecific defenses
    - ➤ Table of white blood cell types
    - Lymphatic system:
      - Lymph, vessels, ducts, nodes
      - ➤ Structure and function of lymph nodes
      - Other organs
    - Other defenses: skin barrier, mucous membranes, lysozymes, fever, microorganisms of digestion
    - Acquired immunity, innate immunity
    - Immune deficiency diseases (HIV, AIDS)
  - Medical defenses against disease:
    - ➤ Immune therapy, serums
    - Chemotherapy, antibiotics
  - Prevention: nutrition, rest, exercise

Life Sciences: Methodology & Philosophy

- Natural history and scientific investigation:
  - Natural history through the ages:
    - Bible beginnings, Hebrews
    - Greeks:
      - ➤ Anaximander, Plato, Aristotle
    - Romans:
      - ➤ Pliny, Galen
    - Ancient science vs. the Bible
    - Middle Ages:
      - ➤ Nestorians
  - Modern science: Protestant Reformation, advances in biological sciences, microscopy, cell theory
  - Biology and scientific investigation:
    - Scripture and scientific investigation, scientific method
    - Repudiation of spontaneous generation, law of biogenesis
    - Limitations of science
    - Scientism
- Evolution—a retreat from science:
  - Science and faith: great founders of science believed in God and creation
  - Rejecting the truth:
    - Darwin and Lyell, natural selection
    - ➤ Effects of naturalism

Biology cont. p. 186

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Biology* *cont.*

Life Sciences: Methodology & Philosophy *cont.*

- Paleontology:
  - Evidence against evolution, speciation, macroevolution, fossils
  - Transitional forms and lack thereof
  - Punctuated equilibrium hypothesis
  - Geologic column, radiometric dating, Cambrian explosion
  - Coelacanth, *Archaeopteryx,* horse series
  - Hominid fossils, Neanderthal, Cro-Magnon
- Biological evidence against evolution:
  - Impossible transitional forms:
    - ➤ Bat wings, avian respiratory system
  - Homology
  - Molecular biology: design and complexity
  - Genetics: limited variety, mutations
  - Natural selection and genetic variety:
    - Peppered moth
    - Pesticide-resistant insects, antibiotic-resistant bacteria
    - ➤ Bacterial proliferation
  - Embryonic recapitulation
- ➤ Why evolution cannot be properly called a science
- ➤ Threat of evolution to modern science

Ecology

- Introduction of basic terms: ecology, habitat, biotic and abiotic factors
- Levels of ecology: biosphere, biomes, ecosystems, community, population, organism
  - ➤ Ecological stability
- Influences in the ecosystem: biodiversity, carrying capacity, types of abiotic and biotic factors
- Nutritional relationships in an ecosystem:
  - Producers and consumers, trophic level, food chain, food web, niches
  - ➤ Energy flow, pyramid diagrams
- Special nutritional relationships:
  - Symbiosis, predation, competition
  - ➤ Amensalism
  - Neutralism
  - ➤ Herbivory
- Nutrient cycles:
  - Hydrologic, atmospheric, sedimentary cycles
  - ➤ Carbon-oxygen, phosphorous cycles
- Major biomes:
  - Tundra, northern coniferous forest, temperate deciduous forest
  - Grassland, desert, tropical rain forest
  - Aquatic biomes:
    - Freshwater
    - Marine:
      - ➤ Estuary
- Ecological succession and man's role:
  - ➤ Primary succession, secondary succession
  - Dominion and stewardship

Zoology

- Mammals:
  - Characteristics of animals, vertebrates, and mammals:
    - Mobility, diversity, symmetry
  - Types of mammal reproduction
  - 18 mammal orders: discussed with representative animals
  - ➤ Extinct mammals
- Birds:
  - Feathered vertebrates:
    - Characteristics for flight
    - Backyard and roadside birds
    - Groups of birds:
      - Perching, birds of prey, swimming and wading, game, tropical, flightless
      - ➤ Extinct birds
  - Avian anatomy and physiology:
    - Feathers, skeletal and muscular systems
    - ➤ Nervous system: brain, senses
    - Food and digestion:
      - ➤ Intestine, cloaca, bursa of Fabricus
    - ➤ Excretory system
    - Circulatory system:
      - ➤ Nucleated red blood cells
    - ➤ Details of respiratory system
  - Family life of birds:
    - Migration, courtship
    - ➤ Mating and fertilization
    - Egg, nesting, incubation
    - ➤ Care of young
- Reptiles and amphibians:
  - Reptiles:
    - Cold-blooded, similar traits
    - Lizards: habitat, sizes, poisonous lizards, colorful, detached tails and other defenses, and eating habits
    - Snakes:
      - Sizes, methods of locomotion, scaly skin
      - Sense organs:
        - ➤ Scale-covered eyes, hearing (quadrate bone)
        - Smell: Jacobson's organ
      - Design for feeding, groups of snakes, venom, snakebite treatment
    - Turtles:
      - Reptiles with shells
      - Characteristics:
        - ➤ Tympanic and nictitating membranes
      - Groups
    - Crocodilians
    - Tuatara: parietal eye
    - Dinosaurs and similar creatures: extinct reptiles, types and characteristics
  - Amphibians:
    - Vertebrates with a double life:
      - Characteristics:
        - ➤ Three-chambered heart

Biology cont. p. 187

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SCIENCE: *Biology* *cont.*

Zoology *cont.*

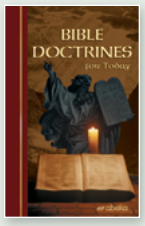
- Frogs and toads:
  - ➤ Coloring
  - Toxic skin secretions
  - ➤ External fertilization
  - Development and metamorphosis
  - ➤ Anatomy: head, oral cavity, body systems
- Salamanders:
  - Reproduction and metamorphosis:
    - ➤ Spermatophore, paedomorphosis
  - Sizes; notable salamanders
- Caecilians

- Fish:
  - Bony fish:
    - Abundance and importance
    - ➤ Detailed study of anatomy and physiology
  - Cartilaginous fish: sharks, rays, and chimaeras; lampreys, hagfish
- Arthropods:
  - Common characteristics, classes
  - Insects:
    - Life cycle of insects
    - ➤ Grasshopper anatomy and physiology
    - Orders of insects and their economic significance: 8 of the more than 25 orders are taught
    - Insects and man
      - ➤ Genetic control
  - Arachnids:
    - Spiders:
      - External anatomy
      - ➤ Internal anatomy, reproduction
    - Harvestmen, scorpions, mites, and ticks
    - Centipedes and millipedes
  - Crustaceans:
    - ➤ Anatomy and life cycle of crayfish
    - Other crustaceans
  - ➤ Extinct arthropods
- Other invertebrates:
  - Mollusks:
    - General characteristics
    - Bivalves, gastropods, cephalopods
  - Enchinoderms:
    - Starfish anatomy
  - ➤ Rotifers: parthenogenic
  - Coelenterates and porifera:
    - Coelenterates: hollow-intestined invertebrates, polyp, medusa, hydra, jellyfish, sea anemones, corals
    - Porifera (sponges):
      - ➤ Anatomy and physiology
  - Annelids:
    - Earthworms:
      - Characteristics and anatomy and physiology
    - ➤ Sea worms
    - Leeches
  - Flatworms and roundworms:
    - Platyhelminths:
      - ➤ Anatomy of planarians, flukes, and tapeworms
    - Nematodes:
      - ➤ Filaria, hookworm, trichina, ascaris
  - Protozoa:
    - Flagellates:
      - Euglena:
        - ➤ Pellicle, binary fission
      - Trypanosome
    - Sarcodines:
      - Amoeba
      - ➤ Foraminifera, radiolarla
    - Ciliates: paramecia, other ciliates
    - Sporozoans

Cellular & Molecular Biology

- Cytology—design and function of cells:
  - Variety and complexity of cells:
    - Discovery of cells
    - ➤ Variety in cells, complexity of cells
  - Design of cells:
    - ➤ Details of cell structure and organelles
  - ➤ Life and work of cells:
    - ➤ Maintaining life, photosynthesis and cellular respiration
    - ➤ Membrane transport, endocytosis and exocytosis, cell movement, cilia and flagella
    - ➤ Cell cycle and mitosis, chromosomes, cell death
- Heredity: continuity of life:
  - God's provision for the continuity of life:
    - Heredity, genes
    - ➤ Differentiation, sexual reproduction, meiosis
  - ➤ Classical genetics:
    - ➤ Mendel's experiments, law of dominance, genotype and phenotype
    - ➤ Punnett squares, hybrids and hybridization, law of segregation
    - ➤ Incomplete dominance, law of independent assortment, linkage
    - ➤ Sutton's hypothesis
    - ➤ Morgan's research, sex chromosomes, sex-linked traits
  - ➤ Human genetics:
    - ➤ Dominant gene inheritance, codominance
    - ➤ Multiple allele inheritance
    - ➤ Pleiotropy and polygenic inheritance
    - ➤ Sex-linked disorders, genetic advances, eugenics
- DNA—regulation of life:
  - DNA:
    - Deoxyribonucleic acid
    - ➤ Watson and Crick, storage as chromatin
    - ➤ Structure of RNA and DNA, bases, base pairing
  - Activities of DNA:
    - ➤ Central dogma of molecular biology, DNA replication, telomeres
    - ➤ Transcription, mRNA, translation, rRNA, tRNA
    - ➤ Noncoding DNA, intron, exon, small RNA
    - ➤ Genetic engineering, cloning
    - Mutations

BIBLE: *Bible Doctrines*



Christians need to know what they believe and why they believe it so they can be built up in their faith and equipped to present their beliefs intelligently and effectively to others. *Bible Doctrines for Today* is written as a practical, personal study designed to reach both the head and the heart of the student. It covers all major doctrines: the Bible, God, Christ, the Holy Spirit, man, salvation, the Church, angels, and end times. Important terms and definitions of these doctrines will be explained, illustrated, and applied to the student's life. Many memory verses are correlated with the text to confirm the doctrinal truths being presented.

Evaluation

- Verses:
  - Verse quizzes (28)
  - 9-weeks verses exams (2)
  - Semester verses exam (1)
  - Final verses exam (1)
- Content:
  - Quiz on the books of the Bible (1)
  - Quizzes (8)
  - 9-weeks exams (2)
  - 9-weeks exams (2)
  - Semester exam (1)
  - Final content exam (1)

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Lessons *137*

- Various biblical doctrines such as: Bibliology (18 lessons), Theology (16), Christology (12), Pneumatology (6), Anthropology (9), Soteriology (11), Ecclesiology (8), Angelology (9), and Eschatology (18)
- Bibliology—doctrine of the Bible:
  - Revelation and inspiration of the Scriptures
  - Authenticity, credibility, and canonicity of the Scriptures
- Theology—doctrine of God:
  - Arguments for His existence
  - Attributes, sovereignty, nature, and names of God
  - His work of Creation and providence
- Christology—doctrine of Christ:
  - Names and nature of Jesus Christ
  - Significance of Christ's supernatural life
  - Humiliation, crucifixion, resurrection, and exaltation of Jesus Christ
- Pneumatology—doctrine of the Holy Spirit:
  - Holy Spirit's past and present work
  - Gifts and graces of the Holy Spirit
  - Blasphemy against the Holy Spirit
- Anthropology—doctrine of man:
  - Origin of man and sin on earth
  - Seriousness of sin
- Soteriology—doctrine of salvation:
  - Necessity of and faith for salvation
  - Justification, sanctification, and adoption
  - Blessings and assurance of salvation
- Ecclesiology—doctrine of the church:
  - Organization, ordinance, and mission of the church
- Angelology—doctrine of angels:
  - Names and titles of specific angels
  - Satan: his present and future position
- Eschatology—doctrine of last things:
  - The rapture of the church
  - Judgment Seat of Christ for the saved
  - Tribulation on earth
  - Christ's second coming to earth and millennial reign
  - Great White Throne Judgment for the lost
  - Personal eschatology
  - Reality of heaven and hell

Music *90 songs*

- Hymns of the faith, gospel songs, choruses, holiday songs

Memory Work

- Passages (32 containing 94 verses)
  - Salvation (5)
  - The authenticity of the Scriptures (6)
  - The Man of sorrows (6)
  - Being wise (3)
  - Being of one mind (4)
  - Preeminence of Christ (4)
  - The Everlasting and All-Knowing God (10)
  - Praises to God (3)
  - Serving with gladness (5)
- Books of the Bible

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

ENGLISH: *Grammar & Composition*



The abilities to express ideas creatively and to skillfully comprehend the written word are built upon the study elements which are included in English 11. The *Handbook of Grammar and Composition* and *Workbook V* build upon the grammar foundation established in previous years and introduce new concepts to further enhance the students' knowledge of basic grammar. In addition, *Handbook of Grammar and Composition* emphasizes writing through assignments in argumentative essay, narrative essay, exposition of a process, literary character analysis, critical book reviews, and a research paper. Several smaller writing assignments are also included throughout the text.

Added Enrichment

- Review games

Evaluation

- Grammar quizzes (17)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam
- Compositions:
  - Character trait paragraph
  - Book reviews: oral, full (1 each)
  - Paragraph, character sketch (1 each)
  - Essays: argumentative, narrative (1 each)
  - Character analysis, rhyming poem, classification, application letter, résumé, research paper (1 each)
- Optional (graded at teacher discretion):
  - Paragraphs, short book reviews
  - Character analysis, one-act play, outline, essay
  - Summary, descriptions, type sketch, poems
  - Exposition of a process

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Grammar

- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things:
      - Political and economic organizations and alliances
    - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection O
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period for declarative sentences, abbreviations, indirect question, and polite request
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - Participial phrase
        - Adjective and adverb clauses
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - Joined by:
        - Transitional words
        - Coordinating conjunction if clauses already contain commas
    - Between items in a series if the items contain commas
  - Colons:
    - Before a list of items
    - To introduce a formally announced statement or quotation
    - Between:
      - Independent clauses when second clause further explains first one
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
  - Italics:
    - For titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
    - For words, letters, numbers referred to as such
    - For foreign words or phrases
  - Hyphens:
    - To divide a word at the end of line
    - In compound numbers
    - In fractions used as adjectives
    - In prefixes before a proper noun or adjective
    - In compound adjectives before a noun
  - Quotation Marks:
    - In a direct quotation
    - To enclose:
      - Titles of short poems, songs, chapters, articles, and other parts of books or magazines
      - A quoted passage of more than one paragraph: at the beginning of each paragraph and at the end of the last paragraph
  - Apostrophes:
    - To form:
      - Possessive case of nouns
      - Individual possession within a group
      - Possessive case of indefinite pronouns
    - To show omissions from words

Grammar & Composition cont. p. 190

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

Grammar *cont.*

- With *s* to form plurals of letters, numbers, signs, and words used as words
- Dashes:
  - After a series of words or phrases giving details about a statement that follows
  - To indicate an abrupt change or break in a sentence
  - To set off parenthetical elements or confidential comments
- Parentheses:
  - To enclose:
    - Parenthetical elements
    - Brief confirmatory information
- ➤ Brackets:
  - ➤ To enclose editorial comments within quotations
  - ➤ To replace parentheses within parentheses

- The sentence:
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Subject before its appositive
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming:
    - Compound subjects and verbs
    - Complements: direct object, indirect object, objective complement, predicate nominative, predicate adjective
  - Fragments and run-on sentences
  - Recognizing and diagramming simple, compound, complex, and compound-complex sentences
  - Sentence improvement:
    - ➤ Unity and coordination
    - Subordination:
      - Choosing what to subordinate
      - ➤ Avoiding upside-down, illogical, and excessive subordination
    - Placement of modifiers:
      - Avoid:
        - ➤ Squinting modifiers and split constructions
        - Dangling participial phrases
        - ➤ Dangling gerund and infinitive phrases
        - ➤ Elliptical clauses
    - Pronoun reference
    - ➤ Clear and logical construction
    - Parallelism
    - Point of view:
      - Avoid unnecessary shifts in:
        - Subject, voice, and tense
        - ➤ Mood, person, number, discourse, and tone
    - Consistency of subject, tense, or voice
    - Clear and effective diction
    - Conciseness
- Parts of speech:
  - Recognizing eight parts of speech
  - Verbs:
    - Recognizing action (transitive and intransitive), linking, and helping verbs
    - Distinguishing verbs from verbals: participles, gerunds, and infinitives
    - Using principal parts of verbs
    - Regular verb endings
    - Irregular verbs
    - Using correct principal parts
    - Verb tenses: progressive and emphatic forms
    - When to use the verb tenses
    - Using logical verb tense sequence between clauses and between verbals and independent clause
    - Avoiding unnecessary shifts in sentences: in subjects, verb tense, voice of verbs
    - Active and passive voice
    - Mood: indicative, imperative, and subjunctive
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
  - Nouns:
    - Recognizing nouns:
      - Compound, common, proper, and collective
      - Concrete and abstract
    - Substantives
    - Keeping agreement of subject and verb
    - Recognizing and diagramming nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address, appositives, and objective complements
    - Using parallelism
  - Pronouns:
    - Antecedents
    - Recognizing personal, interrogative, demonstrative, indefinite, compound, relative
    - ➤ Recognizing reflexive and intensive pronouns
    - Keeping agreement of verbs and indefinite pronoun subjects
    - Making pronouns agree with their antecedents:
      - In number and in gender
      - ➤ In person
    - Nominative case:
      - For subjects, predicate nominatives
      - For appositives of subjects, appositives of predicate nominatives
      - For appositives to subjects, appositives to predicate nominatives
      - ➤ For complements of the infinitive *to be*
    - Objective case:
      - For direct objects, indirect objects, objects of prepositions
      - For appositives of direct objects, indirect objects, objects of prepositions
      - For appositives to direct objects, indirect objects, objects of prepositions
      - ➤ For subjects of infinitives and complements of the infinitive *to be*
    - Possessive case
    - Using correct case for *who, whom, whoever,* and *whomever* and in incomplete clauses beginning with *than* or *as*
    - Avoid pronoun usage problems: double subject, possessive case before a gerund
  - Adjectives:
    - Recognizing and diagramming adjectives: participles and proper adjectives and infinitives as adjectives

Grammar & Composition cont. p. 191

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Grammar & Composition* *cont.*

Grammar *cont.*

- Distinguishing adjectives from nouns and pronouns
- Recognizing and diagramming predicate adjectives
- Using and diagramming:
  - Prepositional and participial phrases as adjectives
  - Infinitive phrases as adjectives
  - Adjective clauses
- Placing and punctuating adjective modifiers
- Using adjectives in comparison
- Avoiding double comparison and double negatives
- Adverbs:
  - Recognizing and diagramming adverbs
  - Infinitives as adverbs
  - ➤ Nouns as adverbs
  - Distinguishing adverbs from adjectives
  - Using and diagramming:
    - Prepositional phrases as adverbs
    - Infinitive phrases as adverbs
    - Adverb clauses
  - Correct placement of adverb modifiers
  - Distinguishing dependent clauses
  - Using adverbs in comparison
- Prepositions:
  - Recognizing prepositions, prepositional phrases, and objects of prepositions
  - Distinguishing between prepositions and adverbs
  - Using prepositions correctly
- Conjunctions:
  - Recognizing coordinating, correlative, and subordinating conjunctions
  - Using parallel structure
- Interjections:
  - Definition
  - Punctuation with interjections
  - Other parts of speech used as interjections
  - Diagramming interjections
- Recognizing and diagramming:
  - Nominative absolute and expletives
  - Nominative absolute phrases
- Word study:
  - Using the dictionary:
    - Kinds of dictionaries
    - Selecting a dictionary
    - Using the dictionary
    - Parts of the dictionary
  - Usage and diction:
    - Levels of usage
    - Using correct diction
    - Using clear and effective diction
    - Appropriateness
    - Exactness and vividness
    - Figurative language
    - ➤ Gobbledygook
    - Jargon
    - Triteness
    - Wordiness:
      - ➤ Sentences beginning with *there, it,* and *this*
      - Wordy expressions
      - Redundancies
    - Glossary of diction

Composition

- Manuscript form:
  - Abbreviations, numbers, titles
  - ➤ Abbreviations in footnotes and parenthetical references
- The Writing Process: plan, write, rewrite, edit
- Introducing paragraphs (7):
  - Topic sentence
  - Summarizing sentence
  - Paragraph development by examples, incidents, reasons, comparison and contrast, and combination of methods
  - Paragraph unity
  - Paragraph coherence: chronological order, order of importance, transitional expressions, space order, pronoun reference, and repetition
  - ➤ Paragraph with proper emphasis
- Essays:
  - Essay answer
  - ➤ Narrative essay
  - ➤ Argumentative essay
- Outline:
  - Topical and sentence outlines
  - Format of outline
  - Parallelism in an outline
  - Steps to preparing an outline
- ➤ Paraphrase (5)
- Summaries (6)
- Writing about a process (Exposition of a Process)
- ➤ Classification paper
- Extended definition
- Writing descriptions about persons, places, and things:
  - Steps: point of view, careful selection of details, arrangement of details, use of exact nouns and verbs
- ➤ Character sketch
- ➤ Type sketch
- ➤ Character analysis
- The library:
  - The catalog
  - The reference section:
    - Encyclopedias, dictionaries, special dictionaries, atlases
    - Handbooks of miscellaneous information, books of quotations
    - ➤ Biographical aids, reference works on literature
    - ➤ Other specialized reference works
    - ➤ The *Readers' Guide to Periodical Literature*
    - ➤ Internet sources
  - The Dewey Decimal System
  - The Library of Congress Classification System
- Critical book reviews: written and oral review
- Writing letters:
  - Friendly: letter parts, thank-you note, bread-and-butter note
  - Business:
    - Letter parts, order letter, request letter, complaint letter
    - Letter to a government official
    - ➤ Letter of application, résumé

Grammar & Composition cont. p. 192

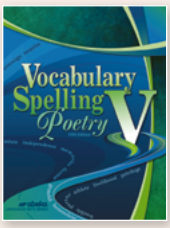
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ENGLISH: *Grammar & Composition* *cont.*

Composition *cont.*

- Research paper:
  - Planning the paper:
    - Selecting subject
    - Finding sources:
      - ➤ Encyclopedia, periodical databases
      - ➤ *Essay and General Literature Index,* published bibliographies
    - Writing bibliography cards
    - Making a preliminary outline
    - Taking notes: writing note cards, avoiding plagiarism
  - Writing the paper: introduction, body
  - Using parenthetical citations
  - Rewriting the paper: check organization, introduction, conclusion, unity, coherence, and citations
  - Editing the paper: check each paragraph, sentence, word; capitalization and punctuation
  - Typing the paper:
    - General information
    - Formatting pages: title page, pledge page, outline page, first page, and succeeding pages
    - Inserting footnotes or endnotes
  - ➤ Additional guidelines:
    - ➤ Abbreviations in citation entries
    - ➤ Ellipsis marks in quotations
    - ➤ Block quotations
  - Documentation for research paper:
    - Parenthetical citations
    - ➤ Endnotes and footnotes
  - ➤ Typing instructions

ENGLISH: *Vocabulary, Spelling, Poetry*



Mastering the vocabulary and spelling words in *Vocabulary, Spelling, Poetry V* will greatly help students in their writing, speaking, and reading comprehension. Students will memorize nine poems throughout the year. The benefits of reciting and memorizing poetry are learning an appreciation of poetic excellence, enriching, their personal lives, and laying a foundation for future literature studies. Students will also further develop their ability to analyze words by studying prefixes, roots, and suffixes.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (24):
    - Spelling words (360)
    - Vocabulary words (144)
    - Organized by spelling rules, suffixes, homonyms, compound words, and commonly misspelled words
  - Vocabulary lists:
    - Organized by word origin, prefixes and suffixes, and vivid and precise verbs
    - Each vocabulary word includes:
      - Pronunciation, etymology
      - Part of speech, definition
      - Sample sentence
      - Synonyms, antonyms
      - Related forms of the word
  - Practice exercises (100), including:
    - Pretest over vocabulary words and their meanings
    - Cumulative review of vocabulary words and definitions
  - Review games
- Vocabulary chart showing:
  - Prefixes (48), suffixes (48)
  - Greek and Latin roots and meanings (100)
  - Guidelines for solving analogy questions
  - Pronunciation key
  - Index includes vocabulary words; prefixes, roots, suffixes; synonyms, antonyms

Evaluation

- Spelling and vocabulary quizzes:
  - Weekly (20)
  - Quarterly review (1 each 9 weeks; each counts as 2 quiz grades)
- Poetry quizzes: written (7), oral (2)

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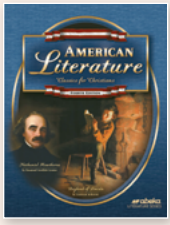
Spelling & Vocabulary Skills Development

- ➤ Master spelling lists including:
  - ➤ Vocabulary words and definitions
  - ➤ Words that follow the spelling rules
  - ➤ Sound-alike suffixes
  - ➤ Commonly misspelled words
  - ➤ Homonyms
- Use vocabulary words in proper context
- Memorize vocabulary definitions
- Be able to identify commonly misspelled words
- Apply spelling and phonics concepts through daily teacher-directed oral practice and independent written practice
- Learn to distinguish between homophones
- Learn practical spelling tips and suggestions from Keys to Good Spelling
- Master 48 prefixes, 100 roots, and 48 suffixes

Poetry Skills Development

- ➤ Memorize 9 lyrical poems
- Develop appreciation of poetry
- Lay foundation for future literature study
- Perform in front of an audience
- recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper observation of punctuation

ENGLISH: *Literature*



American Literature presents a variety of selections that reflect the faith, doubts, longings, accomplishments, and emotions of the American people. Students will further develop their skills in analyzing literature as they study several genres and time periods of American literature. In addition, students will learn about significant American authors and their influential works while reading classics such as *Moby Dick, Ben Hur, Uncle Tom's Cabin, The Innocents Abroad,* and *The Song of Hiawatha.* Since art appreciation is an important part of the literature study in English 11, *American Literature* includes paintings that reflect the themes and time periods of each unit.

Literary Value

- 105 authors, including works by well-known writers such as Washington Irving, Will Rogers, Mark Twain, Phyllis Wheatley, and Walt Whitman
- Prose selections (45), poems (175), plays (2), essays (25)

Added Enrichment

- Footnotes to define and explain unfamiliar words
- Comprehension and discussion questions after selections
- Character-building quotations and verses
- Introductory paragraphs for interest and background info
- Author biographies
- Literary terms defined and explained throughout
- Glossaries of literary terms and vocabulary-building words
- Unit reviews

Evaluation

- Comprehension quizzes (18)
- Homework reading quizzes (35)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

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Reading Skills Development

- Develop skills in reading speed and comprehension
- Further develop oral reading skills
- Be able to identify significant quotations and the selections in which they are featured
- Increase vocabulary
- Further develop writing skills
- Study various literary forms: short story, essay, novel, narrative poetry, and descriptive poetry
- Study meaning and use of literary terms and devices such as theme, plot, imagery, figurative language, aphorism, character analysis, conceit, dialect, epitaph, local color, pun, realism, rhetorical devices, and understatement
- Study the development of plot, theme, setting, and character(s) in short stories, essays, and classical works of literature

› Study historical backgrounds and writing techniques to better understand American literary periods

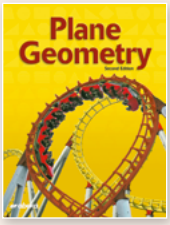
Comprehension, Discussion & Analysis Skills Development

› Read entire novel: *The Scarlet Letter*

- Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- Build appreciation for good literature and a love of reading
- Develop an understanding of people's motives and feelings while recognizing consequences of particular actions
- Learn to analyze literature while studying selections
- Comprehend and appreciate the basic elements of a work of literature
- Learn to appreciate the rhyme, rhythm, and figurative language of poetry

› Develop a greater understanding and appreciation for American culture and heritage

MATHEMATICS: *Plane Geometry*



Plane Geometry teaches students how to use known facts to verify the truth of additional facts, to solve geometric problems, and to use deductive reasoning for drawing correct conclusions. Students learn to think *naturally, logically,* and *systematically* whenever they encounter a proof to write, a construction to make, or a problem to solve. They are then equipped throughout life to perform such tasks as determining which car is the better buy or identifying truth and flaws in politics.

For this grade level, see also *Precalculus* on p. 210.
Also available: *Consumer Mathematics* and *Business Mathematics* on Electives pp. 226–230.

Topical Interest Essays

- Geometry Past and Present; Geometry and the Pyramids
- Euclid, Master of Logic; Geometry and Solomon's Temple
- Archimedes, Greatest Mathematician of Antiquity
- Geometry and the Parthenon; Blaise Pascal, Inventor, Mathematician, Writer
- The Golden Ratio; Leibniz, Universal Genius
- Notre Dame de Paris; Isaac Barrow, Teacher, Friend of Isaac Newton
- Kaleidoscope; Sir Christopher Wren, Mathematician and Architect
- The value of π; Symmetry in Nature

5 Final Review Exercises Quick Reference & Summaries

- Conversion tables, plane geometry notation and formulas
- Basic mathematics axioms, geometry principles, postulates, and informal statements
- Theorems and corollaries, properties of proportions, transformations
- Constructions, proof methods, factual summaries

Evaluation

- Quizzes (50)
- Tests (8)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Introduction to Geometry

- Geometry defined
- ➤ Principles, informal statements, axioms, postulates
- Fundamental definitions: equal segments, midpoint, trisection
- Angles:
  - Equal, bisector
  - ➤ Perigon
  - Straight angle, adjacent, right, perpendicular lines, acute, obtuse, reflex
  - ➤ Oblique
  - Complementary, supplementary, vertical
  - Measuring angles; degrees, minutes, seconds; protractor; compass
- Triangle:
  - Defined, vertices, base, exterior angle
  - ➤ Opposite interior angle, median
  - Altitude, scalene, isosceles, equilateral, acute, obtuse, right, equiangular, sum of angles
- Polygon:
  - Defined
  - Base, adjacent sides, diagonal, convex, concave, sum of angles, regular, center
- Circle:
  - Defined, center, circumference, diameter, radius
  - Chord, arc, semicircle, quadrant
- Congruence:
  - Defined
  - Corresponding parts
- Constructions:
  - Perpendicular bisector, angle bisector, angle
  - Perpendicular at a point
  - ➤ Perpendicular from a point
  - Triangle given three sides, one side and adjacent angles, two sides and included angle
- ➤ Optical illusions, deduction
- Euclid's *Elements*
- ➤ Numeric applications

Rectilinear Plane Figures

- Demonstrative proof: defined, demonstrated, given, prove, analysis, proof, theorem, corollary
- Triangles congruent by:
  - SAS
  - ➤ LL
  - ASA
  - ➤ LA
  - SSS
  - ➤ HA, SAA, HL
- Triangle sides-angles relationships:
  - Isosceles triangle, equilateral, equiangular
  - ➤ Exterior-exterior angle, opposite sides-angles
- Auxiliary lines, direct and indirect method of proof
- Parallel lines
- ➤ Parallel postulate and corollary
- Transversal formed
- Angles formed, angle relationships
- ➤ Proving lines parallel
- Proving angles equal, supplementary, complementary
- Triangle relationships:
  - Sum of angles
  - Exterior-opposite interior angles
  - ➤ Acute angles of right triangle
  - ➤ 30°-60°-90°
- ➤ Unequal lines and angles, perpendicular lines, triangles with unequal lines and angles
- Distance defined between two points, two lines, a line and a point
- Parallelograms and quadrilaterals:
  - Defined, base, altitude, rhombus, rectangle, square

Plane Geometry cont. p. 195

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Plane Geometry* *cont.*

Rectilinear Plane Figures *cont.*

- ➤ Relationships of sides, angles, diagonals, shapes formed
- ➤ Proving a quadrilateral is a parallelogram
- ➤ Segments intersected by parallel lines
- ▪ Trapezoid:
  - ▪ Defined, legs
  - ➤ Median
  - ▪ Altitude
  - ➤ Isosceles
- ▪ Polygons:
  - ▪ Defined
  - ➤ Sum of exterior angles, sum of interior angles
  - ➤ Each angle measure, formulas
- ➤ Concurrent lines of a triangle:
  - ➤ Defined, altitudes
  - ➤ Angle bisectors, perpendicular bisectors of sides, medians
- ➤ Proof reasoning methods (critical thinking skills): analytic, synthetic, general method
- ➤ Inequality axioms
- ➤ Numeric applications

The Circle

- ▪ Relationships of equal arcs, central angles, and chords; unequal arcs, central angles, and chords; chord distances from center
- ▪ Diameter-chord relationships, perpendicular relationships
- ▪ Inscribed and circumscribed polygons
- ▪ Tangent lines and relationships, common tangents
- ▪ Tangent and intersecting circles, common chord, concentric circles
- ▪ Measuring angles and arcs, inscribed angles, semicircles
- ▪ Angles formed by combinations of chords, tangents, secants
- ▪ Constructions and proofs:
  - ▪ Reviewed
  - ➤ Bisect arc
  - ▪ Parallel lines
  - ➤ Divide a line into *n* equal parts
  - ➤ Circumscribe a circle, inscribe a circle, tangent to a circle
  - ➤ Circle from various givens, triangle from various givens
- ➤ Locus:
  - ➤ Definitions and drawings
  - ➤ Fundamental locus theorems:
    - ➤ Equidistant and given distances from various points
    - ➤ Intersecting and parallel lines
    - ➤ Centers of circles tangent to a line, etc.
  - ➤ Intersecting loci
- ▪ General directions for constructions

Proportions & Similar Polygons

- ▪ Definitions: ratio, antecedent, consequent, proportion, extremes, means
- ➤ Fourth proportional
- ▪ Mean proportional
- ➤ Third proportional, continued proportion
- ▪ Fundamental properties: product of means and extremes, writing proportions
- ➤ Like-powers axioms
- ▪ Finding a mean proportional
- ➤ Transformations: alternation, inversion, addition, subtraction, like powers
- ➤ Proportional segments: by parallel lines, by angle bisectors
- ▪ Similar polygons, corresponding sides
- ▪ Corresponding angles, ratio of similitude
- ➤ Proving triangles similar aaa, aa, sas, ll, sss
- ➤ Proportional line proofs: in triangles, with parallel lines, in right triangles, in circles
- ➤ Pythagorean theorem proved
- ▪ Similar polygons:
  - ▪ Proportional sides, perimeters, diagonals, corresponding lengths
  - ➤ Similarity of corresponding triangles
- ➤ Construction of proportional segments and polygons: fourth proportional, a given proportional, mean proportional
- ➤ Projection
- ▪ Numeric applications

Surface Measurement

- ▪ Defined, equal figures, constant, variable
- ➤ Limit
- ▪ Area mensuration formulas for rectangle, square, parallelogram, triangle, trapezoid
- ➤ Area proportions for rectangle, square, parallelogram, triangle, trapezoid
- ➤ Areas of similar triangles and similar polygons
- ▪ Pythagorean theorem:
  - ➤ By areas of squares, by area of similar polygons
- ➤ Construction of equal non-similar shapes
- ➤ Transforming plane figures
- ➤ Numeric applications

Regular Polygons & Circles

- ▪ Defined
- ➤ Inscribed and circumscribed, chords, tangents, midpoints
- ➤ Inscribed and circumscribed circles
- ➤ Angle at center of n-gon
- ➤ Ratios regarding similar polygons: perimeters, corresponding sides, areas, radii, apothems
- ▪ Area formula
- ➤ Circle proportions
- ➤ Formulas to measure:
  - ▪ Circumferences, radii, diameters
  - ▪ Pi
  - ➤ Arc length using angles in degrees
  - ➤ Sectors, segments, similar sectors and segments
- ➤ Constructions: inscribing a square, regular polygons
- ➤ Numeric applications including 30°-60°-90°, 45°-45°-90°

Trigonometry

- ▪ Defined
- ➤ Graphic solutions
- ▪ Right triangle solutions
- ▪ Sine, cosine, tangent, ratios, functions of angles in degrees
- ▪ Interpolation, angles of elevation and depression
- ▪ Numeric applications

HISTORY & GEOGRAPHY: *U.S. History*



United States History: Heritage of Freedom provides a positive, narrative approach to American history that is reinforced by factual accounts of events, people, and ideas essential in shaping the success of America today. Special emphasis is placed on America's Christian heritage and patriotic pursuit of freedom, helping students identify the values that are the foundation of the United States of America.

Added Enrichment

- Special feature boxes
  - Emphasize the foundation of U.S. history
  - Highlight great influential Americans
  - Give facts about American symbols, details of historical events, and government concepts for a better understanding of U.S. history
- Thought-provoking questions about the information read in the text
- Important U.S. documents: The Declaration of Independence, Preamble to the Constitution, Lincoln's Gettysburg Address, and *The Federalist* No. 10 and No. 51
- Lists: U.S. presidents, states and capitals
- Maps correlating to text

Evaluation

- Reading quizzes
- Review quizzes (including memorization quizzes over Preamble to Constitution, Gettysburg Address, states and capitals, and U.S. presidents)
- Editorials (each counts as a quiz grade)
- Two projects: essay on *The Federalist* papers and critical book review
- Tests, quarter exams
- Semester exam, final exam

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Land of New Beginnings

- Discovery and Exploration
  - The providence of God
  - Tribes and civilizations of North America
  - The Renaissance, Protestant Reformation
  - Portuguese, Spanish, and French Exploration
    - New France sparsely populated
- The Thirteen Original Colonies
  - English spiritual and political heritage, English exploration
    - ➤ Sir Martin Frobisher and the "Northwest Passage"
  - ➤ Religious, political, economic reasons for colonization
  - Settling Jamestown, Plymouth, and the Thirteen Colonies
- Life in Colonial America
  - Diversity:
    - Immigration, churches, governments
    - ➤ Social classes
  - The livelihood of the colonies
  - Advances of learning
    - Harvard College, Ole' Deluder Satan Act, *The New England Primer*
    - Newspapers
  - ➤ Important political precedents

Birth of a Nation

- Preparation for Independence
  - The Great Awakening
  - French and Indian War
    - Anglo-French conflicts
    - ➤ English and French advantages
    - ➤ Battle of Quebec
  - Fundamental differences between the colonists and the British
- Conflict with Great Britain
  - British regulations on the colonists and colonial reaction
    - ➤ Navigation Acts and regulations on Industry
  - Effects of the French and Indian War
  - Colonists form a united front
  - Lexington, Concord, and Bunker Hill
- The War for Independence
  - American attempts at reconciliation and the British refusal
  - Thomas Paine's *Common Sense*
  - Declaration of Independence
    - ➤ Influence of John Locke and William Blackstone
  - ➤ Patriot disadvantages
  - ➤ People: St. Leger, Herkimer, Wayne, Rochambeau
  - ➤ Battle of Oriskany
  - Treaty of Paris
- The Critical Period and the Constitution
  - Articles of Confederation
    - ➤ Understanding the weaknesses
  - Mount Vernon, Annapolis, and the Constitutional Conventions
    - Jonathan Dayton
    - William Paterson and the New Jersey Plan
  - Federalists and Anti-Federalists
  - ➤ How the Constitution works
  - Federal system and implied powers
  - Religious freedom on the state and federal levels
    - Alexis de Tocqueville
    - ➤ Isaac Backus and John Leland
- The Federalist Era
  - President George Washington: Judiciary Act of 1789
  - Hamilton's financial program
    - Loose and strict construction
    - Mint Act of 1792
  - Federalists and Democratic Republicans
  - French Revolution
  - President John Adams: Department of the Navy
  - President Thomas Jefferson: Twelfth Amendment and the Judiciary Act of 1801

U.S. History cont. p. 197

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *U.S. History* *cont.*

A Growing Nation

- The Age of Jefferson
  - ➤ *Marbury v. Madison*, Aaron Burr
  - ➤ Louisiana Purchase and its exploration
  - ➤ Tripolitan War
  - President James Madison
    - War of 1812
    - ➤ Responsibilities of freedom
    - ➤ Non-Intercourse Act
    - ➤ Fighting in Canada
    - Benefits of the War of 1812
    - ➤ Dolley Madison
- The Nationalist Era
  - President James Monroe and the Monroe Doctrine
    - ➤ Panic of 1819
    - ➤ John Marshall's Supreme Court
  - Westward expansion and the Missouri Compromise
    - ➤ Bonus Bill and American System
    - ➤ Rush-Bagot Agreement
  - President John Quincy Adams and the "favorite sons" election
  - Rising sectionalism and party politics
- The Age of Jackson
  - President Andrew Jackson
    - Webster-Hayne debate, tariffs, nullification, and the Force Bill
    - Native American relocation
    - National Bank
  - President Martin Van Buren: Panic of 1837, suffrage, and the Whig Party
  - President William Henry Harrison
  - President John Tyler
    - ➤ Aroostook War

The American Character

- Revival and Missions
  - Second Great Awakening
    - Richard Allen
    - Foreign and domestic missions outreach
  - Reform movements: abolition, temperance, and suffrage
  - Challenges to Christianity: Unitarianism and transcendentalism
- Education, Technology, and Culture
  - American textbooks: "Blue-Backed Speller" and the *Eclectic Readers*
  - Public education: Horace Mann's normal schools and traditional education
  - Agricultural and industrial advancements
    - ➤ Samuel Slater, James Watt, and Oliver Evans
  - Improved transportation and communication
    - ➤ John Loudon McAdam
    - ➤ New social classes
  - ➤ Development of American Culture
    - ➤ Romantic era and Fireside Poets
    - ➤ Stephen Foster
- Expansion to the Pacific
  - ➤ Manifest Destiny
  - Texas War for Independence
  - Oregon Territory: Jason Lee, Whitmans, and Spaldings
  - President James K. Polk
  - Mexican War
    - Annexation of Texas and the California Gold Rush
    - ➤ John Slidell

Expansion and Conflict

- Slavery and Secession
  - Abolition movement
  - Wilmot Proviso and the Compromise of 1850
  - President Zachary Taylor
    - Seventh of March Speech
  - President Millard Filmore
  - President Franklin Pierce
  - Kansas-Nebraska Act
  - Republican Party
  - President James Buchanan
  - *Dred Scott v. Sanford*
  - Lincoln-Douglas debates
    - ➤ Freeport Doctrine
  - President Abraham Lincoln
  - South Carolina secedes
- The Civil War
  - ➤ Northern and Southern reasons for fighting
  - Key battles
    - Ft. Sumter, Vicksburg, Antietam Creek, Fredericksburg, Chancellorsville, Gettysburg, and Wilderness Campaign
    - ➤ War in the West
  - Emancipation Proclamation
  - Gettysburg Address
  - Confederate surrender at Appomattox Court House
  - ➤ Financing the war: Trent Affair and USS *Alabama* Dispute
  - ➤ Christianity and the Civil War
    - ➤ John William Jones, Oliver O. Howard, Samuel Chapman Armstrong, and William Nelson Pendleton
- Reconstruction
  - Lincoln's Reconstruction plan
    - ➤ Wade-Davis Bill
  - President Andrew Johnson
  - Civil War amendments and Reconstruction acts
  - Johnson impeached
    - ➤ Tenure of Office Act
  - President Ulysses S. Grant
  - President Rutherford B. Hayes: Election of 1876 and Compromise of 1877
  - Tuskegee Institute: Booker T. Washington and George Washington Carver

Age of Progress

- Age of Industry
  - Agricultural progress
    - ➤ Luther Burbank and new legislation
  - Great Age of Enterprise
    - Thomas Edison and Nikola Tesla
  - ➤ Factors of America's prosperity
  - ➤ Big business organizations
  - Politics in the Age of Industry
    - Labor unions
    - Trouble on the farm: Greenback Labor Party, the Free Silver Movement, and the Populist Party
  - Expanding influence of Christianity
- The Gilded Age
  - Life in the Gilded Age
    - Immigration
      - ➤ Chinese Exclusion Act

U.S. History cont. p. 198

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *U.S. History* *cont.*

Age of Progress *cont.*

- ➤ William Speer
- New Immigration
- New opportunities for women
- Emergence of the modern city and the improvement of daily life
- Growing Christian influence
- Education and social reform
- ➤ Morrill Act and the Chautauqua Movement
- ➤ Temperance Movement: Frances Willard
- Literature, art, and music in the late 19th century
- Men in the White House
- ➤ Black Friday
- ➤ Presidential Succession Act and Electoral Count Act
- America's Expanding Influence
- Transcontinental railroad
- ➤ James J. Hill and Jay Gould
- Settling the West
- Mining, cattle herding, and farming
- Oklahoma Land Rush
- Plains Indians
- Indian Wars
- ➤ Wovoka
- ➤ Helen Hunt Jackson and the Indian Reorganization Act
- New outlying possessions
- Alaska, Hawaii, and the Samoan Islands
- Relations with foreign countries
- ➤ England and the Treaty of Washington
- ➤ Latin America and the organization of American States
- Spanish-American War
- Advancing freedom and civilization in the Philippines, Cuba, Puerto Rico, and Guam
- ➤ Foraker Act

A New Century

- The Progressive Era
- Advances in technology, transportation, and communication
- President Theodore Roosevelt
- Business and labor: Antitrust laws and Panic of 1907
- ➤ Natural resources: Gifford Pinchot
- ➤ Foreign affairs: Hay–Bunau-Varilla Treaty
- President William Taft
- ➤ Payne-Aldrich Bill
- Progressive Party
- President Woodrow Wilson
- Federal Reserve Act
- Pancho Villa
- State and local government changes
- Joseph G. Cannon, recall, presidential primary
- World War I
- Steps toward war and beginning of war
- United States' involvement
- *Sussex* pledge, National Defense Act, Selective Service Act
- Wilson's Fourteen Points, League of Nations, and Treaty of Versailles
- ➤ Henry Cabot Lodge
- Roaring Twenties
- Postwar unrest
- Communist threats: Sacco-Vanzetti Case
- ➤ Washington Conference
- ➤ Fordney-McCumber Tariff
- Dawes Plan and Young Plan
- ➤ McNary-Haugen Bill
- ➤ Liberalism: social gospel and new thought patterns
- ➤ Darwinism and the Scopes Monkey Trial
- ➤ Results of the Scopes Monkey Trial
- Fundamentalists, Christian scholars, and evangelism
- Depression and the New Deal
- President Herbert Hoover
- Causes of the Great Depression
- Success of private relief versus government intervention
- ➤ Foreign affairs: Smoot-Hawley Tariff
- ➤ American culture in the Depression
- President Franklin Roosevelt and the New Deal
- ➤ Relief, recovery, and reform
- Repeal of prohibition
- The inefficiency of and dangerous precedents set by the New Deal

The Global Age

- World War II
- The Road to War
- Disarmament failures and religious unbelief
- Geneva Disarmament Conference
- Rising dictatorships
- Unchecked aggression and failure of the Munich Pact
- American involvement
- ➤ America First Committee
- Lend-Lease Act and Pearl Harbor
- ➤ Executive Order 9066
- European and Pacific Theaters: D-Day, Doolittle's Raid, V-E Day, and V-J Day
- Manhattan Project
- Holocaust
- Formation of the United Nations
- Domestic Policies in the Cold War
- President Harry Truman
- Fair Deal
- GI Bill of Rights and Internal Security Act
- Communist subversion and McCarthy trials
- President Dwight Eisenhower
- ➤ Atomic Energy Act
- *Brown v. Board of Education of Topeka*
- Presidents Kennedy and Johnson
- New Frontier and the Great Society
- Civil Rights Act of 1964, Voting Rights Act of 1965, and the Fair Housing Act of 1968
- Post-World War II Amendments
- Presidents Nixon, Ford, and Carter
- Watergate Scandal
- Three Mile Island
- Foreign Policies in the Cold War
- Post-World War II
- Cold War: "Iron Curtain", Truman Doctrine, Marshall Plan, NATO
- Europe
- Berlin Airlift, Geneva Summit, Berlin Wall
- SALT I and II
- ➤ Henry Kissinger

U.S. History cont. p. 199

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HISTORY & GEOGRAPHY: *U.S. History* *cont.*

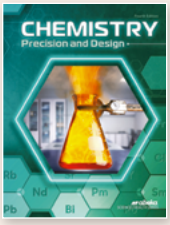
The Global Age *cont.*

- Asia
  - ➤ Japanese Peace Treaty Conference
  - Korean War: failure of containment
  - Vietnam War
    - Tet Offensive, My Lai Massacre
    - The fall of Saigon
- Latin America and Africa
  - Communist Cuba: Bay of Pigs and Cuban Missile Crisis
- Middle East
  - Eisenhower Doctrine
  - Yom Kippur War and OPEC
  - ➤ Lebanon Crisis
  - Camp David Peace Accords
  - Iran hostage crisis
- Daily Life in the Cold War
  - Technological advancements
    - Space Race: Sputnik and NASA
    - Moon landing
    - Telecommunication, television, computers, and satellites
    - Age of the Automobile
  - Social movements
    - Civil rights: Martin Luther King Jr., Rosa Parks, and the SCLC
    - Vietnam War protests, Communist sympathizers
    - *Roe v. Wade*
    - Cultural Revolution
  - Daily life
    - ➤ Evolution of family life
    - ➤ Entertainment
    - ➤ Christianity in the Cold War
- The Eve of the New Millennium
  - The Reagan Era
    - Moral Majority, "Reaganomics", and the Reagan Doctrine
  - The Bush administration
    - Foreign policy: Tiananmen Square, Manuel Noriega, and Nelson Mandela and apartheid
    - Collapse of the Soviet Union, fall of the Berlin Wall
    - Persian Gulf War
  - Clinton's presidency
    - NAFTA and the PLO
    - ➤ Newt Gingrich and the "Contract with America"
    - ➤ Budget debate
  - Technology and Culture in the 1990s
    - Information Age
    - Culture and corruption
- America in the New Millennium
  - The Bush administration
    - 9/11 attack
    - ➤ USA PATRIOT Act
    - Bush Doctrine
    - Operation Enduring Freedom and Iraqi Freedom
    - ➤ Neoconservatism
  - The Obama administration
    - Stimulus and the Affordable Care Act
    - ➤ Death of Osama bin Laden and the rise of ISIS
    - ➤ Benghazi Scandal
  - ➤ The Trump administration
    - ➤ Confirmation of Neil Gorsuch and Brett Kavanaugh
    - ➤ United States-Mexico-Canada Agreement
    - ➤ Singapore Summit and the Jerusalem Embassy Act
  - ➤ American moral decline
    - ➤ Postmodernism
    - ➤ *Obergefell v. Hodges*
    - ➤ Euthanasia
    - ➤ Las Vegas Shooting
  - ➤ Science and culture in the New Millennium

Prayer Time

- Learn to pray for our nation and for government officials

SCIENCE: *Chemistry*



Chemistry: Precision and Design explores the many branches of chemistry to discover the ingenious structure and orderly function of God's creation. The Christian perspective of this text rejects evolution and recognizes special creation as the reasonable explanation for the origin and design of the universe. Although chemistry has been less permeated by evolutionary doctrine than biology or geology, one's view of origins does affect how he approaches the science of chemistry and how he applies chemical principles to societal issues.

Chemistry: Precision and Design recognizes God's command for man to have dominion over the creation, and its goal is to teach how man might extend his "dominion" and make wiser use of the physical creation. This text presents chemistry as a foundational science and includes chapters on nuclear and organic chemistry. It seeks not only to give students a solid basis in chemical principles but also to help students understand the practical application of these principles.

Added Enrichment

- Feature boxes include:
  - Additional information on topics of interest
  - Chemistry in everyday objects
  - Highlights of God's design in the chemistry of His creation
  - Innovations in chemistry
  - Chemical explanations of environmental issues
- Practice exercises (61), critical thinking questions (168)
- Laboratory exercises (27)

Evaluation

- Reading quizzes (23)
- Review quizzes (31)
- STEM Project (counts as 6 quiz grades and 1 test grade)
- Tests (8), Quarter Exam (2)
- Semester Exam, Final Exam

➤ **RED** *indicates first introduction of content.*

Chemistry: An Introduction

- Branches of chemistry, importance of chemistry
- Process of science:
  - Scientific investigation, hypotheses, designing an experiment, laws and theories
  - Causality, models in science
  - Scientific ethics
  - Limitations and purpose of science
  - Engineering design
- Measurement and mathematics in chemistry:
  - Precision and accuracy, uncertainty
  - F.P.S. and SI units
  - Prefixes, measuring length, volume, mass, density, temperature, and other quantities
  - Unit conversion
  - Scientific notation:
    - ➤ Calculations
  - Significant digits in measurement and calculation
  - ➤ Problem-solving strategies

Matter

- States of matter, melting and boiling points
- Classification:
  - Atoms, molecules
  - Elements, compounds, pure substances, mixtures:
    - ➤ Relative abundance of elements
  - Homogeneous and heterogeneous matter
- John Dalton and atomic theory:
  - ➤ Laws derived from atomic theory
- Properties and changes of matter:
  - Properties of matter
  - Physical and chemical changes
  - ➤ Separation of mixtures
- Subatomic particles:
  - ➤ Discovery of the electron, proton, and neutron
- Atomic number, mass number, isotopes, and ions
- Atomic mass:
  - Atomic mass units
  - ➤ Mass spectrometer, mass spectrum
  - ➤ Calculating atomic mass, weighted averages

Elements and Compounds

- Formulas and names: types of chemical formulas, naming binary molecular compounds
- Naming ionic compounds: memorizing names of ions, determining empirical formulas
  - ➤ Hydrate names and formulas
- The mole:
  - Formula masses, mole
  - ➤ Avogadro's number, molar mass
  - ➤ Empirical formulas from percent composition

Chemical Reactions

- Balancing chemical equations:
  - Equations, reactants, products, law of conservation of mass
  - ➤ Steps for balancing equations
- Classification of chemical reactions:
  - Combination (synthesis), decomposition, single-displacement (substitution), and double-displacement reactions
  - ➤ Predicting products of reactions
- ➤ Quantitative relationships from the balanced equation:
  - ➤ Mole relationships
  - ➤ Limiting reactant, mass relationships in chemical reactions

Gases

- Kinetic-molecular theory:
  - ➤ Five assumptions of kinetic-molecular theory
  - ➤ Ideal gas
- Gas pressure:
  - Pressure, barometer
  - ➤ Manometers
- The gas laws:
  - Boyle's law, Charles's law, combined gas law

Chemistry cont. p. 201

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Chemistry* *cont.*

Gases *cont.*

- ➤ STP, Gay-Lussac's law
- ➤ Avogadro's law, molar volume, ideal gas law
- Diffusion, partial pressures, and stoichiometry:
  - Diffusion
  - ➤ Rates of diffusion, Graham's law, partial pressure
  - ➤ Dalton's law of partial pressures, stoichiometry and gases

Chemical Thermodynamics

- Energy:
  - Kinetic and potential energy
  - System, surroundings
  - ➤ Internal energy
  - First law of thermodynamics:
    - ➤ Mathematical statement
- Heat in chemical reactions:
  - ➤ Enthalpy
  - Endothermic and exothermic reactions
  - ➤ Enthalpy of reaction, thermochemical equation
  - ➤ Standard state, enthalpy of formation, Hess's law, mass-heat calculations
- Calorimetry
- Heat and changes of state:
  - Enthalpy of fusion, Enthalpy of vaporization
  - Vapor pressure:
    - Vapor pressure of liquids, critical point
    - ➤ Vapor pressure of solids, phase diagrams
- Entropy:
  - Second law of thermodynamics, spontaneity
  - ➤ Gibbs free energy

Light, Electrons & Atomic Structure

- Nature of light:
  - Properties of waves: crest, trough, wavelength, amplitude, frequency, speed
  - Classical theories of light, electromagnetic wave, speed of light, electromagnetic spectrum, quantum theory of light
  - Photon, wave-particle duality
  - ➤ Photon energy-frequency relationship
- Electrons and the structure of the atom:
  - Spectrometer, line spectra, continuous spectra
  - ➤ Hydrogen spectrum
  - ➤ Introductory quantitative treatment of Bohr model, details of energy levels, ground state, excited state, quantized, matter waves
  - ➤ Schrödinger equation
  - Uncertainty principle
  - ➤ Detailed description of electron-cloud model
- Electron configuration and quantum numbers:
  - Probability contours, orbital shapes
  - ➤ Electron configuration
  - Four quantum numbers, Pauli exclusion principle
  - ➤ Aufbau principle, Hund's rule
  - Valence electrons
  - ➤ Lewis structures of atoms

Periodic Table

- Historical development of the periodic table:
  - ➤ Döbereiner's triads, Newland's octaves
  - Periodic law
  - ➤ Mendeleev's table
- Classification of the elements:
  - Group, period
  - Nonmetals, metals, semimetals, main-group elements, transition and inner transition metals
  - Brief description of several groups (alkali metals, etc.)
- ➤ Periodicity of chemical properties: periodic properties of elements in the alkali and alkaline earth metals, valence
- ➤ Electron configurations and the periodic table: correlations between the two. Madelung rule
- ➤ Periodic properties of the elements: atomic size, ionic size, ionization energy, metallic character, electron affinity, electronegativity

The Chemical Bond & Intermolecular Forces

- Octet rule
- Covalent bonds:
  - Explanation of covalent bonds, bonding and nonbonding electrons
  - Single, double, and triple bonds
  - Covalent networks
  - Lewis structures, delocalized electrons
  - ➤ Resonance structures
  - Polar and nonpolar bonds, dipoles
  - ➤ Molecular shape: VSEPR, effect of shape on molecule polarity
  - ➤ Hybridization: sigma and pi bonds
- Explanation of ionic bonding, crystalline solids
- Metallic bonding
- ➤ Predicting bond character
- Intermolecular forces: dipole-dipole, London forces, hydrogen bonds
- Crystals: amorphous and crystalline solids:
  - ➤ Types of unit cells, close packing

Selected Nonmetals & Their Compounds

- ➤ Hydrogen: most abundant element in universe, properties, preparation, reactions, and uses
- ➤ Nitrogen: occurrence, properties, preparation, reactions, and uses
- ➤ Phosphorus: occurrence, properties, preparation, reactions, and uses
- ➤ Oxygen: occurrence, properties, preparation, reactions, and uses, hydrogen peroxide, free radicals
- ➤ Sulfur: occurrence, properties, preparation, reactions, and uses
- Halogens:
  - ➤ Occurrence, properties, preparation, reactions, and uses of stable halogens
- Noble gases:
  - ➤ Occurrence, properties, compounds, and uses

Selected Metals & Semimetals

- Metallurgy:
  - Ore
  - ➤ Processing ore
- Main-group metals:
  - Alkali metals:
    - ➤ Occurrence, properties, preparation, and uses; alkali metal compounds
  - Alkaline earth metals:
    - ➤ Occurrence, properties, preparation, and uses
  - Aluminum:
    - ➤ Occurrence, properties, preparation, and uses; thermite process
  - ➤ Lead
- Transition and inner transition metals:
  - Iron:
    - Occurrence
    - ➤ Properties, production, steel refining, annealing, hardening, and tempering

Chemistry cont. p. 202

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Chemistry* *cont.*

Selected Metals & Semimetals *cont.*

- Copper:
  - ➤ Occurrence, properties, preparation, and uses
- Precious metals:
  - ➤ Occurrence, properties, preparation, and uses
- ➤ Titanium, uranium
- ➤ Important semimetals and their compounds:
- Silicon and germanium:
  - ➤ Occurrence, properties, preparation, and uses
  - Semiconducting properties
  - ➤ Silicates, glass, silicones
- ➤ Boron

Solutions & Colloids

- Introduction to solutions:
  - Solution, solvent, solute
  - ➤ Miscible and immiscible
  - ➤ Hydrated, solvated, ionization
  - Factors affecting solution rates
  - ➤ Solubility rules
- Behavior of solutions:
  - ➤ Crystallization, dynamic equilibrium
  - Solubility
  - Saturated
  - ➤ Unsaturated, supersaturated
  - Effect of temperature
  - ➤ Effect of pressure on solubility; enthalpy of solution
- Measuring solution concentration:
  - ➤ Generic concentration expression, dilution
  - Amount concentration, molality
  - ➤ Mass fraction
- Colligative properties:
  - Vapor pressure:
    - ➤ Effects of solute
    - Vapor pressure and changes of state
  - ➤ Quantitative treatment of boiling point elevation and freezing point depression
  - ➤ Electrolytes and colligative properties
  - ➤ Osmotic pressure
- ➤ Reactions in aqueous solutions:
  - ➤ Classifying aqueous reactions:
    - ➤ Precipitation, acid-base, and redox reactions
    - ➤ Predicting products of precipitation reactions
  - ➤ Stoichiometry of solution reactions
- Colloids and suspensions:
  - Tyndall effect, Brownian motion
  - ➤ Types of colloids
  - Suspensions

Chemical Kinetics

- ➤ Introduction to chemical kinetics: reaction rate, collision theory
  - Activation energy
- Concentration, temperature, and reaction rate:
  - ➤ Quantitative treatment
- ➤ Transition states and energy changes:
  - ➤ Transition-state theory, activated complex
  - ➤ Potential energy in endothermic and exothermic reactions
- Effects of a catalyst:
  - Alternate pathway with lower activation energy
  - ➤ Energy changes in catalyzed reactions, types of catalysts
  - Enzymes:
    - ➤ Inhibitors
- ➤ Reaction mechanisms: elemantary reactions, chain mechanisms, rate laws, method of initial rates

Chemical Equilibrium

- Reversible reactions:
  - Chemical equilibrium
  - ➤ Equilibrium concentrations
- Le Chatelier's Principle:
  - Concentration changes, pressure changes
  - ➤ Temperature changes, effects of a catalyst
- ➤ Equilibrium constants, solubility product constants, common ion effect

Acids, Bases & Salts

- Nature of acids and bases:
  - Characteristics of acids and bases
  - ➤ Arrhenius concept, Brønsted-Lowry concept
  - ➤ Conjugate acids and bases, naming acids and bases
  - ➤ Polyprotic acids, acidic and basic anhydrides
- ➤ Strengths of acids and bases: strong and weak acids and bases
- Acids in chemical reactions:
  - ➤ Net ionic equations
  - Reactions with bases—neutralization, salts
  - ➤ Reactions with carbonates, bicarbonates, and metals; activity series
- ➤ Equivalence concept: equivalent, equivalent concentration
- pH:
  - Ionization of water
  - ➤ Calculating pH with logarithms, pOH scale, pH measurement
  - Acid-base indicators
- ➤ Acid-base titrations: titration, equivalence point, end point
- ➤ Hydrolysis and buffers: acidic and basic salts, characteristics of buffers

Oxidation-Reduction Reactions & Electrochemistry

- Redox reactions:
  - ➤ Oxidizing and reducing agents
  - ➤ Oxidation numbers
  - ➤ Balancing redox reactions
  - ➤ Strength of oxidizing and reducing agents: activity series
- Electrochemical reactions:
  - Electric current, electrolyte, anode, cathode
  - Electrolysis:
    - Molten sodium chloride
    - ➤ Water, aqueous salt solution
    - Electroplating
  - Voltaic cells:
    - ➤ Construction, salt bridge
    - Sign conventions of anodes and cathodes
  - ➤ Cell voltage: measuring electrode potentials, standard reduction potentials

Chemistry cont. p. 203

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Chemistry* *cont.*

Nuclear Chemistry

- Radioactivity:
  - ➤ Changes in the nucleus—discovery
  - ➤ Nuclides
  - Radiation, radioactivity, types of radioactivity
- Nuclear stability:
  - ➤ Density of the nucleus
  - Strong nuclear force
  - Radioactive decay
  - ➤ Nuclear mass defect, nuclear binding energy, electron volt, binding energy per nucleon
- Nuclear reactions:
  - ➤ Details of alpha, beta, and gamma decay; positron emission; neutron radiation
  - ➤ Penetration ability
  - Half-life
  - ➤ Activity, units of measurement
  - ➤ Radioactive decay series, bombardment reactions
  - Radiometric dating
  - ➤ Particle accelerators, transuranium elements
- Effects of radiation on matter:
  - ➤ Ionizing radiation, effects on living tissue
  - ➤ Detecting radiation, measuring radiation
  - Health effects, sources of exposure
- Nuclear fission and fusion:
  - ➤ Discovery
  - ➤ Details of chain reaction
  - Critical mass
  - ➤ Atomic bomb
  - Nuclear reactor:
    - ➤ Enrichment
    - Safety
    - Waste, breeder reactor
  - ➤ Chemistry of nuclear fusion, confinement methods

Organic Chemistry

- Introduction to organic chemistry: carbon bonding, isomer, structural formula, functional group
- Hydrocarbons:
  - ➤ Detailed overview of alkanes, alkenes, alkynes, aromatic hydrocarbons: structure, nomenclature, and reactions
  - ➤ Saturated and unsaturated, alkyl groups
  - ➤ Sources of hydrocarbons
- Substituted hydrocarbons:
  - Alcohols, carboxylic acids, esters:
    - ➤ Nomenclature, reactions
  - ➤ Aldehydes and ketones, amines, amides
  - Other substituted hydrocarbons:
    - Haloalkanes
    - ➤ Epoxides, thiols
- Polymer chemistry:
  - Monomer, polymerization
  - ➤ Polymers by chemical structure:
    - ➤ Polyethylene, vinyls, polyesters, polyamides (nylon), polycarbonate, silicones
  - Biological polymers:
    - Protein, cellulose, chitin, and DNA
- Biochemistry:
  - Proteins and amino acids, peptide bonds
  - Carbohydrates, sugars, mono-, di-, and polysaccharides
    - ➤ Pentose, hexose, chain and ring forms, stereoisomers
  - Fats, lipids, fatty acids, oils:
    - Saturated and unsaturated:
      - ➤ Chemical structure of *trans* fats
    - Soaps and detergents:
      - ➤ Saponification
    - Phospholipids, steroids, cholesterol:
      - ➤ Chemical structure
  - Nucleic acids:
    - DNA, RNA
    - ➤ 3′ and 5′ ends, factors affecting base pairing
    - Codon, gene, transcription, translation
  - Metabolism:
    - Cellular respiration, fermentation, photosynthesis
    - ➤ Catabolism, anabolism

BIBLE: *Jesus & His Followers* (one semester)



Jesus and His Followers traces the life of Christ from His arrival as a Babe in Bethlehem, through His death on the cross at Calvary, to His ascension into heaven. This practical, personal study of the gospels is designed to reach both the head and the heart of the student. Through the teachings of Jesus and the example He set for His followers, the student learns how to live a more abundant and fruitful Christian life. Practical applications and thought-provoking questions encourages the student to examine his walk with Christ and apply God's Word to his life. Memory passages have been selected to correlate with the topics discussed to help the student become grounded in the Scriptures.

Evaluation

- Verses:
  - Verse quizzes (16)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - Unit quizzes (8)
  - 9-weeks content exam (1)
  - Final content exam (1)

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Lessons *72*

- ➤ The Bible—God communicates with us:
  - ➤ How our English Bible came to us
  - ➤ The English Bible in the 20th Century
  - ➤ Four portraits of Christ in the Gospels
- Jesus' birth and preparation for ministry:
  - The first Christmas
  - In the Temple at age twelve
  - Jesus is baptized
    - The trinity of God
    - The purpose of water baptism
    - Salvation is a prerequisite
  - Jesus is tempted
    - The background of the tempter
    - ➤ The essence of temptation
- Jesus' early ministry:
  - Miracle at the wedding in Cana
    - ➤ What Scripture says about alcohol
    - ➤ Drugs—a blessing or a curse?
  - Jesus cleanses the Temple
    - The Spirit of God dwelling in the believer
    - ➤ New birth and the new nature
  - Samaritan woman at the well
- His popular ministry in Galilee:
  - Jesus heals and forgives sin
    - ➤ Causes of sickness
  - Ten lepers and Jairus's daughter
    - ➤ Promises for answered prayer
  - Feeding the multitude
  - Jesus walks on water and offers living Bread
  - Jesus meets with opposition
  - ➤ Jesus meets demonic activity
- ➤ The Bible—God communicates with us:
  - ➤ How our English Bible came to us
  - ➤ The English Bible in the 20th Century
  - ➤ Four portraits of Christ in the Gospels
- Jesus' birth and preparation for ministry:
  - The first Christmas
  - In the Temple at age twelve
  - Jesus is baptized
    - The trinity of God
    - The purpose of water baptism
    - Salvation is a prerequisite
  - Jesus is tempted
    - The background of the tempter
    - ➤ The essence of temptation
- Jesus' early ministry:
  - Miracle at the wedding in Cana
    - ➤ What Scripture says about alcohol
    - ➤ Drugs—a blessing or a curse?
  - Jesus cleanses the Temple
    - The Spirit of God dwelling in the believer
    - ➤ New birth and the new nature
  - Samaritan woman at the well
- His popular ministry in Galilee:
  - Jesus heals and forgives sin
    - ➤ Causes of sickness
  - Ten lepers and Jairus's daughter
    - ➤ Promises for answered prayer
  - Feeding the multitude
  - Jesus walks on water and offers living Bread
  - Jesus meets with opposition
  - ➤ Jesus meets demonic activity
- The Master Teacher:
  - Jesus teaches through parables
  - Jesus calls the disciples and chooses apostles
  - Jesus teaches His followers to pay taxes
  - Jesus reveals what hell is like
- ➤ Various Encounters: The Sabbath encounter
- Christ encounters the hypocritical Pharisees
- Mount of Transfiguration
  - ➤ Two ways to increase faith
- Encounters with a young ruler and Zacchaeus
- Widow's Son and Lazarus
- The Passion Week:
  - Triumphal entry
  - Passover supper and Garden of Gethsemane
    - Paul instructs the church about the Lord's table
    - Jesus speaks to the eleven
      - ➤ The vine and the branches
      - ➤ Persecution inevitably awaits His followers
      - ➤ Jesus' prayer for His disciples
  - Jesus' trial and crucifixion
- Resurrection: Post-resurrection appearances
- Ascension

Jesus & His Followers cont. p. 205

➤ **RED** *indicates first introduction of content.*

BIBLE: *Jesus & His Followers* *cont.*

Lessons *cont.*

- ➤ Sermon on the Mount
  - ➤ The Beatitudes produce "overflowing joy"
  - ➤ Disciples called to be "salt" and "light"
  - ➤ Guidelines for giving and praying
  - ➤ The Lord's Prayer—an outline for prayer
  - ➤ Guidelines to combat materialism
  - ➤ Practical points to avoid pitfalls

Music *51 songs*

- Hymns, gospel songs, holiday songs

Memory Work

- Passages (16 containing 48 verses)

Prayer Time

- Learn to pray for others, missions, our nation, those in authority over us. Include praise and thanksgiving to God.

BIBLE: *Life Management* (one semester)



The successful Christian life is a life under biblical management. *Life Management under God* is an application of biblical principles in practical areas of life. Each lesson provides a marvelous opportunity to apply God's truth to everyday problems and situations. Great effort has been taken to also include critical topics from a scriptural point of view. This study can help each student obtain success by instructing him on how to apply the Word of God, life's greatest certainty, to his own life.

Evaluation

- Verses:
  - Verse quizzes (17)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - Unit quizzes (7)
  - 9-weeks content exam (1)
  - Final content exam (1)

➤ **RED** *indicates first introduction of content.*

Lessons *70*

- ➤ How to relate to others:
  - ➤ Being a friend
  - ➤ Relationships with the opposite sex
  - ➤ Getting along with your family
  - ➤ Learning to forgive
  - ➤ Living courteously
- ➤ Your safety and well-being:
  - ➤ First aid
  - Alcohol and tobacco
  - Illegal drugs
- ➤ Developing balanced living habits:
  - ➤ Nutrition for optimum living
  - ➤ Exercise for vibrant living
  - ➤ Dealing with stress and fatigue
  - ➤ Promoting spiritual health
- ➤ Job success:
  - ➤ Part-time work and your life's work
  - ➤ How to get a job
  - ➤ How to get along with your boss and relate to your fellow workers
- ➤ Taking responsibility:
  - ➤ Time management for efficient living
  - ➤ Managing your money
  - ➤ Responsibilities of citizenship
- ➤ Preparing for marriage from a biblical perspective:
  - ➤ Falling in love
  - ➤ Living with your marriage partner
  - ➤ Looking at the issue of divorce
  - ➤ Fornication and adultery
  - ➤ Sexually transmitted diseases
- ➤ Issues that affect your life:
  - ➤ Creation versus evolution, abortion
  - ➤ Gambling, social networking

Music *44 songs*

- Songs, holiday songs

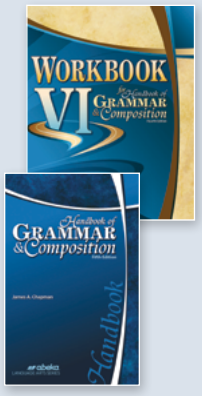
Memory Work

- Passages (29 containing 72 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us.

ENGLISH: *Grammar & Composition*



English 12 is designed to incorporate a program of English literature, composition, grammar, vocabulary, and outside reading into a senior-level English class. The study of grammar is not stressed in the senior year as much as in earlier years because of the extensive background that students should have gained from previous study; however, grammar is still taught briefly each day. Grammar instruction includes correcting homework exercises from *Workbook VI for Handbook of Grammar and Composition* and briefly presenting new material from *Handbook of Grammar and Composition.*

Added Enrichment

- Review games

Evaluation

- Grammar quizzes (17)
- Tests (8), mid-semester tests (2)
- Semester exam, final exam
- Compositions:
  - Essays (5)
  - Argumentative essay
  - Oral book reviews (2)
  - Full book review
  - Vocation project
  - Character analysis
  - Extended definition
- Optional (graded at teacher discretion):
  - Paragraphs, book reviews
  - Character sketch, original poem
  - Extemporaneous compositions, résumé
  - Descriptions, narrative

Grammar

- Capitalization:
  - Proper nouns and words formed from proper nouns:
    - Particular persons, places, things:
      - Political and economic organizations and alliances
      - Words referring to Deity and Holy Scripture
    - Words from proper nouns
    - Common noun or adjective when part of proper name
  - Titles of persons, titles of works
  - First word of every sentence
  - Pronoun *I* and interjection *O*
  - First word of every line of poetry
- Punctuation:
  - End marks:
    - Period for declarative sentences, abbreviations, indirect question, and polite request
    - Question mark for interrogative sentences
    - Exclamation point for exclamatory sentences
  - Commas:
    - Before a coordinating conjunction joining two independent clauses
    - To indicate:
      - Omissions or avoid possible misreading
      - Nonessential elements in a sentence:
        - Appositive and appositive phrase
        - Participial phrase
        - Adjective and adverb clauses
        - Direct address
        - *Well, yes, no,* or *why*
        - Parenthetical expressions
    - To set off introductory phrases or clauses
    - In dates and addresses
    - After salutations and closings of letters
  - Semicolons:
    - Between independent clauses:
      - If not using coordinating conjunction
      - Joined by transitional words
      - Joined by coordinating conjunction if clauses already contain commas
    - Between items in a series if the items contain commas
  - Colons:
    - Before a list of items
    - To introduce a formally announced statement or quotation
    - Between:
      - Independent clauses when second clause further explains first one
      - Chapter and verse of Bible reference
      - Hour and minute of time reference
    - After salutation of a business letter
  - Italics:
    - For titles of books, magazines, newspapers, plays, works of art, ships, trains, aircraft, and spacecraft
    - For words, letters, numbers referred to as such
    - For foreign words or phrases
  - Hyphens:
    - To divide a word at the end of line
    - In compound numbers
    - In fractions used as adjectives
    - In prefixes before a proper noun or adjective
    - In compound adjectives before a noun
  - Quotation Marks:
    - In a direct quotation
    - To enclose:
      - Titles of short poems, songs, chapters, articles, and other parts of books or magazines
      - A quoted passage of more than one paragraph: at the beginning of each paragraph and at the end of the last paragraph
  - Apostrophes:
    - To form:
      - Possessive case of nouns
      - Individual possession within a group
      - Possessive case of indefinite pronouns
    - To show omissions from words
    - With *s* to form plurals of letters, numbers, signs, and words used as words
  - Dashes:
    - After a series of words or phrases giving details about a statement that follows
    - To indicate an abrupt change or break in a sentence
    - To set off parenthetical elements or confidential comments

Grammar & Composition cont. p. 207

ENGLISH: *Grammar & Composition* cont.

Grammar cont.

- Parentheses:
  - To enclose:
    - Parenthetical elements
    - Brief confirmatory information
  - Brackets:
    - To enclose editorial comments within quotations
    - To replace parentheses within parentheses
- The sentence:
  - Definition of sentence
  - Kinds of sentences classified by purpose: declarative, imperative, interrogative, exclamatory
  - Recognizing subjects and verbs: complete subject, simple subject, complete predicate, simple predicate, and verb phrase
  - Overcoming problems locating subjects and verbs:
    - Finding:
      - Subject in an inverted sentence: interrogative sentence, sentence beginning with *there* or *here*
      - Subject of an imperative sentence
      - Subject before its appositive
      - Verb phrase that is interrupted by other words
  - Diagramming subjects and verbs
  - Recognizing and diagramming compound subjects and verbs
  - Recognizing and diagramming complements: direct object, indirect object, objective complement, predicate nominative, predicate adjective
  - Fragments and run-on sentences
  - Recognizing and diagramming simple, compound, complex, and compound-complex sentences
  - Sentence improvement:
    - Unity and coordination
    - Subordination:
      - Choosing what to subordinate
      - Avoiding upside-down, illogical, and excessive subordination
    - Placement of modifiers:
      - Avoid:
        - Squinting modifiers and split constructions
        - Dangling participial phrases
        - Dangling gerund and infinitive phrases
        - Elliptical clauses
    - Pronoun reference
    - Clear and logical construction
    - Parallelism
    - Point of view:
      - Avoid unnecessary shifts in:
        - Subject, voice, and tense
        - Mood, person, number, discourse, and tone
    - Consistency of subject, tense, or voice
    - Clear and effective diction
    - Conciseness
- Parts of speech:
  - Recognizing eight parts of speech
  - Verbs:
    - Recognizing action (transitive and intransitive), linking, and helping verbs
    - Distinguishing verbs from verbals: participles, gerunds, and infinitives
    - Using principal parts of verbs
    - Regular verb endings
    - Irregular verbs
    - Using correct principal parts
    - Verb tenses: progressive and emphatic forms
    - When to use the verb tenses
    - Using logical verb tense sequence between clauses and between verbals and independent clause
    - Avoiding unnecessary shifts in sentences: in subjects, verb tense, voice of verbs
    - Active and passive voice
    - Mood: indicative, imperative, and subjunctive
    - Avoid incorrect verb forms
    - Use troublesome verbs correctly and avoid verb usage errors
  - Nouns:
    - Recognizing nouns:
      - Compound, common, proper, and collective
      - Concrete and abstract
    - Substantives
    - Keeping agreement of subject and verb
    - Recognizing and diagramming nouns as predicate nominatives, direct objects, indirect objects, objects of prepositions, direct address, appositives, and objective complements
    - Using parallelism
  - Pronouns:
    - Antecedents
    - Recognizing personal, interrogative, demonstrative, indefinite, compound, relative
    - Recognizing reflexive and intensive pronouns
    - Keeping agreement of verbs and indefinite pronoun subjects
    - Making pronouns agree with their antecedents:
      - In number and in gender
      - In person
    - Nominative case:
      - For subjects, predicate nominatives, appositives of subjects, appositives of predicate nominatives, appositives to subjects, and appositives to predicate nominatives
      - For complements of the infinitive *to be*
    - Objective case:
      - For direct objects, indirect objects, objects of prepositions and for appositives of direct objects, indirect objects, objects of prepositions and for appositives to direct objects, indirect objects, and objects of prepositions
      - For subjects of infinitives and complements of the infinitive *to be*
    - Possessive case:
      - Using correct case for *who, whom, whoever,* and *whomever* and in incomplete clauses beginning with *than* or *as*
      - Avoid pronoun usage problems: double subject, possessive case before a gerund
  - Adjectives:
    - Recognizing and diagramming adjectives: Participles and proper adjectives and infinitives as adjectives
    - Distinguishing adjectives from nouns and pronouns
    - Recognizing and diagramming predicate adjectives
    - Using and diagramming:
      - Prepositional and participial phrases as adjectives
      - Infinitive phrases as adjectives
      - Adjective clauses
    - Placing and punctuating adjective modifiers
    - Using adjectives in comparison
    - Avoiding double comparison and double negatives

Grammar & Composition cont. p. 208

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ENGLISH: *Grammar & Composition* *cont.*

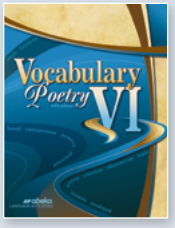
Grammar *cont.*

- Adverbs:
  - Recognizing and diagramming adverbs
  - Infinitives as adverbs
  - Nouns as adverbs
  - Distinguishing adverbs from adjectives
  - Using and diagramming:
    - Prepositional phrases as adverbs
    - Infinitive phrases as adverbs
    - Adverb clauses
  - Correct placement of adverb modifiers
  - Distinguishing dependent clauses
  - Using adverbs in comparison
- Prepositions:
  - Recognizing prepositions, prepositional phrases, and objects of prepositions
  - Distinguishing between prepositions and adverbs
  - Using prepositions correctly
- Conjunctions:
  - Recognizing coordinating, correlative, and subordinating conjunctions
  - Using parallel structure
- Interjections:
  - Definition
  - Punctuation with interjections
  - Other parts of speech used as interjections
  - Diagramming interjections
- Recognizing and diagramming:
  - Nominative absolute and expletives
  - Nominative absolute phrases
- Word study:
  - Using the dictionary:
    - Kinds of dictionaries
    - Selecting a dictionary
    - Using the dictionary
    - Parts of the dictionary
  - Usage and diction:
    - Levels of usage
    - Using correct diction
    - Using clear and effective diction
    - Appropriateness
    - Exactness and vividness
    - Figurative language
    - Gobbledygook
    - Jargon
    - Triteness
    - Wordiness:
      - Sentences beginning with *there, it,* and *this*
      - Wordy expressions
      - Redundancies
      - Glossary of diction

Composition

- Manuscript form:
  - Abbreviations, numbers, titles
  - Abbreviations in footnotes and parenthetical references
- The Writing Process: plan, write, rewrite, edit
- Introducing paragraphs:
  - Topic sentence
  - Summarizing sentence
  - Paragraph development by examples, incidents, reasons, comparison and contrast, and combination of methods
  - Paragraph unity
  - Paragraph coherence: chronological order, order of importance, transitional expressions, space order, pronoun reference, and repetition
  - Paragraph with proper emphasis
- Essays (6):
  - Essay answer
  - Narrative and argumentative essays
- Outline:
  - Topical and sentence outlines
  - Format of outline
  - Parallelism in an outline
  - Steps to preparing an outline
- Extended definition
- Writing descriptions about persons, places, and things (6):
  - Steps: point of view, careful selection of details, arrangement of details, use of exact nouns and verbs
- Character sketch
- Critical book reviews: written and oral review
- Writing letters:
  - Friendly: letter parts, thank-you note, bread-and-butter note
  - Business:
    - Letter parts, order letter, request letter, complaint letter, and letter to a government official
    - Letter of application, résumé
- ➤ Vocation Project (Research paper):
  - Planning the paper:
    - Selecting subject
    - Finding sources: encyclopedia, periodical databases, *Essay and General Literature Index,* published bibliographies
    - Writing bibliography cards
    - Making a preliminary outline
    - Taking notes: writing note cards, avoiding plagiarism
    - ➤ Writing a questionnaire cover letter and conducting an interview
  - Writing the paper: introduction, body
  - Using parenthetical citations
  - Rewriting the paper: check organization, introduction, conclusion, unity, coherence, and citations
  - Editing the paper: check each paragraph, sentence, word; capitalization and punctuation
  - Typing the paper:
    - General information
    - Formatting pages: title page, pledge page, outline page, first page, and succeeding pages
    - Inserting footnotes or endnotes
  - Additional guidelines:
    - Abbreviations in citation entries
    - Ellipsis marks in quotations
    - Block quotations
  - Documentation for research paper:
    - Parenthetical citations
    - Endnotes and footnotes
  - Typing instructions

ENGLISH: *Vocabulary, Poetry*



Knowing and using a selection of choice vocabulary words gives high school students an advantage, whether it is in a job interview, on a college entrance exam, or simply in meeting today's expectations for expression and communication. Mastering the vocabulary words in *Vocabulary, Poetry VI* will help students in their writing, speaking, and reading comprehension. Many of the words are taken from *English Literature.* Students will study the antonyms and synonyms included with the definitions and learn prefixes, root words, and suffixes, expanding their vocabulary even further. Students will also memorize ten poems throughout the year. The students will benefit from reciting and memorizing poetry.

Added Enrichment

- Vocabulary lists (12):
  - Total words and definitions (144)
  - Organized by word origin or by roots, prefixes, and suffixes
- Practice exercises (100) including:
  - Pretest over vocabulary words and their meanings
  - Cumulative review of vocabulary words and definitions
- Each vocabulary word includes:
  - Pronunciation, etymology, part of speech
  - Definition, sample sentence
  - Synonyms, antonyms
  - Related forms of the word
- Pronunciation key
- Vocabulary chart showing:
  - Prefixes (48), suffixes (48)
  - Greek and Latin roots and meanings (100)
- Guidelines for solving analogy questions
- Index includes vocabulary words; prefixes, roots, suffixes; synonyms antonyms

Evaluation

- Weekly quizzes (8)
- Quarterly review (1 each 9 weeks; each counts as 2 quiz grades)
- Poetry quizzes: written (9), oral (1)

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Skills Development

➤ Master vocabulary words and definitions

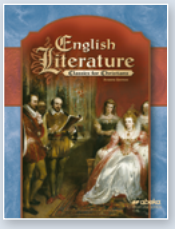
- Use vocabulary words in sentences and in proper context
- Memorize vocabulary definitions
- Master 48 prefixes, 100 roots, and 48 suffixes
- Learn more than 1,000 synonyms, antonyms, and related words for vocabulary words
- Analyze word meanings based on their prefixes, roots, and suffixes
- Develop ability to solve analogy questions
- Apply spelling and phonics concepts through teacher-directed oral practice and independent written practice

Poetry Skills Development

➤ Memorize 10 lyrical poems

- Develop appreciation for poetry
- Lay foundation for future literature study
- Recite in unison
- Use appropriate expression and volume
- Increase vocabulary
- Demonstrate comprehension of emotion and content
- Develop a mental visualization of the poem
- Discuss meaning and purpose of poems
- Use proper punctuation in writing and reciting poems

ENGLISH: *Literature*



English Literature presents a chronological study of English literature from the Anglo-Saxon period to the Modern Age (twentieth century). Classics such as *Beowulf, The Importance of Being Earnest, Pride and Prejudice, Paradise Lost, Robinson Crusoe, David Copperfield,* and *The Canterbury Tales* were chosen not only for their literary value but also for their character development. Students will learn about a variety of literary genres and will further analyze literature through in-depth studies of a tragedy, an allegory, and a novel. In order to help students visualize the works and time periods they are studying, *English Literature* contains a variety of illustrations and photographs of English people, places, and art.

Literary Value

- 105 authors, including well-known writers such as Elizabeth Barrett Browning, Geoffrey Chaucer, Daniel Defoe, Charles Wesley, and Oscar Wilde
- Prose selections (24), poems (221), plays (4), essays (13), devotional works (7), and sermon (1)

Added Enrichment

- Footnotes define and explain unfamiliar words
- Comprehension and discussion questions after selections
- Character-building quotations and verses
- Introductory paragraphs for interest and background information
- Author biographies and literary terms
- Glossary of literary terms
- Unit reviews
- Introduction to each literary period describing literary characteristics of that age

Evaluation

- Comprehension quizzes (22)
- Homework reading quizzes (29)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

Literature cont. p. 210

➤ **RED** *indicates first introduction of content.*

ENGLISH: *Literature* *cont.*

Reading Skills Development

- Develop skills in reading comprehension
- Further develop oral reading skills
- Be able to identify significant quotations and the selections in which they are featured
- Increase vocabulary
- Further develop writing skills

➤ Study various literary forms: lyric and epic poetry, drama, allegory, Romantic and Victorian poetry, and modern fiction

- Study meaning and use of literary terms and devices such as theme, plot, imagery, figurative language, analogy, aside, caesura, carol, exemplum, idyll, kenning, madrigal, metonymy, ode, rondeau, scop, currealism, and terza rima
- Study historical backgrounds and writing techniques to better understand each literary period

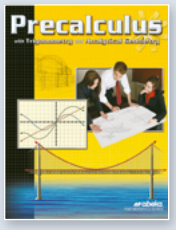
➤ Study the development of plot, theme, setting, and character(s) in short stories, essays, and other notable works of English literature

Comprehension, Discussion, & Analysis Skills Development

➤ Read entire works: *The Pilgrim's Progress* and *Macbeth*

- Develop proper discernment according to the truths of Scripture
- Answer factual, interpretive, and inferential comprehension and discussion questions
- Improve ability to use deductive reasoning, understand cause and effect, and draw conclusions
- Build appreciation for good literature and a love of reading
- Develop an understanding of people's motives and feelings while recognizing consequences of particular actions
- Learn to analyze literature while studying selections
- Comprehend and appreciate the basic elements of a work of literature
- Learn to appreciate the rhyme, rhythm, and figurative language of poetry

MATHEMATICS: *Precalculus*



The purpose of *Precalculus* is to teach the student how to select and apply various techniques to solve mathematical problems in a skillful, systematic, and logical manner. Students will learn the underlying principles of trigonometry and interrelationships of lines and functions with graphical and analytical problem-solving techniques from a study in analytical geometry. The study culminates with an introduction to selected calculus topics.

Also available: *Consumer Mathematics* and *Business Mathematics* on Electives pp. 226–230.

Topical Interest Essays

- The History of Pi
- Distance of travel due to earth's rotation
- Mathematics in Astronomy—Eratosthenes' calculation of earth's circumference
- Sir Isaac Newton
- Oscilloscope Measurement of Household Voltage
- Mathematics in Engineering
- The Place of Imaginary Numbers
- Euler's Formula $e^{i\pi} + 1 = 0$
- Missile Guidance Technology
- Mathematics in Physics—Projectile Motion
- Mathematics in Biology
- Summation—A Calculation of Pi
- The Design of Cylindrical Containers
- Mathematics in Physics—Fluid pressure on a vertical surface

Evaluation

- Quizzes (49)
- Tests (9)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Trigonometry & Analytical Trigonometry

- Basic trigonometric ratios
- Solving right triangles

➤ Advanced trigonometric ratios
➤ Trigonometric functions
➤ Solving trigonometric equations

- Trigonometric graphs:
  - Intercepts

  ➤ Symmetry, sinusoid
  ➤ Amplitude, period, key angles, key points
  ➤ Vertical and horizontal scaling
  ➤ Vertical and horizontal translation
  ➤ Phase shift
  ➤ Vertical asymptotes

➤ Signs of the functions by quadrant
➤ Periodic motion: simple harmonic motion, frequency, rotating object, suspended object
➤ Identities:
  ➤ Reciprocal, cofunction, Pythagorean, quotient
  ➤ Negative angle, double angle, half angle
  ➤ Sum and difference, product to sum, sum to product
  ➤ Verifying
  ➤ Used to find unknown values

- Special angle function values (30°, 45°, etc.; $\frac{\pi}{6}, \frac{\pi}{4}$, etc.)
- Inverse function values using a calculator
- Function values:
  - Angles in degrees

  ➤ Angles in radians
  ➤ Finding unknown function values
  ➤ Function values using the unit circle, line diagrams of function values

  - Using a calculator, using right triangles, using special triangles:
    - 30°-60°-90°
    - 45°-45°-90°
    - 90°; $\frac{\pi}{6} - \frac{\pi}{3} - \frac{\pi}{2}$, $\frac{\pi}{4} - \frac{\pi}{4} - \frac{\pi}{2}$

➤ Reducing trigonometric function angles: reference angle, reference triangle
➤ Rewriting as a cofunction

Precalculus cont. p. 211

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Precalculus* *cont.*

Coordinate Geometry

- Basic review, terminology
- ➤ Trigonometric Function graphs:
  - ➤ Intercepts, symmetry, sinusoid
  - ➤ Amplitude, period, key angles, key points
  - ➤ Vertical and horizontal scaling
  - ➤ Vertical and horizontal translation, phase shift
  - ➤ Vertical asymptotes
- ➤ Angles in degrees and radians
- ➤ Graphing by addition of ordinates
- ➤ Inverse functions, inverse trigonometric functions
- Intercepts: *x*-intercept, *y*-intercept
- ➤ Symmetry: *x*-axis, *y*-axis, origin
- Domain:
  - Limiting operations
  - ➤ Determining
- Complex number plane
- Points of intersection
- Distance
- Slope:
  - ➤ Variation, inclination
  - Parallel and perpendicular lines
  - ➤ Angle between two intersecting lines
- Straight line:
  - ➤ Inclination
  - ➤ Distance to a point
  - Systems of lines
  - Equation forms:
    - Slope-intercept
    - ➤ Point-slope, two-point, intercept, parallel to axes, general
- Midpoint
- Parametric equations:
  - ➤ Eliminating the parameter
  - ➤ Developing equations: Shrödinger's wave model graph
  - ➤ Involute of a circle, brachistochrone, cycloids
- Locus of a point
- ➤ Conic sections:
  - Circle: center, radius
  - Ellipse:
    - ➤ Vertexes, foci, major and minor axes, latus rectum, eccentricity
  - Parabola:
    - Vertex
    - ➤ Focus, latus rectum, eccentricity
  - ➤ Hyperbola: vertexes, foci, transverse and conjugate axes, latus rectum, eccentricity, asymptotes, conjugate hyperbolas
  - ➤ Horizontal and vertical translation, rotation of axes
- ➤ Graphing in three dimensions:
  - ➤ Traces, cylinders, elements
  - ➤ Graphs: ellipsoid, paraboloid, hyperboloid of one sheet, hyperboloid of two sheets, hyperbolic paraboloid, cone

Polar Coordinates

- ➤ Graphing techniques
- ➤ Terminology, conversions
- ➤ Analysis techniques: branch tangents at the pole, symmetry, determining angles resulting in undefined values
- ➤ Rotation of axes
- ➤ Graphs: lines, circles, roses, cardioids, limaçons, parabolas

Angles

- Angles on the Cartesian plane:
  - In degrees
  - ➤ In radians
- ➤ Initial side, terminal side, standard position
- ➤ Quadrant of an angle, coterminal angles, positive and negative angles: in degrees, in radians, conversions
- ➤ Bearing
- ➤ Key angles for a trigonometric function graph
- Trigonometric function values:
  - ➤ Reference angle by quadrant: in degrees, in radians
- Special angles: 30°, 45°, etc.; $\frac{\pi}{6}$, $\frac{\pi}{4}$, etc.

Functions

- Functional notation
- Domain and range:
  - ➤ Finding, using inequalities, using intervals, characteristics
- ➤ Functions: even, odd, periodic, inverse
- Horizontal line test, vertical line test, one-to-one functions

Triangles

- Solving right triangles
- ➤ Solving oblique triangles:
  - Law of sines, law of cosines
  - ➤ The ambiguous case
- Using angles of elevation and depression
- Finding area
- Right triangle trigonometry
- Reference triangle
- 30°-60°-90°, 45°-45°-90°; $\frac{\pi}{6} - \frac{\pi}{3} - \frac{\pi}{2}$, $\frac{\pi}{4} - \frac{\pi}{4} - \frac{\pi}{4}$

Complex Numbers

- Imaginary numbers and basic quantities
- Standard form
- Graphing on the complex plane
- ➤ Magnitude, argument, trigonometric form, polar form, conversions
- ➤ Multiplying and dividing complex numbers
- ➤ Finding roots and powers: De Moivre's theorem

Distance

- Length of an arc:
  - Using degrees
  - ➤ Using radians
- Distance between two points:
  - In two dimensions
  - ➤ In three dimensions
  - ➤ Horizontal and vertical distance
  - ➤ From a line to a point

Vectors

- ➤ Scalar, equal vectors, unequal vectors, negative vector, resultant, vector sum

Regression Analysis

- ➤ Method of least squares: general equations for solution
- ➤ Close-fit curve
- ➤ Summation notation
- ➤ Pearson-*r* correlation coefficient
- ➤ Linear and non-linear data: $y = mx + b, y = ae^{tx}, y = ax^t, y = a + bx + cx^2 \ldots + mx^n$

Precalculus cont. p. 212

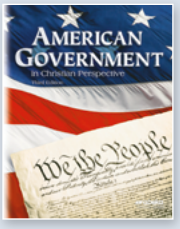
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MATHEMATICS: *Precalculus* cont.

Introductory Calculus

- ➤ History, limits
- ➤ First derivative of a polynomial: using limits, using the short method
- ➤ Slope using derivatives
- ➤ Second derivative of a polynomial: maximum and minimum, critical points
- Rate of change:
  - Average
  - ➤ Instantaneous
- Velocity:
  - Average
  - ➤ Instantaneous
- Acceleration:
  - Average
  - ➤ Instantaneous
- ➤ Anti-derivative
- ➤ Area under a curve

HISTORY & GEOGRAPHY: *American Government* (one semester)



American Government in Christian Perspective seeks to give students a clear understanding of the historical and philosophical elements that make the United States a unique nation. Only when students fully understand these foundational elements will they be able to love and appreciate our republic. *American Government in Christian Perspective* traces the roots of our political institutions and examines the Constitution itself. Through a clear explanation of the legislative, executive, and judicial branches of government, students learn how a republic actually functions. Students will also study state and local government and be better able to understand their local systems, which will in turn develop a better understanding of and a greater appreciation for American philosophy and ideology.

Added Enrichment

- Special feature boxes (44):
  - Give better understanding of the following:
    - Foundations of American liberty
    - Operation of opposing government systems
    - Symbols of American government
    - Concepts of American government
  - Highlight those who have helped shape American government through their writings and biographical sketches
- Important U.S. documents: the Constitution of the United States, the Declaration of Independence, and the Articles of Confederation
- *State and Local Government* (5 sections)
  - Helps students understand the state and local government by completing the study outline for their state

Evaluation

- Reading quizzes (15)
- Review quizzes (19); (includes memorization quizzes for "The Star-Spangled Banner," the Preamble to the Constitution, and four Scripture passages totaling 15 verses)
- Current events (14; each counts as quiz grade)
- Patriotic project (counts as test grade)
- Tests (4), 9-weeks exam (1)
- Final exam

➤ **RED** *indicates first introduction of content.*

Foundations of American Government

- ➤ America—a unique nation:
  - ➤ Miracle of America:
    - ➤ A blessed nation
    - ➤ American character
    - ➤ Need for vigilance
  - ➤ American symbols
  - ➤ Patriotism versus nationalism
- ➤ Government under God:
  - ➤ Foundations of civil government: nature of government
  - ➤ Forms of government:
    - ➤ Theocracy and human governments
    - Constitutional republic
    - ➤ Dictatorship
  - ➤ Christians and government:
    - ➤ Christian's response and responsibilities to government
    - ➤ Character and government
- Shaping of the American republic:
  - English heritage:
    - Bible and Christianity in England
    - English common law and government
    - Struggle for liberty
  - English tradition takes root in America:
    - Compacts, colonies, and charters
    - Colonial law and government
    - Local government
  - Steps toward unity:
    - Spiritual revival in the colonies
    - Early efforts at political union
  - A nation is born:
    - Steps toward independence
    - Independence declared

Our Constitutional Republic

- Constitution of the United States:
  - From Plymouth to Philadelphia:
    - Roots of America's Constitution
    - Articles of Confederation
  - New Constitution adopted:
    - Constitutional Convention, 1787
    - Bundle of compromises
    - Federalists and Anti-Federalists
  - Main features of the Constitution:
    - Supreme law of the land
    - ➤ Purposes of our government

American Government cont. p. 213

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HISTORY & GEOGRAPHY: *American Government* *cont.*

Our Constitutional Republic *cont.*

- ➤ Rights and responsibilities of the American people
- ➤ Republican and limited government
- ▪ Congress—legislative branch:
  - ➤ Structure of Congress:
    - ➤ Congressional houses and leadership
    - ➤ Constitutional qualifications
  - ➤ Procedures within Congress: process, pay, privileges, and penalties
  - ➤ Responsibilities of Congress:
    - ➤ Lawmaking and the process
    - ➤ Representation and oversight
  - ➤ Powers of Congress that they can and cannot exercise
- ▪ President—executive branch:
  - ➤ President and the Constitution: creation, term, tenure, qualifications, succession, and compensation
  - ➤ President's leadership: constitutional powers and God-given authority
  - ➤ Vice President
  - ➤ Roles of the President: chief of state, commander in chief
  - ➤ President's team:
    - ➤ White House office
    - ➤ Office of Management and Budget
    - ➤ Other advisory bodies
- ▪ Bureaucracy—executive branch:
  - ▪ From patronage to a merit system
  - ▪ Growth of the bureaucracy
  - ➤ Organization of the bureaucracy:
    - ➤ Executive departments
    - ➤ Agencies
    - ➤ Government corporations
  - ➤ Power of the bureaucracy:
    - ➤ Bureaucracy and the Constitution
    - ➤ Legacy of expanding bureaucracy
  - ➤ Reform of the bureaucracy: reorganization, reduction, and removal
- ▪ Federal Courts—judicial branch:
  - ➤ Constitutional and legislative courts: nominating federal judges and justices
  - ➤ Judicial process:
    - ➤ Civil and criminal cases
    - ➤ Procedure in a trial court and an appeals court
  - ➤ Supreme Court:
    - ▪ Judicial review: *Marbury v. Madison*
    - ➤ Legal road to the Supreme Court
    - ➤ Court in session
    - ➤ Changing role of the Court: Earl Warren
- ▪ Bill of Rights and other amendments:
  - ▪ Bill of Rights:
    - ▪ Background of the Bill of Rights
    - ➤ Our civil rights and responsibilities
    - ▪ Original meaning of separation of church and state
  - ➤ Other amendments
  - ➤ Importance of various court cases

Our Federal Republic

- ➤ American federalism:
  - ➤ Federalism defined
  - ➤ Founders' choice
  - ➤ Constitution and federalism: dividing power and fulfilling obligations
  - ➤ History of federalism: rise of central power:
    - ➤ Dual, cooperative, and coercive federalism
  - ➤ Federalism today:
    - ➤ States and the Supreme Court
    - ➤ States and Congress: the 10th Amendment
- ➤ State and local government:
  - ➤ Fifty individual states:
    - ➤ State constitutions and the federal Constitution
    - ➤ Changing states constitutions
    - ➤ Functions of state government
  - ➤ State executive officers
  - ➤ State legislators:
    - ➤ Terms, sessions, and apportionment
    - ➤ Qualifications, elections, compensation, and personnel
    - ➤ Powers of the state legislature
    - ➤ Officers and organization of the state legislature
    - ➤ Legislative process
    - ➤ Voter participation in the lawmaking process
  - ➤ State courts
  - ➤ Local government: county, New England town, township, and municipal government
  - ➤ Financing state and local government
- ➤ American citizen in action—making a difference:
  - ➤ United States citizen:
    - ➤ Citizenship defined
    - ➤ Citizenship by birth and naturalization
  - ➤ Citizen and his government: elected and appointed
  - ➤ Political participation in America:
    - ➤ Citizen and the military, voting process, political party, interest group, public opinion, and news media
    - ➤ Other forms of political action
  - ➤ Citizen and his character: importance of righteousness in the preservation of the nation

State and Local Government Study Outline

- ▪ A research guide divided into five sections to help students better understand their state and local government:
  - ▪ Section 1—My home state
    - ▪ State history
    - ▪ Voter requirements
    - ▪ Elections
    - ▪ State constitution overview
    - ▪ Changing the state constitution
  - ▪ Section 2—State executive officers
    - ▪ The governor's office
    - ▪ Gubernatorial qualifications, elections, and terms
    - ▪ Powers and duties of the governor
    - ▪ Lieutenant governor
    - ▪ Secretary of state
    - ▪ State attorney general
    - ▪ State treasurer
    - ▪ State auditor
    - ▪ State comptroller
    - ▪ State superintendent of education
    - ▪ Other state offices

American Government cont. p. 214

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HISTORY & GEOGRAPHY: *American Government* *cont.*

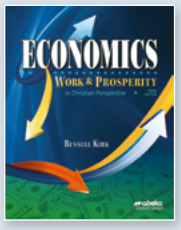
State and Local Government Study Outline *cont.*

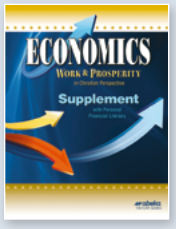
- Section 3—State legislature
  - Overview
  - Terms and sessions
  - Apportionment
  - Qualifications and elections
  - Officers, organizations, and powers
  - Legislative committees
  - The legislative process
- Section 4—State courts
  - State court levels
  - The jury system
- Section 5—Local government
  - County government
  - New England town government
  - Township government
  - Municipal government

Prayer Time

- Learn to pray for our nation and for government officials

HISTORY & GEOGRAPHY: *Economics* (one semester)





The purpose of *Economics: Work and Prosperity* is to teach basic economic principles and to give students a clear understanding of free-enterprise capitalism, individual moral responsibility, and the biblical work ethic from a conservative Christian perspective. This course emphasizes God's Word as the one standard for man's thoughts and actions and encourages man's dependence upon God rather than upon government. It stresses acceptance of moral responsibility and accountability to God and man. Finally, this course strengthens the link between economic freedom and the political and individual freedoms Americans enjoy.

Added Enrichment

- Special feature boxes (25):
  - Emphasize the importance of responsibility in economics
  - Highlight people that have had positive and negative influence on economics
  - Include illustrations of the success of capitalism, comparison and contrasts of different economies, and relationships of economics and government
- Supplement with personal financial literacy
  - 56 applications expand on textbook topics
  - 8 optional project ideas to further enhance application of topics

Evaluation

- Reading quizzes (18)
- Review quizzes (17)
- Current events (18; each counts as quiz grade)
- Research paper (1; counts as test grade)
- Tests (4), 9-weeks exam (1)
- Final exam
- Optional assessment to coordinate with use of supplement

➤ **RED** *indicates first introduction of content.*

Everybody's Economics

- ➤ Why bother about economics?
- Building an economy: the Pilgrims at Plymouth
- ➤ Economists and the language of economics
- ➤ Everything has to be worked for
- ➤ Goods, wants, and needs
- ➤ Goods for production and goods to use up
- ➤ What makes goods valuable?

Economists & Economic Laws

- ➤ First principles of economics
- ➤ Early economic history
- Adam Smith and *The Wealth of Nations*
- ➤ Ways to prosperity
- ➤ Supplement
  - ➤ Public policy decision-making model

Factors of Production

- ➤ Prosperity does not grow on trees
- ➤ Factors of natural resources, labor, capital, and entrepreneurship
- ➤ Achieving economic prosperity
- ➤ Supplement
  - ➤ Achieving national economic goals
  - ➤ Renewable and nonrenewable resource development
  - ➤ Wage and salary equity factors

Laws of Supply & Demand

- ➤ Value of goods
- ➤ Marginal utility and value
- ➤ Basic laws of supply and demand
- ➤ Supply and demand in balance
- ➤ Government and economic laws
- ➤ Supplement
  - ➤ Impulse buying
  - ➤ Establishing wages, market value, and productivity

Productive Market Economy

- ➤ Market signals
- ➤ Contrasting economic systems
- ➤ Profits and productivity
- ➤ Supplement
  - ➤ Buying a new or used car
  - ➤ Four types of economies
  - ➤ Production possibilities curve model: choice, scarcity, opportunity
  - ➤ Economics benefits of a college education

Economics cont. p. 215

➤ **RED** *indicates first introduction of content.*

HISTORY & GEOGRAPHY: *Economics* *cont.*

Good That Competition Does
- Healthy competition
- Perfect competition
- Monopolies and monopolistic competition
- Oligopolies
- Competitive encouragement in the free market
- Supplement
  - Pricing strategies
  - Benefits from natural monopolies
  - Comparing various market structures
  - Government's role in protecting consumers from fraud

Efficiency of Production
- Source of efficiency
- Total cost and efficiency
- Division of labor
- Scale of production
- Absolute and comparative advantage
- Geographic specialization and trade
- Supplement
  - Marginal cost analysis

Why Everybody Needs to Save
- Fables in support of saving
- Saving in Old Egypt and in modern countries
- Rewards of saving
- Wise and foolish saving
- Many forms of saving
- Savings in stocks, bonds, and mutual funds
- Compulsory saving
- Supplement
  - Spending and saving balance
  - Effect of inflation on purchasing power
  - Extended warrantees
  - Insurance considerations
  - Investment strategies that minimize risk
  - Government actions that encourage or discourage saving
  - Effect of taxes on investment choices
  - Stock price changes
  - Investment information for specific companies
  - Factors that affect the value of financial assets
  - Risk tolerance in financial decision-making
  - Government transfer programs—workers' compensation, social security disability, unemployment insurance

What Money Is Good For
- Three functions of money
- Metallic and paper money
- Money supply
- The Treasury, Federal Reserve, and commercial banks
- Use and abuse of money
- Supplement
  - Factors of borrowing money
  - Credit score protection
  - Primary financial institutions of the United States
  - Securities and Exchange Commission
  - Government agencies protections of U.S. banking system
  - Lenders protection on borrowers' loans
  - Credit history
  - Credit counseling for out-of-control debt
  - Bankruptcy types
  - Financing the purchase of a home
  - Stimulating the economy

Government & the Economy
- Purpose of government
- Government and macroeconomics
- Government's potential danger to economics
- American government and the economy
- Supplement
  - Dishonest investment schemes from the past
  - How taxes are levied in the United States
  - Taxes employees pay
  - Federal spending and budget deficits and the national debt

Successes & Difficulties in the Market Economy
- Achievements of the market economy
- Business cycles
- Inflation
- Selfishness and envy
- Supplement
  - Technological advancements and economic growth
  - Types of business organizations
  - Effect of recessions on unemployment rate
  - Influence of inflation on world economics
  - Effect of demand on salaries
  - Creating a budget
  - Personal responsibility in estate planning

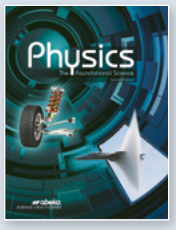
Promise & Performance in the Command Economy
- Goals, tours, and permanent problems of a command economy
- Infiltration of socialism

Look at the Global Economy
- Growth of the global economy
- Global issues in perspective
- Supplement
  - Open-market flow diagram and the global economy
  - International economics

Cheerful View of Our Economic Future
- Refuting the prophets of doom
- Killing the goose that lays the golden eggs
- Building the moral foundation of economics
- Supplement
  - Charities and nonprofits donations
  - A moral foundation to economics

Prayer Time
- Learn to pray for our nation and for government officials

SCIENCE: *Physics*



Physics: The Foundational Science describes the laws that govern the interactions between matter and energy. Clear and thorough explanations penetrate the most perplexing questions. Whenever possible, the principles of physics are illustrated by everyday experience and practical devices. Numerous illustrative problems are solved in detail.

This course will play an important role in showing students the harmony between scientific knowledge and Christian belief. The premise of the book is that we live in a God-created world governed by laws discoverable by reverent scientific inquiry. Issues of vital importance to Christians are handled in depth.

Physics: The Foundational Science adopts the traditional procedure of starting with solids, liquids, and gases—tangible things familiar to students. By putting the study of matter first, this course offers a smooth transition between chemistry and physics. An extended treatment of mechanics follows so that the student will be well prepared for further study in physics and engineering. While taking a traditional approach, this text more than adequately covers the most recent developments in physics for a broad range of topics: from particle physics to electronics and from lasers to relativity. The emphasis throughout is upon solid advances in knowledge rather than upon theoretical speculation.

Added Enrichment

- Feature boxes include:
  - Information on physics in action in the everyday world (10)
  - Articles highlighting Christian physicists and their contributions (6)
  - Information about related physics topics (3)
  - Key symbols and abbreviations at the beginning of each chapter
  - Key equations listed at the end of each chapter
  - Laboratory exercises (20)

Evaluation

- Reading quizzes (23)
- Review quizzes (42)
- Science project includes background paper, investigation plan, experimentation, follow-up paper, and oral presentation (counts as 2 quiz grades and 2 test grades)
- Tests (8), 9-weeks exam (2)
- Semester exam, final exam

➤ **RED** *indicates first introduction of content.*

Introduction to Physics

- Nature of science:
  - Branches of science, man's dominion, God's revelation
  - Classical and modern physics
- The Scientific Method: cogitation, observation, experimentation, scientific method, hypothesis, data
- Measurement:
  - Units of measurement:
    - ➤ Fundamental and derived quantities
    - Systems of units:
      - FPS, MKS
      - ➤ CGS
  - Standards of measurement:
    - Length, mass, time
    - Need for consistent standards
- Scientific notation
- Measurement calculations: metric-metric conversions, calculations with physical qualities, dimensional analysis
- Significant digits:
  - Determining, calculation rules, accuracy and precision
  - ➤ Tolerance, error of measurement, systematic and random errors
- Mathematical techniques:
  - Fractions, literal equations, proportions
  - ➤ Steps in working physics problems

Matter

- Nature of matter:
  - Characteristics:
    - Inertia
    - Mass, weight, density, specific gravity
- Pure substances and mixtures:
  - Molecule, elemental molecule, compound, mixtures
  - Homogeneous, heterogeneous, solid, liquid, gas, plasma
- Composition of matter:
  - Atom, nucleus, proton, atomic number, neutron, mass number
  - Isotope, atomic mass, atomic mass units
  - Electron, ion, anion, cation, element, periods, groups
  - Valence electrons
- Elementary particles:
  - Einstein's equation, photons, mass gain, nuclear mass defect
  - Subatomic particles
  - ➤ Elementary particles
  - Quarks
  - ➤ Hadrons, mesons, baryons, gluon
  - ➤ Leptons
  - Neutrino, positron, gamma radiation
  - ➤ Pair production
- Particle reactions:
  - ➤ Antiparticles, antimatter, annihilation, electron capture
  - Heavy atoms
  - Radioactive decay, half-life
  - ➤ Reaction implications

Liquid State

- Characteristics of a liquid:
  - Surface tension
  - Adhesion, cohesion
  - Capillarity:
    - Capillary tubes, meniscus
- Hydrostatics:
  - Law of liquid pressure:
    - Force, pressure
    - ➤ Defined, equation, Pascal's vases, water head, lateral force
  - ➤ Pascal's principle
  - ➤ Transmission of liquid pressure, hydraulic device
  - Archimedes' principle: derivation, buoyant force
- ➤ Hydrodynamics:
  - ➤ Principle of viscosity: poise
  - ➤ Principle of continuity:
    - ➤ Ideal liquids
    - ➤ Cavitation, laminar flow, eddy currents, volume flow rate
  - Bernoulli's principle: velocity and pressure, lateral pressure

Physics cont. p. 217

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Physics* *cont.*

Gaseous State

- Air pressure:
  - Gases in the air, vacuum, atmospheric pressure
  - ➤ Gases compared to liquids:
    - Archimedes' principle, Bernoulli's principle, airfoil
- Barometers:
  - ➤ *Horror vacui*, Pascal's discovery
  - Standard atmospheric pressure
  - ➤ Gauge and absolute pressure
  - Aneroid barometer
- Gas laws:
  - Boyle's law, inverse proportion, Charles's law
  - Absolute zero, absolute temperature, direct proportion
  - Combined gas law, Avogadro's law, mole, Avogadro's number
  - Universal gas constant, ideal gas law

➤ Pneumatic devices: entrained, water and exhaust pumps, compressors, siphon

Solid State

- Characteristics of solids:
  - Elasticity, plasticity
  - ➤ Rigidity, resilience, elastic limit
  - ➤ Mechanical working, forging, rolling, malleability, drawing, ductility

➤ Moduli of deformation:

- ➤ Hooke's law: tensile force, restorative force
- ➤ Forces of deformation: stress, strain
- ➤ Tensile stress:
  - ➤ Tension, Young's modulus, proportional limit, elastic limit
  - ➤ Ultimate tensile strength, breaking point, brittle, compression
- ➤ Shear stress and volume stress

Introduction to Motion

- Kinematics: translational, rectilinear, and curvilinear motion
- Speed and velocity:
  - Rates of motion:
    - Velocity
    - Constant velocity, uniform, variable velocity
    - ➤ Sign convention
  - Velocity equations: change in position over time, graph of displacement vs. time, instantaneous velocity
- Acceleration:
  - ➤ Types of acceleration: average, uniform, variable
  - Acceleration equations:
    - ➤ Graph of velocity vs. time, instantaneous acceleration, deceleration

➤ Horizontal motion: final velocity, average velocity, displacement, common equations

- Vertical motion:
  - ➤ Free-fall acceleration, effect of air resistance, terminal velocity

Vectors & Projectile Motion

- Introduction to vectors:
  - Vector properties
  - ➤ Parallel, antiparallel, collinear, perpendicular
  - ➤ Skewed, vector diagram, concurrent vectors
  - Resultant
- Vector composition of collinear vectors
- Vector composition of perpendicular vectors:
  - ➤ Parallelogram method
  - Pythagorean method:
    - Magnitude
    - ➤ Direction

➤ Vector composition of skewed vectors:

- ➤ Parallelogram method: law of cosines, law of sines

➤ Vector resolution

➤ Vector composition revisited: component method

- Projectile motion:
  - ➤ Projectile motion and gravity, rate of fall, final velocity, trajectory
  - ➤ Effect of air resistance, critical velocity
  - Escape velocity

Forces in Nature

- Newton's three laws of motion:
  - Newton's first law:
    - Inertia, force
    - Friction
    - Alternative formulations
  - Newton's second law: determinants of force, units of force, meaning of mass, mass vs. weight
  - Newton's third law: action-reaction
- Friction—the cause, kinetic and static friction

➤ Laws of kinetic friction, normal force:

- Coefficients of friction: coefficients of kinetic and static friction
- Reducing friction: minimizing roughness, lubricating, rollers and bearings
- Four fundamental forces: strong, electromagnetic, weak, and gravitational forces
- Gravity and gravitation—geocentric, heliocentric:
  - Laws of planetary motion:
    - Empirical, law of orbits
    - ➤ Mathematical description of law of areas
    - Aphelion, perihelion
    - ➤ Quantitative treatment of law of periods
  - Universal gravitation:
    - ➤ Kinematics, dynamics
    - Universal law of gravitation, Cavendish's measurement of *G*
- Earth's gravitational field:
  - ➤ Factors affecting *g*, static equilibrium, center of gravity
  - ➤ Stable, unstable, and neutral equilibrium, instability
  - ➤ Determining the CG, multiple suspensions, center of mass
  - Gravitational field, gravitational field strength

Concurrent Forces

➤ Force as a vector:

- Free-body diagram, principle of transmissibility, tension
- ➤ Center of gravity, friction, translational equilibrium, equilibrant

➤ Force problems:

- ➤ Friction, level surfaces, angled forces, inclined plane
- ➤ Load-bearing structures

Circular & Periodic Motion

➤ Uniform circular motion:

- ➤ Centripetal acceleration: rate of, centripetal force, centrifugal force, roadway and railway curves

➤ Periodic motion:

- ➤ Motion of a spring:
  - ➤ Spring constant, equilibrium, oscillatory motion
  - ➤ Period, amplitude, frequency, simple harmonic motion
- Motion of a pendulum: laws of a pendulum, physical pendulum
- Resonance: natural frequency, resonance

Physics cont. p. 218

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Physics* *cont.*

Work & Machines

- Work:
  - Scientific definition, work and force, basic work equation
  - Units of work, scalar quantity
  - ➤ Applied at an angle
  - ➤ Concurrent applied forces
  - Negative work, net work, work and potential energy
- Power: watt, horsepower, defining work in terms of power
- Simple machines:
  - Lever:
    - ➤ Law of levers, load
    - Input force, output force, input distance, output distance
    - Input lever arm, output lever arm, input work, output work
    - Mechanical advantage, classes of levers
  - Inclined plane, wedge, and screw; pulley: block and tackle; wheel and axle
  - Efficiency

Energy & Momentum

- Energy:
  - Kinetic energy:
    - Kinetic energy equation, work and kinetic energy, relative contributions of mass and velocity
  - Potential energy:
    - Gravitational, elastic force
  - ➤ Conservative forces: nonconservative force, dissipative force
  - Conservation of energy:
    - ➤ Mechanical energy
    - ➤ Law of conservation of mechanical energy
    - Law of conservation of energy
- Momentum:
  - ➤ Original formulation of Newton's second law:
    - ➤ Two useful interpretations
  - Law of conservation of momentum
  - ➤ Colliding objects:
    - ➤ Elastic and inelastic collisions, elastic one-dimensional collisions
    - ➤ Completely inelastic one-dimensional collisions
- ➤ Impulse

Rotary Motion: Angular, Circular & Rotary Motion

- ➤ Angular velocity and angular acceleration:
  - ➤ Arc length, rim speed, radians
  - ➤ Rotary motion:
    - ➤ Angular displacement, angular velocity, and angular acceleration
    - ➤ Basic equations for rotary motion, linear motion and angular motion
- ➤ Radian measure for circular motion
- ➤ Rotational inertia: experimental study of, equation for, *I* for various bodies
- ➤ Torque:
  - ➤ Law of torque: radius of a force
  - ➤ Work, power, kinetic energy, and momentum:
    - ➤ Total kinetic energy of moving body
    - ➤ Conservation of energy in rotary motion
    - ➤ Conservation of angular momentum
    - ➤ Flywheels
  - ➤ Angular momentum as a vector:
    - ➤ Right-hand rule
    - ➤ Gyroscope
- ➤ Parallel forces:
  - ➤ Effects of parallel forces on rotating body
  - ➤ Effects of static equilibrium: translational equilibrium, rotational equilibrium

Heat

- Thermometry:
  - Thermal equilibrium
  - Constructing a temperature scale:
    - Fahrenheit, Celsius, and Kelvin scales
    - ➤ Triple point, absolute scale
  - Converting among temperature scales
- Thermal expansion:
  - Effects of heating a solid: linear, area, and volume expansion
  - Liquid expansion
- Heat exchange:
  - Caloric theory
  - Units of heat
  - Law of heat exchange:
    - Heat capacity
    - Specific heat
  - Phase changes: melting, freezing, exothermic, heat of vaporization, condensation, calorimeter, calorimetry
  - Heat transfer:
    - ➤ Heat conduction, thermal conductor, thermal conductivity
    - ➤ Thermal insulator, heat flow
    - Conduction, convection, radiation

Laws of Thermodynamics

- First Law of Thermodynamics:
  - Internal energy:
    - System, surroundings
    - ➤ Closed system, open system, isolated system
    - Equilibrium, internal energy, thermal energy
    - Mechanical equivalent of heat
    - Thermodynamics
    - ➤ Internal energy equation
    - ➤ Qualitative explanation of adiabatic processes, isothermal
  - Ideal gas law:
    - ➤ Reversible and irreversible processes
- Second Law of Thermodynamics:
  - Entropy:
    - ➤ Quantitative definition
    - Tendency to minimum energy and maximum entropy
  - ➤ Other formulations of the second law
  - ➤ Cause of ordered complexity
  - Evolution and the second law of thermodynamics: evolution's challenge to science
- ➤ Zeroth and Third Laws of Thermodynamics: thermal equilibrium

Waves

- Transverse waves:
  - Wave pulse, crest, trough
  - ➤ Elastic medium
  - Energy transport
  - Wave properties:
    - Simple harmonic motion, sinusoidal, periodic
    - Frequency, period, speed, wavelength, amplitude
  - ➤ Wave classification:
    - ➤ One-, two-, and three-dimensional waves
    - ➤ Interface, wavefront, ray; straight, spherical, and plane waves

Physics cont. p. 219

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Physics* *cont.*

Waves *cont.*

- Longitudinal waves:
  - Compression pulse, rarefaction pulse, longitudinal waves
  - ➤ Sinusoidal character of longitudinal waves
  - Water waves, sound waves
- Boundary effects:
  - Reflection:
    - Angle of incidence, angle of reflection, law of reflection, reflection of sound, sonar
  - Refraction: of sound waves
  - Diffraction: of sound waves
- Superposition:
  - ➤ Composite wave trains
  - Constructive and destructive interference
  - ➤ Standing wave train, standing wave:
    - Node, antinode, loop, envelope of oscillation

Sound

- Nature of sound:
  - Graphical representation of sound waves:
    - ➤ Displacement and pressure wave trains
- Speed of sound:
  - ➤ Hardness
  - Density, temperature, effect of air temperature
- Doppler effect:
  - ➤ General Doppler equation
  - Sonic booms, supersonic speed, shock wave
- Characteristics of sound:
  - Intensity:
    - ➤ Threshold of hearing, quantitative treatment, amplifying
  - Loudness:
    - ➤ Nonlinear receiver, relative intensity, quantitative treatment
    - Decibel
  - Pitch:
    - ➤ Sonic spectrum, mean free path, audio spectrum
    - Infrasonic and ultrasonic waves
    - ➤ Cavitation
    - ➤ Ear's nonlinear response to frequency

Nature of Light

- Early light theories:
  - ➤ Ancient contributions, camera obscura, rectilinear propagation
  - Huygens' theory
  - Newton's theory:
    - ➤ Corpuscles
  - ➤ Young's demonstration, Herschel's discovery
  - Infrared rays
  - Maxwell's theory, electromagnetic waves, photons, wave-particle duality
- Electromagnetic spectrum:
  - Nature of an electromagnetic wave: range of wavelengths, electromagnetic spectrum, Planck's constant
  - Regions within the electromagnetic spectrum: visible light, infrared, ultraviolet
- Color:
  - Spectrum of visible light:
    - ROY G. BV
    - ➤ Solar spectrum
    - Monochromatic, composite light
  - Light mixing:
    - Additive mixing, primary colors
    - ➤ Secondary and complementary colors
  - Objects' colors:
    - Surface color
    - ➤ Transparent, translucent, opaque, color filters, hue, pure color, brightness
  - Pigment mixing:
    - Subtractive mixing, subtractive primaries
    - ➤ Subtractive secondaries

Reflection of Light

- Laws of reflection:
  - ➤ Absorbed, scattered, transmitted, reflected, reflectance, specular and diffuse reflection
  - First law of reflection
  - ➤ Second law of reflection
- ➤ Mirror images:
  - ➤ Plane mirrors: virtual and real images, right-angled mirror, double mirror
  - Concave mirrors:
    - Spherical mirrors, concave, convex
    - ➤ Vertex, center of curvature, principal axis
    - ➤ Secondary axis, radius of curvature, aperture, point source
    - ➤ Focal point, focal length, focal plane, ray diagram
    - ➤ Principal rays: central, parallel, and focal rays; real and virtual image
  - ➤ Convex mirrors: spherical aberration
  - ➤ Parabolic mirrors
- ➤ Mirror equation:
  - ➤ Establishing the mirror equation: geometric relationships, important sign conventions
  - ➤ Lateral magnification: comparing heights, important references

Refraction of Light

- Laws of refraction:
  - ➤ Optical density
  - Refraction
  - ➤ Refractive index, refractometer
  - ➤ First law of refraction: angle of incidence, angle of refraction
  - ➤ Second law of refraction: principle of reversibility
  - Refraction effects: mirage
  - ➤ Total internal reflection: critical angle
- Lenses:
  - Convex and concave lenses
  - ➤ Planar lenses, sign convention, focal length of lens
  - ➤ Converging lenses:
    - ➤ Principal axis, principal focal point, optical center, focal length
    - ➤ Secondary focal point, converging images, ray diagrams
    - ➤ Optical plane; parallel, central, and focal rays
  - ➤ Diverging lenses
  - ➤ Lensmaker equation
- ➤ Thin lens equation:
  - ➤ Lateral magnification: lens combinations, corrective lenses
  - ➤ Myopia, hyperopia, power of a lens

Wave Optics

- Interference:
  - In phase, out of phase, antinode, node
  - ➤ Newton's rings: fringes, cause of, optically flat

Physics cont. p. 220

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Physics* *cont.*

Wave Optics *cont.*

- Interference fringes in soap film:
  - ➤ Monochromatic and color fringes
  - Iridescence
- Diffraction:
  - Obstacle diffraction: umbra, penumbra
  - Single-slit diffraction: diffraction fringes, antinode, node, fringe formation
  - ➤ Multiple-slit diffraction: double slits, coherent light, triple slits, zeroth-order maximum, first-order maximum, second-order maximum
  - Diffraction gratings:
    - ➤ Diffraction angle, grating constant, reflection grating, transmission grating, phase gratings
- Dispersion:
  - Dispersion of white light:
    - By a prism
    - ➤ By diffracting grating
  - ➤ Chromatic aberration
  - Rainbows:
    - Formation, primary bow, secondary bow
    - ➤ Supernumerary bows, miniature bows, lunar bow
- Polarization: unpolarized, polarized, by selective absorption, by reflection

➤ Scattering, structural colors

Electrostatics

- Charge:
  - Static electricity: discharge, law of electric charges, neutralized
  - Charge carriers:
    - Anion, cation
    - Current in gases, liquids, and solids
    - Conductors, delocalized electrons, insulators, semiconductors
  - Transfer of charge: conduction, induction, grounded, electroscope
  - Coulomb's law:
    - Law of electric force, coulomb
    - ➤ Microcoulombs, permittivity
    - Comparing gravitation and electric force, charge conservation
- Electric fields:
  - ➤ Electric field strength: first formulation, second formulation
  - Electric field maps:
    - Lines of force
    - Uniform field

➤ Electric potential:

- ➤ Electric potential energy vs. electric potential
- ➤ Potential difference
- ➤ Potential gradient: GPE, EPE
- ➤ Distribution of free electrons: corona discharge, equipotential surface, equipotential lines

Magnetism

- Magnetic materials:
  - Dipolarity: magnetite, lodestone, north pole, south pole, dipolar, monopoles, law of magnetic poles
  - Making magnets:
    - Magnetization, contact, induction, demagnetization, keeper, temporary vs. permanent magnets
    - ➤ Permalloy, alnico
  - Coulomb's law of magnetic force
  - Magnetic fields:
    - Mapping a magnetic field, lines of flux
    - ➤ Magnetic induction
    - Permeability
  - Magnetic moment:
    - Spin magnet, orbital magnets, domain theory
    - ➤ Saturation
    - Diamagnetic, paramagnetic, ferromagnetic
- Electromagnets:
  - Conventional current
  - Oersted's discovery
  - ➤ Ampere's right-hand rule
  - Solenoid

➤ Magnetic force: two loops or two solenoids, two parallel conductors, ampere, coulomb, force of a straight conductor

➤ Defining magnetic induction:

- ➤ Direction of magnetic force: three-finger rules
- ➤ Force on a moving charge
- ➤ Magnetic flux: flux density

Current Generation

- Electromagnetic induction:
  - Current in a moving conducting loop:
    - ➤ Right-handed three-finger rule, magnetic flux
    - Electromagnetic induction
  - ➤ Different motions in a magnetic field
  - Galvanometer
  - Discovery of electromagnetic induction:
    - ➤ Law of induction
  - ➤ Lenz's law: direction of current
- Electric generators:
  - Simple AC generators: armature, slip rings, brushes, alternating current, AC frequency
  - Simple DC generators: direct current, commutator
  - ➤ Complex generators: rotor, stator, prime mover, three-phase current
- Motors:
  - ➤ Motor effect: electric motor, torque, torque arm, two-pole motor
  - ➤ Energy losses: hysteresis, eddy currents
- Electrochemical cells:
  - Current production: electrodes, electrolyte, salt bridge, load, anode, cathode, electromotive force
  - Batteries: cells in series and in parallel
- Thermoelectricity:
  - ➤ Seebeck effect: thermocouple, Seebeck voltage and effect
  - ➤ Peltier effect
- Piezoelectricity:
  - ➤ Piezoelectric effect and devices

Electric Circuits

- Resistance:
  - Defining resistance
  - ➤ Resistance in a conductor
  - ➤ Ohmic, nonohmic, resistivity
  - Rheostat
  - Nichrome
  - Insulators, semiconductor, conductor, superconductivity
- Ohm's Law:
  - Elements of a circuit: current source, conventional current
  - Circuits with a single resistance: Ohm's law
  - *IR* drop: voltage, energy transactions

Physics cont. p. 221

➤ **RED** *indicates first introduction of content.*

SCIENCE: *Physics* *cont.*

Electric Circuits *cont.*

- Quantitative treatment of equivalent resistance:
  - Series and parallel resistors
  - Rules for resistances in series
  - Equivalent parallel resistance, rules for resistance in parallel
- Complex circuits:
  - ➤ Networks
  - Circuit resistance and current:
    - Open circuit
    - ➤ Open-circuit voltage
    - Closed circuit
    - ➤ Closed-circuit voltage
    - Short circuit
- ➤ Measuring electricity: multimeter, galvanometer, ammeter, voltmeter, ohmmeter
- ➤ Kirchhoff's Laws: first law, junctions, principle of charge conservation, second law

Electrical Devices

- Electrical work:
  - Work and heat:
    - ➤ Calculation of joule heat
  - Work and power:
    - ➤ Three equations for electric power
    - Energy consumption
- Effective values of current and voltage: house current, in phase
- Capacitor:
  - ➤ Calculating capacitance: farad, dielectric, dielectric constant, permittivity of free space, dielectric strength
  - ➤ Capacitor combinations: parallel and series capacitors
- ➤ Inductance: single loop, self-induced emf, coil, self-inductance, inductor, mutual inductance
- ➤ Inductor combinations: series and parallel inductors, series-aiding and series-opposing combinations
- Transformers:
  - ➤ Transformer equation
  - Step-up and step-down transformers
  - ➤ Efficiency

Advanced Physics Concepts

- Quantum theory:
  - Blackbody radiation:
    - Incandescence
    - ➤ Radiancy
    - ➤ Stefan-Boltzmann law, Wien's law
  - Quanta: Planck, quantum theory
- Photons:
  - Photoelectric effect:
    - ➤ Photoelectrons, work function
    - ➤ Saturation potential, stopping potential
    - ➤ Threshold frequency, Einstein's hypothesis, Compton effect
- Matter waves:
  - ➤ Momentum of light
  - De Broglie's equation, matter waves
  - ➤ Wave-particle duality, complementarity
- Quantum numbers:
  - Pauli exclusion principle, orbital
  - Principal, subshell, magnetic, and spin quantum numbers
  - ➤ Angular momentum
- Spectral lines:
  - Line emission spectra:
    - Line absorption spectrum, emission spectra and classical theory, quantized, ground and excited states
    - ➤ Quantitative relationships between wavelength, energy, and quantum numbers
  - Wave mechanics:
    - Wave mechanical model, wave function
  - Uncertainty principle:
    - ➤ Mathematical formulation, philosophical implications

Relativity

- Speed of light:
  - ➤ Galileo's, Rømer's, and Michelson's methods; ether, interferometer
- Theories of relativity:
  - ➤ Physical absolutes, relativism:
    - Special relativity:
      - Five applications, rest mass, time dilation, length contraction
      - ➤ Quantitative aspects
    - General relativity: its effects, conclusion

BIBLE: *Genesis* (one semester)



Genesis: Creation, Fall, Flood, Babel introduces the student to the Bible as the unfailing foundation for truth and the Christian faith. This course begins with an overview of the inspiration and preservation of Scripture, giving the student tools to answer the question, *"Can I trust the Bible?"* Taking a cursory look at Genesis 1–11, the student will be challenged to consider what he believes and why he believes it, will be encouraged to apply the truths of Scripture to daily living, and will be enabled to share his faith in gracious humility with others. Discussion prompts throughout this study create an opportunity for strengthening his personal biblical worldview. The course includes an introduction to apologetics with *Live It Out* pages, allowing the student to develop confidence in his understanding and articulation of foundational doctrinal beliefs. *Dig Deeper* sections provide additional content and allow for flexible pacing.

Evaluation

- Verses:
  - Verse quizzes (14)
  - Quarter verses exam (1)
  - Final verses exam (1)
- Content:
  - Content quizzes (2)
  - Quarter content exam (1)
  - Final content exam (1)

➤ **RED** *indicates first introduction of content.*

Lessons *68*

- An Unfailing Foundation
  - The inspiration and preservation of Scripture
- Creation
  - Creation of the universe
    - God, the eternal Creator
    - Creation vs. evolution
  - Days of Creation
    - ➤ Biblical view of 24-hour days
  - Creation of man
  - ➤ Man's commission
    - ➤ Replenish, have dominion, rest
  - Creation of responsibility
  - God created Eve
    - ➤ Adam's need for companionship
- The Fall
  - A subtle attack
  - Man reacts to sin
  - God's redemption plan introduced
  - Consequences of sin
  - ➤ Life after the Fall
  - ➤ Man's heritage
- The Flood
  - Cause of the Flood
  - Building the ark: preserving life
  - The fact of the Flood
    - Judgment fulfilled, waiting on God
  - ➤ Life after the Flood: man's commission
  - ➤ The value of life
    - The purpose of government
    - An unconditional promise
  - The end of Noah's life
    - ➤ Consequential choices; far-reaching results
- Tower of Babel
  - The earth's population; the origin of nations
  - ➤ Man's rebellion and self-sufficiency
  - God's redemption plan continued
- ➤ The Need for Apologetics
  - ➤ A proper approach
  - ➤ Defending biblical truth
- Additional Dig Deeper Topics
  30 topics including—
  - ➤ Distortions of the biblical view of inspiration
  - Crucial preservation considerations
  - Reading and memorizing God's Word
  - Evolutionary distortions of Creation—the Gap Theory
  - ➤ Singleness
  - ➤ Man's response to God's correction
  - ➤ Navigating difficult emotions
  - ➤ Caring for the animals on the ark
  - New beginnings
  - The biblical function of government
  - Steps to effectively study Scripture
  - ➤ God's sovereignty and man's choice
  - ➤ We don't speak the same language anymore!

Music *40 songs*

- Hymns of the faith

Memory Work

- Passages (14 containing 43 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

BIBLE: *Book of the Revelation* (one semester)



Using the seven churches of Asia Minor as an outline of church history, *Book of the Revelation* chronicles the life of the church from the apostolic church of the first century to the Laodicean church of the twentieth century. The text focuses particularly on godly men and women who allowed themselves to be used by God. This gives students a greater appreciation for their Christian heritage and provides them with good role models such as John Wycliffe, George Whitefield, David Livingstone, Fanny Crosby, and Billy Sunday. *Book of the Revelation* continues with a look at the future events revealed to John on the isle of Patmos. The prophecies of Revelation are clearly explained to help students develop a greater desire for the Lord's return and to encourage them to watch and be ready.

Evaluation

- Verses:
  - Verse quizzes (13)
  - 9-weeks verses exam (1)
  - Final verses exam (1)
- Content:
  - Content quizzes (15)
  - Test (1)
  - Final content exam (1)

➤ **RED** *indicates first introduction of content.*

Lessons *69*

- Church history:
  - Ephesus: seven periods of church history
  - Smyrna: some famous martyrs
  - Pergamos:
    - Emperor Constantine
    - Arian and Augustine and the Pelagian controversies
    - Doctrine of Balaam weakens the believers
    - Doctrine of the Nicolaitans gets a stronghold
    - The spread of the Gospel to Africa and Ireland
  - Thyatira:
    - Rise of the Papacy
    - Doctrines of men
    - Long line of popes
    - Reactions and divisions:
      - Mohammed and Islam
      - Eastern Catholics break with the Roman Church
  - Sardis:
    - The English Reformation
    - State churches and denominations
    - Separatists and pilgrims
  - Philadelphia:
    - Pietists and Moravians
    - Great Awakening circuit riding preachers and camp meetings
    - America's Second Great Awakening
    - Victorian Era
    - Heroes of the faith in the 1800s
    - Satan's response to the Philadelphia Church:
      - The rise of false philosophies and cults
      - How we should respond when encountering a cult
  - Laodicea:
    - Revival fires in the first half of the 20th Century: Satan counter-moves with Neo-orthodoxy
    - The Laodicean Church in the last half of the 20th Century:
      - History of New Evangelicalism
      - Social revolution in the 1960s and '70s
      - Progressive Education and Materialism impact the Laodicean Church
- Things to come:
  - Rapture of the Church:
    - Why we believe the Rapture occurs before the Tribulation
  - Throne of God and Six Seal Judgments:
    - The First Parenthesis: 144,000 Jewish Evangelists
  - Seventh Seal is opened:
    - Six Trumpet Judgments
    - The Second Parenthesis:
      - Mighty angel
      - Bitter-sweet book
      - Measuring rod
      - Two faithful witnesses
  - Third Parenthesis:
    - Antichrist and False Prophets:
      - Great Dragon persecutes Israel
      - Winepress of God's Wrath
  - 7th Trumpet:
    - Seven last plagues
    - The Great Day of the Lord's Wrath
    - Babylon and its fall
  - Second Coming of Christ: to judge and make war
  - Christ's Millennial Reign and Satan's Doom:
    - Resurrection of the saved and the lost
    - Great White Throne Judgment
  - The New Jerusalem

Music *42 songs*

- Hymns of the faith, choruses

Memory Work

- Passages (19 containing 53 verses)

Prayer Time

- Learn to pray for each other, our nation, those in authority over us

Spanish 1 Grades 7–12



Understanding grammar as the foundation of language is a key to language fluency. This course gives an excellent Spanish foundation with the optimal balance of grammar, vocabulary, reading, listening, and speaking. *Spanish 1* is designed to enable the student to speak, understand, read, and write the basic Spanish he would need to know in most everyday situations.

Oral Fluency Exercises provides students many opportunities to improve their communication skills by applying the grammar and vocabulary they are learning. Through conversations, readings, and songs, students will grow their confidence as they improve their pronunciation, inflection, phrasing, and expression.

Application

- A variety of exercises to master the language: grammar, conversations, readings, songs, presentations
- Vocabulary lists, illustrations, and exercises
- Bible memory passages (12)

Evaluation

- Weekly vocabulary quizzes and quarterly vocabulary review quizzes (28)
- Written grammar content quizzes (36)
- Written tests and exams (12)
- Verse quizzes (12)
- Graded quick quizzes (22)

➤ **RED** *indicates first introduction of content.*

- Spanish alphabet
  - ➤ The alphabet
  - ➤ Spanish vowels
  - ➤ Special consonants
  - ➤ Special letters
  - ➤ Blends
- Pronunciation
  - ➤ Syllabification
  - ➤ Stressed syllables
  - ➤ Accent mark rules
- Cognates
  - ➤ Cognate spelling rules
  - ➤ Cognate endings
- Nouns
  - ➤ Pluralizing nouns
  - ➤ Noun gender
  - ➤ Definite articles
  - ➤ *Un* as an indefinite article
- Numbers
  - ➤ Ordinal numbers
  - ➤ Cardinal numbers
  - ➤ Other Spanish number rules
- *How much, how many, there is, there are*
- Pronouns
  - ➤ Subject pronouns
  - ➤ Direct object pronouns
  - ➤ Indirect object pronouns
  - ➤ Double object pronouns
  - ➤ Prepositional pronouns
- Verb Tenses
  - ➤ Present indicative
    - ➤ Regular
    - ➤ Irregular
      - ➤ *Ser*
      - ➤ Estar
      - ➤ *Ir*
      - ➤ *Dar*
      - ➤ *Tener*
      - ➤ *Hacer*
      - ➤ *Querer*
      - ➤ *Poner*
      - ➤ *Gustar*
      - ➤ *Caer bien*
    - ➤ Stem-changing (*ie*)
    - ➤ Reflexive
  - ➤ Preterite
    - ➤ Regular
    - ➤ Irregular
      - ➤ *Ser*
      - ➤ *Estar*
    - ➤ Stem-changing (*ie*)
    - ➤ Reflexive
  - ➤ Present progressive
    - ➤ Regular
    - ➤ Stem-changing (*ie*)
- Adjectives
  - ➤ Adjective agreement
  - ➤ Adjective placement
  - ➤ Possessive adjectives
- Adverbs
  - ➤ Ending in *-ly*
  - ➤ Adverb phrases
- Capitalization and negation
  - ➤ Capitalization
  - ➤ Negation
- Prepositions
  - ➤ Preposition *de*
  - ➤ Simple prepositions
  - ➤ Compound prepositions
- Questions
  - ➤ Formulating questions
  - ➤ Interrogative words
- Complements
  - ➤ Personal *a*
  - ➤ Direct object
  - ➤ Indirect object
- Degrees
  - ➤ Comparative
  - ➤ Superlative
- Exclamations and conjunctions
- Commands
  - ➤ *Tú* commands
  - ➤ *Ustedes* commands

Spanish 1 cont. p. 225

Spanish 1 cont.

- Negative commands
- Commands with direct object pronouns
- Commands with indirect object pronouns
- Commands with double object pronouns

- Presentations
  - Personal presentations
  - Interviews

Spanish 2 Grades 7–12



Spanish 2 is designed to build upon the previously laid foundation to deepen the student's application of the language. This course is designed to enable the student to further develop his language fluency.

Literacy Comprehension Exercises includes featured Spanish-speaking countries and territories and provides students opportunities to improve their literacy by seeing the language in context. Through readings, songs, tongue twisters, and riddles, students can grow their confidence in speaking and reading the language.

Application

- A variety of exercises to continue to master the language: grammar, conversations, dialogues, songs, riddles, tongue twisters, presentations
- Vocabulary lists and illustrations
- Bible Memory Passages (12)

Evaluation

- Weekly vocabulary quizzes and quarterly vocabulary review quizzes (28)
- Written grammar content quizzes (24)
- Written tests and exams (12)
- Verse quizzes (12)
- Graded quick quizzes (24)

➤ **RED** *indicates first introduction of content following the completion of Spanish 1.*

- Pronunciation
  - Spanish alphabet
  - Accent mark rules
- Nouns
  - Number and gender agreement
- Cardinal numbers
- *How much / how many*
- Verbs
  - Present indicative
  - *Ser* and *estar*
  - *Ir a* + infinitive
  - Preterite
  - Present progressive
  - *Gustar*
  - Stem-changing (*ie*)
  - Reflexive
- Prepositions
  - Preposition *de*
  - Prepositional pronouns
- Complements
  - Direct object pronouns
  - Indirect object pronouns
  - Double object pronouns
- Adverbs
- Comparative and superlative phrases
- Commands
  - *Tú* and *ustedes*
  - Negative
  - Commands with direct, indirect, and double object pronouns
- Commands
  - Reflexive commands
  - Reflexive commands with direct object pronouns
  - *Usted, nosotros, vosotros*
- Pronouns
  - Demonstrative
  - Compound relative
  - Possessive
  - Indefinite
  - Relative
  - *Alguno* and *ninguno*
- Presentations
  - *Mi familia*
  - Plays
  - Bible story
  - Gospel presentation
- Verbs
  - Spelling adjustments
  - Present indicative
    - Stem changing (*ue*)
    - *C* to *cz* verbs
  - Imperfect
    - Regular
    - Irregular
    - *Haber*
  - Future
    - Regular
    - Irregular
      - *Poder*
      - *Saber*
      - *Poner*
      - *Salir*
      - *Tener*
      - *Venir*
      - *Decir*
      - *Hacer*
      - *Querer*
  - Conditional
    - Regular
  - Subjunctive mood
    - Regular
    - Imperfect

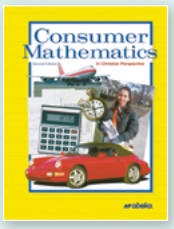
Spanish 2 cont. p. 226

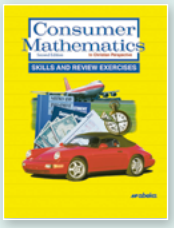
➤ **RED** *indicates first introduction of content.*

Spanish 2 cont.

- ➤ Passive voice
- ➤ Verbs that require indirect object pronouns
- Prepositions
  - ➤ *Para* and *por*
- Comparisons
  - ➤ Equivalence of adjectives and adverbs
  - ➤ Equivalence of nouns and verbs
- Participle
  - ➤ *Estar* + particle
  - ➤ Past participle
- ➤ *Al* + infinitive
- ➤ *Hay que* + infinitive
- ➤ Asking questions in the passive reflexive form
- ➤ The absolute superlative *-ísimo*
- ➤ *Donde, cuando,* and *como*
- ➤ *If* + present indicative
- ➤ Possessive adjectives + *propio*
- ➤ Subject pronouns + *mismo*
- ➤ *Tener ganas de*
- ➤ *Dar ganas de*

MATHEMATICS: *Consumer Mathematics*





No student studying *Consumer Mathematics* is tempted to ask, Why do I have to learn this? No other math course is as clearly related to knowledge and skills that are a must for every person. Percents, proportions, fractions, decimals, word problem skills, and many other concepts are fun to learn in the practical setting of buying a car, food, house, clothing, insurance, etc.

Consumer tips are given frequently, but most importantly, biblical principles are highlighted throughout the text.

The accompanying workbook gives students the practice they need to master arithmetic skills and complete the course.

Supplementary Exercises

- Analytical Skills Problem Solving Scenario within each chapter
- Skills and Review Exercises Workbook
  to be used simultaneously with the text for homework and review:
  - Daily practice exercises for maintenance of basic mathematics skills
  - Unit and exam review exercises

Evaluation

- Quizzes (35)
- Tests (8)
- 9-weeks exam (2)
- Semester exam, final exam
- Skills development exercises (optional–12)

➤ **RED** *indicates first introduction of content.*

Buying a Car

- ➤ Cost of a car: warranty, trade-in, options, advertisements, taxes and fees, registration and rates
- ➤ Financing: installments, installment charge, carrying charge, contract
- ➤ Depreciation: average annual depreciation, rate of depreciation
- Insurance:
  - Liability
  - ➤ Bodily injury, property
  - Collision, comprehensive
  - ➤ Deductible, premium
- ➤ Maintenance and repair: owner's manual, service manual, trunk essentials
- ➤ Annual operating cost
- ➤ Leasing:
  - ➤ Open-ended lease, closed-ended lease
  - ➤ Lessee, lease agreement
- ➤ Word problems

Travel

- Times zones: prime meridian, international date line
- ➤ By train or bus, renting a car
- ➤ Word problems

Income

- Hourly wages, straight time, overtime, time and a half, piecework wages
- Employers, employees
- ➤ Time clocks
- ➤ Incentive bonus
- Tips, salary
- Commission: rate of commission, amount of sales
- ➤ Self-employment, fees
- Gross income, net income
- Deductions:
  - Federal income tax
  - ➤ Social security tax, FICA
- Gross pay, net pay, take-home pay
- ➤ Word problems

Budgeting

- ➤ Time budget
- Circle graph: steps in preparing, protractor
- Household budget:
  - ➤ Itemizing to estimate expenses
  - ➤ Balancing the budget, trial budget
- ➤ Budget adjustments
- ➤ Standardized budgets
- ➤ Disposable income
- ➤ Word problems

Consumer Mathematics cont. p. 227

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Consumer Mathematics* *cont.*

Housing

- ➤ Renting versus buying: security deposit
- ▪ Mortgage loans:
  - ▪ Principal, balance
  - ➤ Mortgage loan schedule
  - ▪ Property tax
  - ➤ Assessed value, market value
- ➤ Tax rate: as a percent, amount per $100, per $1,000, in mills
- ▪ Homeowner's insurance:
  - ➤ Tenant's policies
- ➤ Repairs and upkeep
- ➤ Furnishing costs
- ▪ Purchasing electricity: kilowatt-hour, electric company rates, reading the electric meter
- ▪ Purchasing natural gas: gas meter, cubic foot, hundred cubic feet, natural gas rates
- ➤ Other utility expenses: water rates, wastewater rates
- ➤ Telephone rates: local service, long distance
- ➤ Word problems

Food

- ➤ Buying food
- ➤ Grocery shopping tips
- ▪ Reading graphs
- ▪ Unit price, using unit price
- ▪ Conversion equivalents
- ➤ Inflation
- ➤ Consumer price index
- ➤ Cost of living:
  - ➤ Cities ranked by cost of groceries
  - ➤ Range statistic
- ▪ Circle graph
- ▪ The metric system: conversions
- ➤ Restaurant eating: table service, fast food, chain, franchise, franchiser, eating-out tips, junk food
- ➤ Food freezers
- ➤ Saving food dollars: coupons
- ➤ Food labeling and nutrition
- ➤ U.S. Food and Drug Administration
- ➤ Measuring calories:
  - ➤ Calorie, kilocalorie
  - ➤ Calorie need: based on age, on occupation
  - ➤ Calorie content of selected foods
- ▪ Using calories
- ➤ Balanced diet
- ➤ Word problems

Clothing

- ➤ Clothing plan
- ➤ Buying clothing by mail: shipping charges
- ➤ Stretching the clothing budget: clothing quality, care
- ➤ Sewing your own clothing
- ▪ Buying clothing on sale:
  - ▪ Discount
  - ➤ List price
  - ▪ Rate of discount
- ➤ Consumer price index for clothing
- ➤ Price changes
- ▪ Profit and loss in the clothing business:
  - ▪ Cost, selling price, gross profit, net profit, overhead, loss
  - ▪ Selected business formulas: gross profit, net profit, loss
- ➤ Operating statement: net sales, gross profit, net profit
- ➤ Markup on cost, finding selling price based on markup on cost
- ➤ Markup on retail price, finding cost based on markup on retail
- ➤ Manufacturer's cost: wholesale price, total factory cost, factory overhead, cost of a garment
- ➤ Word problems

Leisure

- ➤ Taking a vacation
- ➤ Shopping
- ➤ Enjoying the computer:
  - ➤ Program, programmer, microcomputer, history of, analog computers, digital computers
  - ➤ Bit, binary, conversions
- ➤ Cooking:
  - ▪ Recipes: conversions, adjustments
- ➤ Reading books:
  - ▪ Roman numerals in copyright
- ➤ Church activities
- ➤ Word problems

Federal Taxes & Records

- ➤ Social security tax
- ▪ Federal Insurance Contribution Act (FICA)
- ➤ Medicare
- ▪ Federal income tax
- ▪ Progressive tax
- ➤ W-4 form
- ▪ Exemptions, dependents
- ➤ Withholding allowance
- ➤ Income tax return:
  - ▪ W-2 form
  - ➤ 1040 EZ, 1040A, 1040
- ➤ Joint return, separate return
- ➤ Head of household
- ▪ State income tax:
  - ➤ Sample state tax rates
- ➤ Cash records:
  - ➤ Audited
  - ➤ Cash receipt record, cash payment record
- ➤ Comparing receipts and payments: deficit
- ➤ Cash payment records
- ➤ Word problems

Banking

- ▪ Electronic transfer
- ▪ Demand deposit
- ▪ NOW accounts, super-NOW accounts, money-market accounts
- ▪ Depositor
- ▪ Monthly service charge
- ▪ Bank balance
- ▪ ATM, PIN
- ▪ Deposit slips
- ▪ Writing checks:
  - ▪ Check stubs, register
  - ➤ Overdraft

Consumer Mathematics cont. p. 228

MATHEMATICS: *Consumer Mathematics* *cont.*

Banking *cont.*

- Reconciling the bank statement:
  - Canceled checks
  - Outstanding checks
- Borrowing money:
  - Promissory note, signature loan, unsecured loan, collateral, secured loan
  - Interest: simple interest, principal, rate of interest, time
- Installment plans: finance charge, percent of interest
- Constant ratio formula
- Credit cards:
  - Active, credit line
- Savings account
- Compound interest:
  - Exponent, base
- Certificates of deposit, savings bonds, series EE savings bonds, maturity date
- Related bank services: safety deposit box, cashier's check, certified check, traveler's checks, debit card, online banking
- Word problems

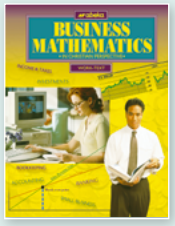
Investments

- Life insurance:
  - Rider, term insurance, lifetime insurance, endowment insurance
  - Straight life, limited payment life, premiums
- Life insurance benefits:
  - Cash value
  - Borrowing, extended term, accelerated death benefit, dividend
- Life insurance settlement options:
  - Lump sum payment
  - Annuity: fixed amount, fixed number of years, lifetime, guaranteed life annuity
- Buying bonds:
  - Bondholder, par value, premium, discount, broker, brokerage fee
  - Wall Street Journal, quoted price, net change
- Interest paid on bonds: annual yield
- Proceeds from bonds:
  - Accrued interest
  - Using a calculator
- Buying stock:
  - Liquid money
  - Common stock, preferred stock, dividends, par value
  - No-par stock
  - Market price
  - Price to earnings ratio, net change
- The stockbroker:
  - Round lots, odd lots
  - No-load stocks
  - Brokerage fees for stock
- Dividends from stock:
  - Cash dividends, stock dividends
- Capital gains and losses on sale of stock:
  - Bull market, bear market
  - Capital gain, capital loss
- Word problems

Small Business

- Beginning a small business:
  - Entrepreneur
  - Capital, owner capital, creditor capital
  - Standard business ratio
  - Expenses, assets and liabilities, resources
  - Net worth
  - Owner's equity
- Balance sheet:
  - Current assets, fixed assets
  - Current liabilities, fixed liabilities
  - Horizontal format
  - Balance
- Ratio analysis: current ratio, quick ratio, acid-test ratio
- Income statement:
  - Net profit, net loss
  - Percent analysis
- Ratios related to sales:
  - Average collection period
  - Inventory turnover
  - Average daily sales, annual sales
- Payroll record: employees' quarterly federal tax returns
- Break-even point analysis: fixed costs, variable costs
- Trade discounts:
  - List price, gross selling price
  - Chain discount
- Trade credit: percent of discount, discount period, net, credit period, invoice dates, E.O.M
- Storage and inventory:
  - Volume
  - Inventory
- Word problems

MATHEMATICS: *Business Mathematics*



Business Mathematics introduces secondary students to beginning accounting procedures and gives valuable insight into the world of investments. At the same time, the course reviews and expands students' understanding of basic mathematic principles, concepts, and skills. Students use arithmetic, algebra, and geometry as tools to make better financial decisions and to gain an understanding of the workings of business.

The excellent balance of skills practice and problem solving meets the needs of the varying abilities of the students. Students increase their understanding of good investment practices and the stock market. The daily Basic Mathematics Practice Exercises review the fundamentals of mathematics while challenging the students with interesting word problems and concepts that may be new to them. These exercises require students to apply and connect various types of mathematical knowledge. Bible principles regarding finance are set forth throughout this textbook.

Evaluation

- Quizzes (34)
- Skills development exercises (54)
- Tests (8)
- 9-weeks exam (2)
- Semester exam
- Final exam

➤ **RED** *indicates first introduction of content.*

Stewardship

- Keeping money records
- Accounting, bookkeeping
- Cash receipts and payment records
- Terminology:
  - Addends, sum, minuend, subtrahend
  - Difference, multiplicand, multiplier
  - Product, factor, dividend, divisor, quotient
- Assets, liabilities, capital:
  - ➤ Accounts receivable, accounts payable
  - Creditor
  - ➤ Accounting equations
- Balance sheet
- Income, cost of goods sold, operating expenses
- Profit, loss: net sales, gross profit, equations
- ➤ Corporation: average owner's equity, return on equity
- Income statement
- Debits and credits:
  - Assets, liabilities, capital
  - Income, cost of goods, expenses
  - ➤ Journal, double-entry bookkeeping system, debit entry, credit entry, "T" accounts
- ➤ General journal: debit and credit entries and totals
- ➤ General ledger: chart of accounts
- ➤ Practical exercise application problems
- ➤ Word problems
- ➤ General principles
- ➤ Unit review

Managing Your Business

- Ratio analysis:
  - Ratio, antecedent, consequent
  - Current ratio, quick ratio
  - ➤ Liquidity of assets, current liabilities
- Percent analysis:
  - Percent, cost of goods sold, gross profit, operating expenses, net profit
  - Proportion, means, extremes, algebraic axioms
- ➤ Average collection turnover:
  - Average daily sales, equations
- Inventory turnover:
  - Cost of goods sold, average inventory
  - Amount of sales, average inventory
- Break-even point:
  - Fixed costs, variable costs
  - ➤ Graph analysis
  - Parallel lines, intersecting lines, coordinate plane
  - Review of mathematical order of operation
  - ➤ Formula
- Trade discount: list price, net price, percentage
- Trade credit: percent of discount, discount period, credit period, E. O. M
- Storage and Inventory:
  - Volume, congruent
  - Cube, edges, rectangular solid, cylinder, cone
  - Conversion factors:
    - Time, English linear, liquid, dry, weight, metric
    - Metric-English
- ➤ Practical exercise application problems
- ➤ Word problems
- ➤ General principles
- ➤ Unit review

Investment

- Reading a stock exchange table
- Principal, dividends:
  - Fraction, denominator, numerator, mixed number
  - Greatest common factor, prime number, composite number
  - Least common denominator, improper fraction
  - Absolute value, cancellation, reciprocal
- Stock market
- Buying and selling stock:
  - ➤ Stock certificate
  - Stockbrokers
  - ➤ Stock exchange, New York Stock Exchange
  - Market value
  - Mixed decimal, whole number, decimal, terminating decimal, repeating decimal
  - Capital gain, capital loss
- ➤ Practical exercise application problems
- ➤ Stock market game: log sheets, money market fund

Business Mathematics cont. p. 230

➤ **RED** *indicates first introduction of content.*

MATHEMATICS: *Business Mathematics* *cont.*

Investment *cont.*

- Certificate of deposit (CD): simple interest formula, percents
- Savings account:
  - ➤ FDIC
  - ➤ Finding the principal: ending-balance method, minimum-balance method, daily-interest method
- ➤ Real estate: things to be aware of, rate of income, annual net income, cash investment
- ➤ Corporate bonds:
  - ➤ Bondholder, face value, par value, premium, discount, quoted price
  - ➤ Annual yield, annual interest, selling price
- ➤ Mutual funds: investment portfolio, prospectus
- Compound interest
- Real return on an investment:
  - Inflation, taxes
  - ➤ Expected gross return, expected after-tax return, expected real return
- ➤ Word problems
- ➤ General principles
- ➤ Unit review

Income Taxes

- Earning a living:
  - ➤ Education, years with a business, responsibility
  - Salary, hourly, commission, piecework, tip, overtime, regular pay, bonus
- Deductions:
  - Gross pay, net pay
  - FICA, social security tax
  - ➤ Maximum taxable income
  - Inflation
- Income tax return: 1040EZ, employee's withholding, allowance certificate, W-4 form, dependents, W-2 form, 1040A, 1040, tax audit
- State income taxes: sample rate table
- Sales tax
- Property tax:
  - Assessed value, property tax rate, market value, assessed value
  - As a percent, amount per $100, per $1,000, in mills
- ➤ Corporate income tax: corporation, taxable income, annual gross income, deductions, graduated tax
- ➤ Practical exercise application problems
- ➤ Word problems
- ➤ General principles
- ➤ Unit review

Banking

- Checking records:
  - Balance, deposit slip, currency, transit number
  - Finding percent of increase or decrease
- Checks and register:
  - Steps for writing a check
  - Bouncing a check, poor credit risk
  - Bank statement
  - ➤ RC, OD
  - Canceled check, outstanding check
  - ➤ Outstanding deposit, reconcile
- Electronic banking: electronic funds transfer, automatic teller, PIN, debit card
- ➤ Loans to small businesses:
  - ➤ Single-payment loans, term, maturity value
  - ➤ Discount loan, proceeds, installment loan, amount financed
- ➤ Practical exercise application problems
- ➤ Word problems
- ➤ General principles
- ➤ Unit review

Keyboarding Grades 10–12



Keyboarding and Document Processing is written to be clear and concise without being software or hardware specific. This keyboarding course begins with the basics of learning the keyboard—all alphabet and figure keys.

Document formatting skills for business letters with special features and other letter and memo styles, unbound reports, and documents with tables are then covered. The main goal of this text is to teach students a skill they will use for life.

Special Projects

- Creative writing
- Weeklong office simulation combining many documents learned

Evaluation

- Written quizzes (15)
- Tests (8)
- Desk arrangement and technique quizzes (40)
- Graded documents (17)
- Timed writings (at least 163)

➤ **RED** *indicates first introduction of content.*

Basic Skills

- Work area arrangement
- Hand and finger placement, proper body position, correct keying technique
- Introduction of alphabet keys in 23 lessons
- Introduction of number and symbol keys
- Spacing after punctuation and symbols:
  - Semicolon, period, colon, backslash, question mark, exclamation point, hyphen, dash, dollar sign
- Gross words a minute
- Net words a minute

Computer Skills

- Line spacing, hard and soft returns, headers and footers
- Page orientation, margins, text alignment
- Character formats: bold, italics, underline
- Centering text on a page, tab stops, indents

Proofreading Skills

- Proofreader's marks:
  - Insert, close up or delete space, transpose, add space
  - New paragraph, do not delete
  - Capitalize, lowercase, spell out
  - Move right or left, align horizontally or vertically, center
  - Bold, italics, underline, start new line, delete
- Keying and correcting documents
- Applying proofreader's marks to already keyed text

Number Expression Facts

- Regular numbers, house numbers, numbers that begin a sentence
- Street numbers, sums of money, weights and measurements
- Numbers that follow nouns, numbers used together
- Related and unrelated numbers

Document Formatting

- Announcements
- Memorandums:
  - Simplified, standard
  - Special features: attachment, enclosure
  - Distribution lists
- Personal business letters: punctuation, block style, enclosure notation
- Envelopes: USPS format, inside address format
- Business letters:
  - Punctuation: open, closed, mixed
  - Special features:
    - Confidential, attention line, subject line, delivery notation
    - Company name in closing
    - Enclosure notation, copy notation, postscript notation
  - Block style
  - Modified block style: horizontal center point
  - Simplified block style
- Outlines
- Reports:
  - Unbound report:
    - Page numbers, side headings, paragraph headings
    - Parenthetical citations, long quotations
  - Bound report
- Works cited page, title page, tables
- Columns and rows, title and body, text columns, number columns
- Optional features:
  - Secondary title, column headings, source note
  - Dollar amounts, total line
- Enumerations for letters, memorandums, and reports
- Second page headings for 2-page letters and memorandums

Document Processing Grades 11–12 (one semester)



Keyboarding and Document Processing is also used in this course. Formatting and producing employment and business documents is the focus of this course. Students spend weeks on an office simulation, producing documents for their "supervisor." They also work on their résumé and a cover letter, preparing them to seek employment. The final project is the compilation of a document portfolio which includes many documents that students have worked on in the keyboarding and document processing courses.

Special Projects

- Preparing employment documents for an open position
- Weeklong office simulation combining many documents learned
- Creative writing

Evaluation

- Written quizzes (3)
- Tests (4)
- Desk arrangement and technique quizzes (13)
- Graded documents (15)
- Timed writings (at least 177)

➤ **RED** *indicates first introduction of content.*

Computer Skills

- Margins, line spacing, headers and footers
- Page orientation, text alignment, character formats
- Centering text on a page, tab stops, indents, inserting symbols

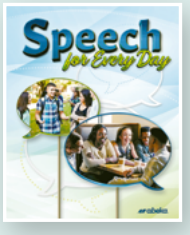
Proofreading Skills

- Correcting formatting and typing errors
- Keying documents and applying proofreader's marks

Document Formatting Skills

- ➤ Employment applications
- ➤ Résumés: chronological, functional
- ➤ Cover letters, follow-up letters, forms, announcements
- Memorandums: simplified, standard
- Envelopes
- Business letters:
  - Personal
  - Block style, modified block style, simplified block style
- ➤ Enumerations for letters, memorandums, and reports
- Second-page headings for 2-page letters and memorandums
- ➤ Letters and memorandums with tables
- Tables
- Reports:
  - Unbound
  - ➤ Bound: long quotations
  - ➤ MLA-style reports: long quotations, works cited page
- ➤ Itineraries, agendas

Speech Grades 11–12 (one semester)



Speech for Every Day presents the art of everyday speech in a friendly, conversational style that students and teachers love. Experience is the key to developing good speaking skills; students need practice speaking to one another in small groups and before larger audiences. An abundance of speaking exercises, group projects, and selections for interpretation throughout the text provides opportunities for practice and performance. Skills mastered include telephone courtesy, introductions, group discussion, pantomime, monologues, poetry, storytelling, declamations, and devotionals.

Application

- Think about it/Write about it exercises
- Impromptu speeches, interview exercise, pantomime exercise
- Group discussion exercise
- Monologue preview and speech
- Declamation preview and speech
- Poetry preview and speech
- Storytelling preview and speech
- Devotional speech

Evaluation

- Speeches
- Content Quizzes
- Reading quizzes
- Practice time sheets

➤ **RED** *indicates first introduction of content.*

The Importance of Speech
- Importance of speech as a Christian and as a citizen

Poise: The Cure for Stage Fright
- Techniques for coping with stage fright
- How to maintain poise

Mechanics: The Foundations of Communication
- Benefits of correct posture
- Steps for correct posture
- Maintaining breath support
- Using qualities of the voice:
  - Force, Pitch, Quality, Time
- Marking a script with phrasing and pacing
- Nonverbal communication with body language and eye contact
- Techniques for entering and exiting the performance area

Listening: The Silent Conversation
- Guidelines for improving listening skills
- Things to identify as you listen
- Guidelines for constructive criticism

Impromptu Conversations: Ready, Think, Speak!
- Informal impromptu speaking
- How to prepare and perform a formal impromptu speech
- Introductions, phone conversations

The Interview: A Conversation of Questions
- Guidelines for formal interviews
- Job interviews, personal interviews

Group Discussions: A Structured Conversation
- Group discussions explained
- Structured and unstructured group discussions
- Tips for defending your beliefs

Pantomime: The Conversation without Words
- Why learn pantomime
- Techniques of pantomime
- Individual pantomimes, group pantomime tableaus

Monologue and Soliloquy: The Lone Conversations
- Monologue and soliloquy explained
- Steps in developing a character
- Annotated scripts explained
- How to prepare a character sketch
- Scene settings
- Guidelines for performing a monologue
- 15 sample monologues

Poetry: A Lyrical Conversation
- History and development of poetry
- Tools for interpreting poetry:
  - Imagery, diction, figures of speech, structure, rhyme, rhythm
- Tools for presenting poetry:
  - Aesthetic distance, phrasing, word color, Dramatic *V*
- Preparing an introduction
- Preparing for poetry performance
- 16 sample poems

Reading with Meaning: A Shared Conversation
- Reading as a conversation
- How to choose a Scripture reading selection
- Holding a manuscript properly
- Analyzing, interpreting and performing a selection

Declamation: A Historical Conversation
- Benefits of declamation
- Steps to prepare a declamation
- Analyzing, interpreting, and performing a declamation
- 15 sample declamations

Storytelling: An Extemporaneous Conversation
- History of storytelling
- Choosing the story
- Types of stories:
  - Fables, fairy tales, folk stories, myths, legends, adventures, historical, Bible stories, modern short stories, parables
- Choosing, analyzing, interpreting and presenting the story
- How to recognize the occasion and purpose of the story
- 15 sample stories

Speech cont. p. 234

SPEECH *cont.*

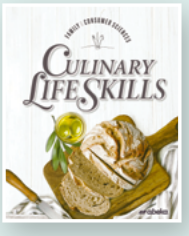
The Devotional: A Spiritual Conversation

- The devotional explained
- Preparing a devotional
  - Choosing and analyzing a scripture topic
  - Writing the introduction, conclusion and tentative outline
  - Preparing transitions, supports and note cards
- Delivering the devotional
- Steps to take after the devotional

Supplementary Information

- Pronunciation practice through tongue twisters
- Focus on parliamentary procedure
  - Electing officers and single-led meeting
- Debate explained
  - Preparing for debate

Culinary Life Skills Grades 11–12 (one semester)



Culinary Life Skills provides a wonderful opportunity for students to learn about hospitality, stewardship, food and kitchen safety, and cooking and baking techniques. This practical course also includes a study of nutrition, meal management, table service, etiquette, and party planning.

The *Culinary Life Skills: Lab Manual* allows students to demonstrate their knowledge of planning menus, proper cooking, and acceptable presentation. They will be able to practice following one recipe at a time, like making muffins or smoothies, as well as following multiple recipes at once, like making lunch or hosting a cake reception. For the final lab, students will host a dinner party which will provide an opportunity for cumulative review of many concepts from the course and will also count as the final exam grade.

Additional Helps

- Demonstrations (42)

Evaluation

- Labs (13)
- Projects (2)
- Written quizzes (19)
- Tests (4)
- Quarter exam

➤ **RED** *indicates first introduction of content.*

Getting Started

- Food & kitchen safety
  - Eating habits and influences
  - Kitchen safety, food safety
- Basic equipment & techniques
  - Maintaining the kitchen and major appliances
  - Use and care of small kitchen appliances
  - Basic cooking techniques, using a recipe

Healthy Habits

- Nutrition
  - Key nutrients
  - Plans for good nutrition, healthy living
- Consumer education
  - Meal management
  - Purchasing groceries

Serving with Style

- Table setting & meal service
  - Table appointments, table setting
  - Meal service
- Etiquette & hospitality
  - Introductions
  - Table etiquette, table manners
  - Restaurant etiquette
  - Elements of party planning

Fresh Foundations

- Eggs & dairy
  - Eggs
  - Milk and milk products, cheese
- Meat, poultry & fish
  - Meat, cooking meats
  - Poultry, cooking poultry
  - Fish and shellfish, cooking fish
- Produce
  - Vegetables, legumes, fruit
  - Garnishes

Flavorful Favorites

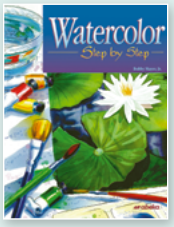
- Adding flavor
  - Herbs, spices, and seasonings
  - Sauces and gravies
  - Fats, oils, and frying
- Mealtime favorites
  - Soups and stews
  - Sandwiches, casseroles, salad

Accompaniments

- Grains & breads
  - Grains, pasta
  - Quick breads, yeast breads
- Beverages, appetizers & desserts
  - Beverages, appetizers
  - Desserts, cakes, pies, pastries
  - Custards and puddings
  - Candy, cookies

Family & Consumer Sciences cont. p. 235

Art Grades 7–12



Watercolor Step-by-Step introduces the tools of the trade, gives innovative substitutes for art materials, and shows the basic techniques used in creating watercolor paintings. Given this foundation, students copy the author's step-by-step demonstration paintings, create their own compositions, and paint them in watercolor. Art history is incorporated in later lessons as students analyze and copy the style of master watercolorists. Students learn to paint still lifes, landscapes, floral compositions, architecture, and other subjects.

Additional Features

- Step-by-step demonstrations (15)
- Self-paced assignments (43)
- Art history incorporated
- Advice on purchasing art materials
- Selected bibliography

Evaluation

- Graded paintings (15)

➤ **RED** *indicates first introduction of content.*

Getting Started

- Stretching the paper
- Painting indoors and outdoors
- The palette
- After painting

Basics of Watercolor

- Flat wash, dark wash, graded wash
- Wet in wet, dry brush, calligraphy
- Spattering, toothbrush, salt, dropping water, masking
- Painting with a sponge, scraping with a knife
- Rubbing with an eraser or sponge, scrubbing with a tissue

Watercolor Paintings Produced

- 15 paintings of scenes such as sunset, misty morning, storm over Lake Jackson, winter landscape, mimosa blossoms, teddy bears, the Valley of Dry Bones, Ochlocknee River in fall, portrait
- 43 other related assignments

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