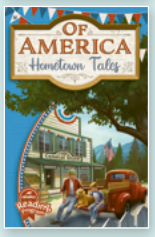
Language Arts: Reading



Inspiring nonfiction, relatable modern fiction, humorous plays, and intriguing classics can all be found in the six updated fifth-grade readers. Students will become acquainted 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.

Original stories introduce memorable characters such as detective Lucas Miller in an original mystery series carried throughout all the compilations. Classic fiction stories transport readers away to faraway lands, like the Kingdom of Wisdom in *The Phantom Tollbooth*, or to nearby friends, like Ramona from *Beezus and Ramona*. Nonfiction selections inspire readers through the integrity, initiative, and courage of some of history's greatest heroes. Be prepared to see great wonders within the world, be more than conquerors, and develop imagination and understanding in character.

Literary Value

- Well-known authors, including Beverly Cleary, Eleanor Estes, Marguerite Henry, Jack Prelutsky, Wilson Rawls, E. B. White, Kenneth Grahame, Kate Douglas Wiggins, Booker T. Washington, Henry Wadsworth Longfellow
- Story and character-building themes such as problem-solving, humility, wisdom, resourcefulness, empathy, diligence, valor, discretion, discovery, faith, perseverance, courage, forgiveness, gratitude, individuality, contentment, sharing the Gospel, leadership

Materials

- Readers (4) containing:
  - Short stories, poems, plays
  - Informative selections
- Christian fiction novel
- Biographical novel
- Speed and comprehension readers
  - *Reading Comprehension 5 Skill Sheets*
  - *Adventures in Nature*

Evaluation

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

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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, author's purpose, setting, moral, main idea, stanza, summary, symbolism, climax, autobiography, biography, fiction, nonfiction, drama, cast, stage directions, act, scene, dialogue, inference, point of view—first person, third person, idiom, narrator, rhyme scheme, meter, repetition, alliteration, dialect, simile, metaphor, personification, imagery
- 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—protagonist, multidimensional, one-dimensional, secondary characters, characterization, genre, theme, internal rhyme, near rhyme, free verse, blank verse, author's style, theme, jargon, internal monologue, author intrusion, allegory, hyperbole, mood, elements of plot—introduction, rising action, climax, falling action, conclusion, irony, wordplay, word usage, flashback, foreshadowing, elements of a mystery—culprit, distraction, limericks, fact and opinion, narrator, figurative language, historical fiction
- Recognizing and analyzing text structures—narrative, informative nonfiction, descriptive, compare/contrast, problem/solution, cause/effect, sequential, chronological
- 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
- Distinguishing fantasy from reality
- Charting information: word webs, Venn diagrams, compare/contrast, predict possible outcomes
- 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 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, sequential, chronological, informative selections
- Recognizing themes in literature
- Recognizing and implementing good creative writing techniques

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Reading cont.

Readers

- *In Character*—15 stories, 13 poems, 2 sequential activities, 2 Scripture readings, 1 play, 1 recipe, showcasing a dynamic cast of characters; reviewing literary concepts title, author, main character, plot, setting, summarization, moral, author's purpose, fiction/nonfiction, simile, rhyme scheme, meter, repetition, act scene, cast, stage directions, symbolism, narrative text structure, point of view, dialect, and introducing literary concepts—theme, character development, characterization, multidimensional and one-dimensional, author's purpose, internal monologue; Time to Think, I Wonder, Think on These Things–factual, inferential, and interpretive comprehension/discussion questions; author/background information for explanation of terms; story and Christian character themes; silent reading prompts; illustration and photo observations; challenging vocabulary and definitions listed at bottom page of stories; In the Spotlight literary concept activities: analyze main character, summarize plot, examine narrative text structure, analyze character development, creative collaboration, write a mystery, compare and contrast characters
- *Message of the Mountain*—a 30-chapter Christian historical fiction novel, the third and final book in the Maple Tree Trilogy; reconnect with the Johnson family as they face new challenges and opportunities, discovering how a personal relationship with God provides peace in trials, strength in adversity, and greater joy throughout life; includes advanced vocabulary words and definitions for vocabulary enrichment; reviews literary concepts—title, author, main character, setting, plot, point of view, symbolism, foreshadowing, cause/effect, summarization, while also incorporating the concepts mood and word usage; book report preparation activities include analysis of character development, charting cause/effect, and chapter summarization; other features include Bible application, critical thinking discussions, character traits to emulate, background information, author's pen, illustration observation, silent reading prompts, Scripture references, factual, inferential, and interpretive comprehension and discussion questions; additional enrichment activities include compare/contrast Venn diagram and character analysis.
- *Noah Webster*—a 12-chapter biographical novel, based on the events in the life of Noah Webster; includes advanced vocabulary words and definitions for vocabulary enrichment; reviews key literary concepts—title, author, main character, setting, plot, moral, cause/effect; plot summarization for preparation in writing a book report; chapter reviews including factual, inferential, and interpretive comprehension and discussion questions; other features include chapter summaries, Scripture reference, Bible application, critical thinking discussions, character traits to emulate, background information; additional enrichment activities include creative collaboration, making ink
- *Wonders Within*—12 stories, 13 poems, 9 informatives, 2 plays, 4 science demonstrations, weaves imagination with discovery while demonstrating God's hand in the wonders all around us; reviewing literary concepts title, author, characters, plot, narrative text structure, elements of poetry, symbolism, folk literature, and introducing genre, figurative language, free verse, author style, internal rhyme, jargon, fact and opinion, word usage, word play, irony, author intrusion, limericks; Time to Think, I Wonder, Think on These Things—factual, inferential, interpretive, and biblically based comprehension/discussion questions; background information, story and Christian character themes, silent reading prompts; illustration and photo observations; additional enrichment activities include journaling, creative writing, compare/contrast topics, Scripture reading, science demonstration; challenging vocabulary and definitions listed at bottom page of selections; In the Spotlight literary concept activities include analyze poetry, describe the topic, compare and contrast the topics, write a story, compare and contrast author's style, read and comprehend, and creative collaboration
- *Of America: Hometown Tales*—24 stories, 9 poems, 1 play, 1 recipe, that flashback through American history, anchoring students in different centuries from the past, while discerning fact from legend and right from wrong; reviewing In the Spotlight concepts, plot, setting, climax, biography and autobiography, folk literature, introducing literary concepts historical fiction, mood, elements of plot—introduction, rising action, falling action, conclusion, hyperbole: Time to Think, I Wonder, Think on These Things–factual, inferential, interpretive, and biblically based comprehensive/discussion questions; author notes to highlight writing styles and dialect, background information; story and Christian character themes; silent reading prompts, illustrations and photo observations; biblical worldview and critical thinking discussion; challenging vocabulary and definitions listed at bottom of pages of selections; enrichment activities including culture experience, creative collaboration, charting the plot/identifying the climax, analyzing the mystery, and predicting an ending; In the Spotlight literary activities: write creatively, sequential activities (recipe, craft), describe the mood, analyze the plot, analyze the character, identify problem and solution, summarize parts of a plot, analyze imagery
- *More Than Conquerors*—16 stories, 9 poems, 1 recipe, centered on the themes of courage, purpose, and faith; reviewing elements of narrative and plot, genre, mood, foreshadowing, author's style, prediction, problem/solution, cause/effect, multidimensional, one-dimensional characters, character analysis, elements of poetry, internal monologue, imagery, symbolism, figurative language, wordplay, idiom, jargon, chronological text; allegory; In the Spotlight activities include map skills, character analysis, creative writing, identifying metaphorical phrases
- *Reading Comprehension 5*—a collection of 42 selections featuring science articles, short stories, informatives, poetry, assessment pages for recall, application, evaluation, and analysis for thinking and problem solving; index of Literary Application of Concepts: alliteration, author's purpose, author's style, blank verse/free verse, characterization/character analysis, character development, dialect, elements of a narrative, fact/opinion, figurative language, flashback, foreshadowing, genre, inference, internal rhyme, jargon, main idea, mood, near rhyme, plot analysis, poetic structure, point of view, prediction, repetition, rhyme scheme, textual evidence, text structure, theme
- *Adventures in Nature*—25 timed narrative and informative selections highlighting the theme of God's beautiful creation; 25 quizzes to assess comprehension speed; 1 reading record to self-evaluate reading pace; 1 My Great Adventure Chart to track overall reading speed and comprehension (while analyzing scores, students can determine their best reading rate to achieve optimal accuracy in comprehension): quiz key

Language Arts: Language

The *God's Gift of Language 5* work-text gives students the tools necessary to build good communication. Through a variety of practice exercises in both grammar and writing, students continue building on the foundational language concepts learned in fourth grade. As well as providing a thorough review of capitalization, punctuation, and the parts of speech, *God's Gift of Language 5* deepens students' knowledge of grammar and increases their writing skills. Fifth graders will be reviewing the four main types of complements and applying correlating rules for punctuation. They will learn how to diagram prepositional phrases and complements. Students 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. Students will enhance their writing abilities by mastering effective topic sentences, paragraphs, and transitional words.

Correlating with both *Writing with Creativity 5* and the Reading 5 program, *God's Gift of Language 5* allows students to translate grammar and mechanics skills into building good 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 (5), and a five-paragraph research essay.

Added Enrichment

- Four themes (deep waters, transportation, Wonders of the World, state parks)
- Glossary section of language terms
- Writing section including book report forms
- Dedicated homework section
- Take 5! review mini-quizzes
- Continual spiral review and application of previously taught material

Evaluation

- Book reports (5)
- Library Research Essay (test grade)
- Weekly quizzes (37)
- Biweekly tests (14)

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Grammar

- Capitalization:
  - First word in every sentence and direct quotation
  - Pronoun *I*
  - Proper nouns:
    - Names, initials, titles of respect, family titles used as names
    - Days of the week and months of the year (not seasons)
    - Holidays/special days
    - Words referring to God and the Bible
    - Streets, cities, states, countries, rivers, oceans
  - ➤ Proper adjectives
  - First word, last word, and every important word in titles
  - ➤ Title of person before a name
  - ➤ Titles used instead of a name in direct address
- Punctuation:
  - Periods
    - At the 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, other parts of books, magazines, and newspapers
  - Commas:
    - After *well*, *yes*, *no*, and *why* at beginning of sentence
    - Separate two or more adjectives before a noun
    - ➤ Before a coordinating conjunction joining a compound sentence
    - ➤ After an introductory dependent clause in a complex sentence
    - Set off words of direct address
    - Set off words in a direct quotation
    - Separate town or city from state
    - Separate words or groups of words in a series
    - Separate part of a date or address
    - After the greeting of a friendly letter and closing any letter
  - Apostrophes:
    - In contractions
    - With *s* to make a singular possessive
    - With *s* or single apostrophe to make a plural possessive
  - Colons:
    - Between chapter/verse of Scripture reference
    - Between hour/minute of written time
    - ➤ After greeting of business letters
  - ➤ Semicolons:
    - ➤ Separate simple sentences not joined by conjunction
    - ➤ Use before the transitional word and a comma after it
  - Underline:
    - Titles of books, newspapers, magazines
    - Names of ships, planes, trains, and spacecraft
    - Plays, films, sculptures, paintings, and other works of art
- Sentences:
  - Definitions of sentence, subject, predicate
  - Find subjects and verbs: compound, simple
  - Kinds of sentences: declarative, interrogative, exclamatory, imperative

Language cont. p. 99

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Language *cont.*

Grammar *cont.*

- Correct run-on sentences and fragments
- Run-together sentences (corrected using introductory words/commas)
- Complete subject and predicate
- Simple subject and verb
- ➤ Clauses: dependent and independent
- Types of sentences: simple, compound, and complex
- ➤ Diagram compound sentences
- 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:
    - Past, present, and future tense
    - 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
    - ➤ 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:
    - Singular/Plural:
      - Plural spelling rules
      - Irregular plural nouns
    - Common/Proper
    - Compound
    - Abstract
    - Nouns as antecedent, subjects
    - Nouns as direct objects, indirect objects, predicate nominatives, appositives, objects of preposition
  - Pronouns:
    - Personal pronouns (subjective, objective, possessive)
    - ➤ Compound, interrogative, demonstrative
    - ➤ Subject and verb agreement with pronouns
  - Adjectives:
    - Proper
    - ➤ Adjectives that look like verbs
    - Possessive nouns and pronouns as adjectives
    - Articles
    - ➤ Predicate adjectives
    - ➤ Distinction between adjectives modifying noun and a compound noun
    - Degrees of comparison
    - ➤ 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*
    - ➤ subordinating and correlative
  - Interjections:
    - Punctuation
    - ➤ Diagram
- ➤ Transitional words
- 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*
- Inference

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
- ➤ Make topical and sentence outlines
- Use the Writing Process for a library research essay:
  - 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
- ➤ Alliteration
- Facts/Opinions (persuasive paragraph)
- Topic/Concluding sentences
- Correspondence:
  - Friendly letter (heading, greeting, body, closing, and signature)
  - ➤ Business letter (heading, inside address, greeting, body, closing, and signature)
  - ➤ Email (email address, subject line, greeting, body, closing, and signature)

Language Arts: Penmanship/Creative Writing

Penmanship: *Writing with Creativity 5* contains exercises designed to give fifth graders daily instruction and practice in maintaining their penmanship skills. Emphasis is placed on neatness and correct letter formation, slant, and spacing through daily practice. Students will benefit from character-building themes and thought-provoking questions through Character Counts activities. Each activity is designed to promote thinking skills, creativity, and class discussion.

Creative Writing: Beginning in lesson 19, students apply effective communication skills as writing class focuses primarily on creative writing. Students will learn multiple types of writing styles including essay, compositions, narrative, poetry, and more. Organizational and critical-thinking skills are built through the process of studying and drafting each creative writing project. The 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 5
- My Writing Portfolio
- Optional collaborative projects
- Extra practice for penmanship review during creative writing focus
- Optional exercises for additional creative writing opportunities
- Character Counts activities
- Additional writing exercises included in Language, Reading, History, Science, and Health

Evaluation

- Wonders of Creativity penmanship quizzes (optional)
- Creative Writing selections (10–optional)

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Penmanship

- Maintaining good writing habits:
  - Sitting properly in desk
  - Holding pen correctly
  - Slanting paper correctly
- Writing in ink with a relaxed grip and flowing movement
- Using correct warm-up procedure with key strokes: ovals, mountains, waves, loops
- Correctly writing all upper- and lowercase letters and numbers 0–9
- Maintaining good overall writing skills:
  - Forming difficult letters correctly
  - Placing letter correctly on lines
  - Writing with consistent spacing between letter and words
  - Slanting letter properly
  - Making smooth connections between letters and difficult letters
  - Writing using ¾ spacing on wide ruled paper
  - Writing using consistent letter size
- Evaluating writing for personal improvement
- Copying most assignments from print to cursive
- Writing journal entries

➤ Character Counts activities with character-building themes

➤ Wonders of Creativity paragraphs to study the creativity of people from the past

Creative Writing

- Reviewing and enhancing the writing process: read and gather, think and plan, write and rewrite, check and polish, share your results
- Using proper capitalization and punctuation
- Organizing main ideas into graphic organizers
- Writing topic/concluding sentences
- Constructing paragraphs
- Creative stories based on prompts
- Story starters
- Picture writing prompts
- Creative writing collection: My Writing Portfolio

➤ Narratives:
  - ➤ Fictional narrative
  - ➤ Personal narrative

➤ Essays:
  - ➤ Informative essay
  - ➤ Interview essay
  - ➤ Persuasive essay

➤ Literary Response

➤ Poetry:
  - ➤ Limericks
  - ➤ Rhyming poems
  - ➤ Cinquain

- Paragraphs:
  - Opinion paragraph
  - Compare/Contrast paragraph
  - Sequential paragraph

➤ Biblical compositions:
  - ➤ Biblical narrative
  - ➤ Biblical paraphrase

➤ Descriptive writing:
  - ➤ Using 5 senses
  - ➤ Show, don't tell
  - ➤ Strong verbs and descriptive words
  - ➤ Figurative language

➤ Hand lettering

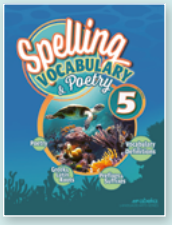
➤ Media literacy:
  - ➤ Writing from someone else's perspective
  - ➤ Persuasion techniques in writing
  - ➤ Sensationalism/Bias in news media
  - ➤ Cause/Effect stories

- Using transitional words to write a sequence
- Collaborative project: Organizing a fundraiser
  - ➤ Collecting fundraiser ideas
  - ➤ Writing a fundraiser plan
  - ➤ Writing a fundraiser proposal
  - ➤ Writing a fundraiser financial plan
  - ➤ Designing a fundraiser flier/website

➤ Creating tongue twisters

➤ Imaginative stories

Language Arts: Spelling, Vocabulary & Poetry 5



In order to achieve spelling mastery, students must learn how to analyze word structure and patterns. *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. Instruction in open and closed compound words is given, as well as in commonly used contractions. Lists are arranged in four sections: prefix, suffix, root, and vocabulary. A variety of exercises allows fifth graders to recognize misspelled words, practice using spelling and vocabulary words in original sentences, and improve their proofreading skills. Review lists are included to promote mastery of words. Opportunities to develop a biblical worldview are provided as each list highlights Wise Words—a character-building quote and Scripture verse. Seek and Find activities give students opportunities to reinforce their spelling usage skills while they search the Scriptures. Students will enjoy memorizing and reciting seven character-building classic poems and a hymn that have been included in this text.

Added Enrichment

- Spelling and vocabulary:
  - Spelling lists (34) including 4 review lists and 2 challenge lists
  - Spelling words (725)
  - Vocabulary words (300)
  - Challenge words (70)
  - Organized by topic (29)
  - Practice exercises (68) including cumulative review of vocabulary words and definitions
  - Spelling games (19)
  - Pronunciation key
  - Quick-reference spelling rules in text
  - Organized by word structure and patterns
  - Build on previous concepts
  - Reinforce new concepts
- Teacher resources:
  - Scope and Sequence
  - Sentence Banks
  - Pro Tip
  - Study Helps
  - Wise Words
  - A Minute to Muse
  - DTAs available for spelling practice and review
- Poetry:
  - Introduction to each poem
  - Biographical sketch of author
  - Vocabulary words to know
  - Comprehension questions
  - Critical thinking questions
  - Discussion starters (biblical worldview)
  - Enrichment Ideas
  - Literary concepts
  - DTAs available to enrich interpretation and appreciation

Evaluation

- Spelling tests (34)

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Spelling & Vocabulary Skills Development

- Master spelling and vocabulary lists including:
  - ➤ Vocabulary words and definitions
  - ➤ Synonyms and antonyms
  - ➤ Homonyms
  - Closed compound words
  - Open compound words
  - Hyphenated compound words
  - Contractions
  - ➤ Prefixes
  - ➤ Suffixes
  - ➤ Greek and Latin roots and their meaning
  - ➤ Syllable rules
  - Memorize vocabulary definitions
  - Use vocabulary words in proper context
  - Write original sentences using spelling and vocabulary words
  - Applying spelling and vocabulary words correctly to complete sentences and paragraphs
  - ➤ Learn the spelling and abbreviation for each book of the Bible
  - ➤ Distinguish between pairs of words commonly used as synonyms, antonyms, or homonyms
  - Applying spelling pattern concepts through daily:
    - Teacher-directed oral practice
    - Independent written practice
  - Learn background information on selected spelling and vocabulary words

Learn Spelling Rules:

- Use *i* before e, except after c, or when sounded like *a*.
- Exceptions to the *i* before *e* rule
- Double a final consonant before adding a suffix beginning with a vowel.
- Know when to change *y* to *i* when adding a suffix.
- Drop the silent *e* before adding a suffix beginning with a vowel.
- Retain the final *e* if the suffix begins with a single consonant.
- Write *g* or *dge* to say the *j* sound at the end of a word.
- The letter *q* is followed by *u* and at least one more vowel.
- Adding a prefix to a word does not usually change the spelling of that word.
- Use *ai* in the middle of a word; use *ay* at the end of a word.
- Use *ck* after a short vowel sound; use *k* after a vowel combination or a consonant.
- When the long *e* sound comes before a final syllable beginning with a vowel, it is usually spelled with *i*.
- The long *e* sound at the end of a word is often spelled with a *y*.
- In English words borrowed from French, the *sh* sound is spelled with *ch*.
- When a word ends in two consonants, simply add the suffix.
- If a word has two or more syllables, use a *c* for the final *k* sound.
- For words ending in *y* preceded by a consonant, change the *y* to *i* before all suffixes except those beginning with *i*.
- ➤ When *gh* is at the end of a word, it usually says the *f* sound; when *gh* is in the middle of a word or follows the long *i* sound, it is usually silent.
- ➤ Directional words like *north, south, east,* and *west* are generally not capitalized.
- The letters *ph* say the *f* sound and can appear in the beginning, middle, or end of a word.
- The long *e* sound can be spelled *e, ee, ea, eo, i, ie,* and *ey*.
- ➤ When the letter *s* follows a vowel, it usually says the *z* sound.

Spelling, Vocabulary & Poetry cont. p. 102

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Spelling, Vocabulary & Poetry 5 cont.

Learn Spelling Rules: *cont.*

- To form the plurals of nouns ending in o preceded by a vowel, add *-s*; to form the plurals of most nouns ending in o preceded by a consonant, add *-es*.
- The *ur* sound as in *fur* can be spelled, *or*, *ur*, *ir*, or *er*.
- English words do not end in *v*; a silent *e* is added to the end of the word.
- When writing a contraction, the apostrophe takes the place of the missing letter or letters.

Learn Prefixes and Their Meaning:

- The prefix *un-* means "not" and can change a word into its antonym.
- The prefix *non-* means "not" or "without" and can change a word into its antonym.
- The prefix *re-* means "again."
- The prefix *in-* means "not" and can change a word into its antonym.
- The prefix *mis-* means "badly" or "wrongly."
- The prefix *pre-* means "before."
- The prefix *de-* means "away, down, completely."
- The prefix *fore-* means "before."
- The prefix *sub-* means "under" or "below."
- The prefix *anti-* means "against, opposite."
- The prefix *co-* means "together" or "with."
- The prefix *dis-* means "not" or "opposite of" and can change a word into its antonym.
- The prefix *inter-* means "between."
- The prefix *extra-* means "outside" or "beyond."
- The prefix *en-* means "cause to" or "put into."
- The prefix *mal-* means "bad, wrong, evil."
- The prefix *up-* means "higher, upward, toward the top."
- The prefix *ir-* means "opposite of" and can change a word to its antonym.
- The prefix *over-* means "above, too much."
- The prefix *super-* means "over, above."
- The prefix *mid-* means "middle."
- The prefix *semi-* means "half" or "part."
- The prefix *ex-* means "out, from, utterly."
- The prefixes *com-*, *con-* mean "together" or "with."
- English words of Spanish origin
- The prefix *multi-* means "many."
- English words of German origin
- Some contractions do not include personal pronouns.

Learn Suffixes and Their Meaning:

- The suffix *-ible* means "can be done" or "capable of being" and can change a verb to an adjective.
- The suffix *-able* means "fit for" or "capable of" and can change a verb to an adjective.
- The suffix *-ful* means "full of" or "known for" and can change a noun to an adjective.
- The suffix *-ic* means "having the form of or characteristic of" and can change a noun to an adjective.
- The suffix *-er* means "one who" and can change a verb to a noun.
- The suffix *-ment* means "the result of an action or process" and can change a verb to a noun.
- The suffix *-ship* refers to "quality" or "position held."
- The suffix *-y* helps a word answer the question "How?" and can change an adjective to an adverb.
- The suffix *-less* means "without" and can change a noun to an adjective.
- The suffix *-ant* or *-ent* means "one who does" or "one who thinks."
- The suffix *-age* means "to perform an action" or "the result of an action."
- The suffix *-al* means "having the form or character of" and can change a noun to an adjective.
- The suffix *-ize* means "to make" or "cause to become."
- The suffixes *-ous*, *-ious* mean "characterized by" and can change a noun to an adjective.
- The suffix *-ify* means "to make" or "to become" and can change an adjective to a verb.
- The suffix *-ive* means "the quality of something" or "tending to" and can change a verb to an adjective.
- The suffix *-ance* means "process of," "quality of" or "state of" and can change a verb to a noun.
- The suffix *-tion* is used to create the noun form of an action verb.
- The suffix *-ee* means "one who receives or completes an action."
- The suffix *-ism* means "the act, practice, or result of."
- The suffix *-hood* means "condition, nature, or state in life."
- The suffix *-sh* means "like" or "similar to."
- The suffix *-some* means "having the quality or condition of."
- Form the plurals of nouns ending in *f* and o.
- Technology words
- Homophones
- Open compound words

Learn Greek and Latin Roots and Their Meaning:

- The Latin root *omni* means "all."
- The Latin root *terr* means "earth."
- The Latin root *ab* means "away from, off" or "down."
- The Latin roots *hab* and *hib* mean "to dwell, to have" or "to hold."
- The Latin root *dict* means "to say."
- The Latin root *fund* means "depth, bottom" or "foundation."
- The Latin root *fort* means "strong."
- The Latin root *vac* means "empty."
- The Latin root *jur* means "law."
- The Latin roots *sens* and *sent* mean "to feel" or "perceive."
- The Latin roots *vid* and *vis* mean "to see."
- The Latin root *aqu* means "water."
- The Latin root *viv* means "alive" or "lively."
- The Latin root *audi* means "to hear" or "able to be heard."
- The Latin root *brev* means "small" or "short."
- The Latin root *lev* means "to lift" or "to make light."
- The Latin root *bene* means "good."
- The Latin root *port* means "to carry."
- The Latin roots *scrib*, *scrip* mean "to write."
- The Latin root *manu* means "hand."
- The Latin root *ped* means "foot."
- The Greek roots *ast*, *aster* mean "star."
- The Greek root *arch* means "ruler."
- The Greek root *auto* means "self."
- The Greek root *bio* means "life."
- The Greek root *path* means "feeling" or "disease."
- The Greek root *dyna* means "power."
- The Greek root *cosmos* means "universe."
- The Greek root *graph* means "to write."
- The Greek root *log*, *logy* means "speech, word, reasoning, study."
- The Greek root *phil* means "love."
- The Greek root *phon* means "sound, voice."
- The Greek root *photo* means "light."
- The Greek roots *sym*, *syn* mean "together."
- The Greek root *dem* means "people."

Spelling, Vocabulary & Poetry 5 cont. p. 103

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

Spelling, Vocabulary & Poetry 5 *cont.*

Learn Greek and Latin Roots and Their Meaning: *cont.*

- ➤ The Greek root *tele* means "far off."
- ➤ The Greek root *hydr* means "water."
- ➤ The Greek root *cycle* means "wheel" or "circle."
- ➤ The Greek root *tri* means "three."
- ➤ Hyphenated compound words

Worksheet Activities:

- Sorting words by Greek and Latin roots
- Arranging words according to prefix and suffix
- Identifying the prefix of a word
- Identifying the suffix of a word
- Analyzing context clues to select the correct vocabulary word
- Writing original sentences using spelling words
- Completing spelling words by adding the missing letters
- Identifying words by their synonyms
- Applying knowledge of patterns and structure to complete the spelling word
- Solving puzzles using spelling words
- Identifying variant spellings of the same sound
- Using spelling words in Bible context
- Identifying rhyming words
- Alphabetizing to the third and fourth letter
- Completing analogies
- Defining vocabulary words
- Applying spelling rules to complete words

Poetry Skills Development

- Memorize 7 lyrical poems and one hymn.
- Develop appreciation of poetry.
- Analyze personification, rhyme scheme, imagery, onomatopoeia, and other literary concepts.
- Perform before an audience.
- Recite in unison.
- Develop appropriate expression and volume.
- Learn the meaning of new and unfamiliar words.
- ➤ Improve comprehension through discussion questions.
- ➤ Critical thinking questions to stimulate reasoning
- ➤ Discussion Starters to facilitate biblical application
- ➤ Enrichment ideas to generate interest in the message of the poem

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.*

Base 10/Numbers

- Place value:
  - ➤ Whole numbers to the 100 billions place; money
  - Decimals to the thousandths place
  - ➤ Writing numbers:
    - ➤ From dictation to the 100 billions place
    - ➤ From number words
    - ➤ In expanded form
- Roman numerals:
  - Value of I, V, X, L, C, D, M
  - Basic rules for Roman numerals
  - More complex rules for forming Roman numerals
- Comparing, including decimals
- Recognize symbols:
  - >(greater than), <(less than)
  - =(equal), ≠(unequal)
- ➤ Rounding: whole numbers, money, mixed numbers, decimals, timed mastery
- Number sentences: greater or less than
- Estimating:
  - Sum, difference
  - Product, quotient
- Squares and square roots:
  - ➤ Terms: exponent, base, radical sign
- ➤ Order of operations: Parentheses, exponents, addition, subtraction, multiplication, division
- Prime/composite
- Factors:
  - Factoring
  - Finding common and greatest common factor
- Multiples:
  - Identifying
  - Finding common and least common multiple

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
- Using commutative property to check
- Addends: column addition
- Averaging
- Fractions/mixed numbers with common and uncommon denominators

Arithmetic cont. p. 104

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

Arithmetic *cont.*

Addition *cont.*

- Measures
- Decimals with annexing zeros
- ➤ Negative numbers

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
- Using inverse operation to check
- Fractions/mixed numbers with common and uncommon denominators/borrowing
- Measures
- Decimals with annexing zeros
- Number sentences: greater or less than
- ➤ Negative numbers

Multiplication

- Multiplication facts: 0–12 tables
- Using commutative property to find related facts
- Word problems
- Timed mastery
- Terms: factor, partial product, product
- Missing sign
- ➤ Mental arithmetic: problems combining multiplication, division, addition, and subtraction up to 13 numbers
- Multiplying with up to 3-digit multiplier (factor)
- Carrying
- Using commutative property to check
- Money
- Fractions:
  - Using cancellation
  - Multiplying fractions with whole or mixed numbers
  - Multiplying fractions with two 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, remainder
- Missing sign
- Timed mastery
- ➤ Mental arithmetic: problems combining division, multiplication, addition, and subtraction up to 13 numbers
- Divisor:
  - 1–2 digits
  - ➤ 3 digits
- Dividends up to 6 digits
- Averaging
- Remainders written as fractions
- Rounding quotients
- Using inverse operation to check
- Money
- Divisibility rules: 2, 3, 4, 5, 6, 9, 10
- ➤ Dividing fractions:
  - ➤ Term: reciprocal
  - ➤ 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
  - ➤ Repeating decimals
- ➤ 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 to lowest terms
- Number line: comparing/ordering
- Finding least common denominator
- 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 decimals to fractions and fractions to decimals

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

Arithmetic cont. p. 105

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

Arithmetic *cont.*

Decimals *cont.*

- ➤ Division:
  - ➤ Dividing a decimal by a whole number
  - ➤ Eliminating the decimal point in the divisor
  - ➤ Annexing zeros to avoid remainders
- ➤ Comparing and ordering decimals
- ➤ Repeating decimals
- ➤ Rounding
- ➤ Timed mastery
- Changing decimals to fractions and fractions to decimals

Problem Solving & Applications

- Word problems:
  - Addition, subtraction, multiplication, division, fractions
  - Money, measures, averages, decimals, equations
  - Geometry: area, perimeter
  - Graphs
  - ➤ Scale drawings, temperature
- Steps of problem-solving process:
  - ➤ Problems requiring four steps
  - Mixed operations, estimating answers, eliminating unnecessary facts
- 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
- Interpreting clocks
- Elapsed time

Money

- Addition, subtraction, multiplication, division
- ➤ Estimation
- ➤ Rounding to the nearest cent
- ➤ Making/counting back change
- ➤ Personal financial literacy:
  - ➤ Introduction to concept/terms
  - ➤ Cost comparison
  - ➤ Home loans
  - ➤ Bank accounts/check register
  - ➤ Taxes
  - ➤ Gross vs. net income
  - ➤ Tithes/offerings
  - ➤ Types of payments
  - ➤ Parts of a check
  - ➤ Debit vs. credit cards
  - ➤ Parts of a debit/credit card
  - ➤ Delayed gratification
  - ➤ Setting up/following a budget

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 $\frac{1}{16}$ of an inch/to the millimeter
  - U.S. customary: inch, foot, yard, mile
  - Metric: millimeter, centimeter, decimeter, meter, decameter, hectometer, kilometer
- Weight:
  - U.S. customary: ounce, pound, ton
  - Metric: milligram, centigram, decigram, gram, decagram, hectogram, kilogram
- Quantity: dozen, score
- Capacity:
  - U.S. customary: 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
- ➤ Fractional measure conversions

Data: Graphing, Statistics, Probability

- Statistics: mean, median, mode, range
- Gathering Data
- Graphs:
  - Drawing graphs
  - Pictographs, bar, and line graphs
  - Dot plots
  - Circle graphs
    - ➤ Using protractor and data to create circle graphs
  - Identify title, labels, and scale
  - ➤ Ordered pairs/Cartesian plane
- ➤ Probability:
  - ➤ Terms: outcome, event
  - ➤ Using formula to calculate

Geometry

- Plane figures:
  - Closed figure, polygon
  - Quadrilateral: parallelogram, rectangle, square, rhombus, trapezoid, kite
  - ➤ Pentagon, hexagon, octagon, decagon
  - Triangle: right, isosceles, equilateral, acute, obtuse, scalene
    - ➤ Sum of angles is 180°
  - ➤ Symmetry: line, rotational
- Angles:
  - Right, congruent
  - Acute, obtuse, straight
  - ➤ Adjacent angles/angles sums
  - Using a protractor to measure/draw angles

Arithmetic cont. p. 106

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

Arithmetic *cont.*

Geometry *cont.*

- Lines:
  - Line segment, line, ray, intersecting lines
  - Parallel and perpendicular lines
- Circles: center, radius, diameter, arc, chord, sector
  - ➤ Angles in a circle
- Terms:
  - Point, plane, congruent
  - Similar, diagonal
- ➤ Transformations: translation, reflection, rotation
- Perimeter of a polygon
- Area:
  - Formulas for rectangle and square
  - Using square measures
- Solid Figures:
  - Terms: face, edge, vertex
  - Types: cube, rectangular prism, square pyramid, sphere, cone, cylinder
  - ➤ Volume:
    - ➤ Formula for rectangular prism
    - ➤ Using cubic measures

Percent, Ratio, Proportion

- ➤ Recognize symbol % (percent)
- ➤ Reading and writing:
  - ➤ Percent as a fraction, decimal, ratio
  - ➤ Fraction as a percent
  - ➤ Decimal as a percent
- ➤ Percent for circle graphs
- ➤ Ratio terms: antecedent, consequent
- ➤ Proportion terms: mean, extreme
- ➤ Scale drawings

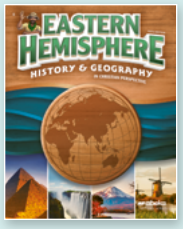
Algebra

- ➤ Terms: variable, simplify, algebraic, translation
- ➤ Solving equations:
  - ➤ 4 new axioms:
    - ➤ With number and unknown side by side
    - ➤ Unknown as numerator and number as denominator
  - ➤ To solve story problems

Negative Numbers

- ➤ Comparing
- ➤ Temperatures below zero
- ➤ Ordered pairs
- ➤ Add/subtract negative numbers

History & Geography



Eastern Hemisphere 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 (100)
- Chapter checkups at end of each chapter (21)
- Special feature boxes with in-depth study of Eastern Hemisphere (81):
  - 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 (75) and important facts about each continent at beginning of each unit
- Worksheets (49):
  - Geography facts and review (28)
  - Chapter content worksheets (9)
  - Geography atlas and continent study (7)
  - Map skills (5)
- *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 (28)
- Homework quizzes (6)
- Tests (8)
- 9-weeks content and geography exams (4)
- Atlas, continent, and geography facts memorized and evaluated (47)

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

History & Geography cont. p. 107

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

History & Geography cont.

History Study

- Importance of history and geography
- Fundamentals of historical research
- Introduction to government
- Fertile Crescent:
  - Cradle of Civilization: Tigris and Euphrates
    - Sumer: Mesopotamia (Babylon), irrigation, writing, wheel, ziggurats
    - Ur of the Chaldees: Chaldea, Abraham
    - Asia Minor
- Ancient Middle East:
  - 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, Daniel, King Belshazzar
  - Persian Empire: Cyrus the Great
- Middle East today:
  - Climate
  - People, culture, religion
  - Importance of history and current events: Islam, Judaism, Christianity
  - Three geographical areas: Fertile Crescent, Arabian Peninsula, Northern Plateaus
  - Six Day War
  - Persian Gulf War
  - Other countries of the Middle East: Israel, Lebanon, Syria, Jordan, Iraq, Kuwait, Bahrain, Qatar, United Arab Emirates, Oman, Yemen, Turkey, Iran, South Caucasus
    - Saudi Arabia
      - Arab League
      - Abraham Records
- Countries of Central and Southern Asia:
  - India:
    - Topographical features, caste system, family life, religion
    - Indus River Valley civilization
    - Taj Mahal, Vasco da Gama, East India Company, William Carey, East and West Pakistan, Mt. Everest
  - Other Central and Southern Asian Countries: Pakistan, Bangladesh, Afghanistan, Nepal and Bhutan, Sri Lanka, Maldives
- Countries of the Far East:
  - China:
    - People, resources, climate, waterways
    - Dynasties, Great Wall of China, Great Silk Road, 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
  - Other East Asian countries: Laos, Cambodia, Thailand, Borneo, Brunei, Singapore, Indonesia, the Philippines, Papua New Guinea, Taiwan, Mongolia
    - Japan:
      - Pearl Harbor
      - Hiroshima and Nagasaki
    - North and South Korea:
      - 38th Parallel
      - Korean War
      - Kim Jong-un
    - Vietnam:
      - Vietnam War
- Countries of Central Asia:
  - Russia:
    - How Communism began: Karl Marx, Marxism, Vladimir Lenin, Joseph Stalin, Nikita Khrushchev
    - Soviet Union: Russian Revolution, Communist terrorism, atheism, few freedoms, government control, United Nations
    - Modern Russia: Vladimir Putin
  - Other Countries of Central Asia: Siberia, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan
- Ancient Europe:
  - Greece:
    - 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
    - Two famous city-states: Athens and Sparta
    - Philip of Macedonia: Macedonia, phalanx
    - Alexander the Great: Hellenistic Age
    - Greco-Persian Wars
  - Northern Europe:
    - Hadrian's Wall, Caledonia, William Wallace
    - Vikings: Leif Ericson
  - Central and Eastern Europe:
    - Gaul
    - Romance, Germanic, and Slavic languages
- 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
  - Roman accomplishments: Pantheon, Colosseum, Appian Way, aqueducts, Latin alphabet
  - Christianity:
    - Birth and early ministry of Christ, spread of the Gospel
    - Nero and the persecution of Christians: colosseum, gladiators, the catacombs
    - Rise of Constantine
  - Fall of Rome
- England and the British Isles:
  - Middle Ages:
    - Charlemagne, Holy Roman Empire, Eastern Orthodox Church
    - End of the Byzantine 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
    - Feudalism, Domesday Book

History & Geography cont. p. 108

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

History & Geography cont.

History Study cont.

- Great events in English history:
  - Magna Carta, Elizabethan Age, 1611 KJV
  - Age of Puritans:
    - Puritans and science, Wesleyan Revival
  - Rise of industry, Victorian Age
  - World War II: Neville Chamberlain, Winston Churchill, Elizabeth II
- England: land and people, Pennine Chain, London, Thames, the Chunnel
  - Ireland, Scotland, and Wales: "Emerald Isle"; potato famine; Republic of Ireland; Northern Ireland; Scottish Highlands; Mary, Queen of Scots; John Knox
- Western Europe: Austria, Belgium, Luxembourg
  - Thirty Years' War
  - Switzerland:
    - Ulrich Zwingli, John Calvin
  - Germany:
    - World War I: Wilhelm II, U-boats, Treaty of Versailles
    - World War II: Adolf Hitler, Holocaust, V-E Day
    - Iron Curtain, Berlin Airlift, Berlin Wall
  - Netherlands: Eighty Years' War
- Northern Europe: Jutland Peninsula, Scandinavian Peninsula, Norway, Sweden, Denmark, Greenland, Finland, Iceland
- Eastern Europe: Baltic States, Poland, Ukraine, Czech Republic, Hungary, Romania, Bulgaria, Albania, Former Yugoslav Republics, Greece
- Southern Europe:
  - Italy:
    - Exploration, science, and culture:
      - John Cabot, Amerigo Vespucci, Galileo, Leonardo da Vinci, Raphael, Michelangelo
    - Benito Mussolini
  - France:
    - Hundred Years' War, Joan of Arc, Jacques Cartier, Samuel de Champlain
    - Reformation: John Calvin, Huguenots
    - Enlightenment
    - French Revolution
    - Napoleon Bonaparte
    - Charles de Gaulle
  - Spain: King Ferdinand and Queen Isabella, Christopher Columbus, Juan Ponce de León, Vasco de Balboa, Hernando Cortés, Francisco Franco
  - Portugal: Bartolomeu Dias, Pedro Cabral, Ferdinand Magellan
- Africa: Continent of Wonders
  - Oral cultures, hieroglyphics, Suez Canal, Great Rift Valley, Horn of Africa, Sahara Desert
  - Highlights of African history:
    - Land of Phut, Sahara, Land of Cush
    - Ethiopian eunuch, Queen of Sheba, early Christians in North Africa
  - Scramble for Africa and missions:
    - Malaria, yellow fever, sleeping sickness, slave trade
    - David Livingstone
- Northern Africa:
  - Egypt:
    - Egypt's beginning: early river civilizations, the Nile River
    - Dynasties: King Tut, Menes, Khufu, Thutmose III, Queen Hatshepsut
    - Building projects of the pharaohs: irrigation and flood control, shadoof, pyramids, Great Sphinx, obelisks, Valley of the Kings,
    - Everyday life in ancient Egypt: people, education, food
    - Papyrus plant: first paper, hieroglyphics, Rosetta Stone
    - Modern Egypt
      - Gamal Abdel Nasser, Anwar el-Sadat, Aswan High Dam
  - Sudan, Libya, Tunisia, Algeria, Morocco
- Western and Central Africa: Liberia, Ghana, Togo, Nigeria, Gabon, Democratic Republic of the Congo, São Tomé and Príncipe, Eritrea, Djibouti, Ethiopia, Somalia
- Eastern Africa: Uganda, Kenya, Tanzania
- Southern Africa: Zambia, Zimbabwe, Botswana, Madagascar
  - South Africa: Boers, Shaka, apartheid, Nelson Mandela
- Australia and beyond:
  - Australia: "Island Continent," land and climate, Great Barrier Reef, plants and animals, history, government, cities, country life, industry and resources, Captain James Cook
  - Oceania: Polynesia, New Zealand, Samoa, Soloman Islands, Fiji
  - Antarctica: discovery and exploration, Roald Amundsen, Richard Byrd, Antarctic Treaty

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
- 45 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
  - Landforms
  - 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, and 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

History & Geography cont. p. 109

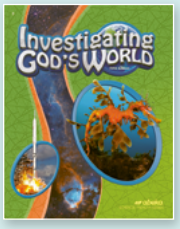
➤ **RED** *indicates first introduction of content.*

History & Geography cont.

Geography Study cont.

- 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



Dive into the exciting world of science with *Investigating God's World*. Your fifth grader will build a strong understanding of earth, life, and physical sciences while deepening their reverence for God as the Creator. Through engaging, hands-on activities and demonstrations in the "Observe to Understand" and "Try This!" sections, abstract concepts—such as star formation, chemical and physical weathering, climate change, seismic waves, and density—become practical and relatable to everyday life. Helpful features like diagrams, Comprehension Checks, Terms boxes, and Chapter Concepts Review sections reinforce learning, promote memorization, and prepare students for written evaluations.

Added Enrichment

- Hands-on learning activities in daily lessons
- Worksheets/Activities/Experiments/Journal in STEM Activities (51)

Evaluation

- Quizzes (21)
- Tests (6)
- 9-weeks exams (2)
- Semester exam (1)

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

Earth Science (Unit 1)

Science Investigation

- Nature of science:
  - ➤ Investigation
  - Science, technology
  - History of the scientific method:
    - ➤ Ptolemy, Copernicus, Galileo
    - Sir Francis Bacon
  - Steps of the scientific method:
    - Hypothesis:
      - ➤ Cause and effect
    - Data
  - Order in nature
  - Branches of science
- Experimental process:
  - Forming the hypothesis: choosing a good question, making a prediction
  - Planning the experiment:
    - Variables: independent, dependent, controlled
  - ➤ Performing the experiment:
    - ➤ Groups: control, experimental
- Graphs and concept maps:
  - ➤ Concept map: examples (information table, tree chart, Venn diagram, graphic organizer, flow chart)
  - Graphs:
    - Circle/pie graph: sector
    - Bar graph: interval
    - Line graph: point, trend
- Evaluating data:
  - Conclusion
  - ➤ Expected and unexpected results: inconclusive data
  - ➤ Laws and theories
  - ➤ Scientific collaboration
- Laboratory procedures:
  - Laboratory tools:
    - Thermometer, scale, beaker, flask, test tube, eyedropper, funnel, hand lens, microscope, binoculars, telescope, clock, timer, stopwatch
    - ➤ Calculator, computer, compass, strainer
  - Laboratory safety:
    - ➤ Detailed tips

Astronomy

- What is astronomy?
  - ➤ Term: astronomy
  - Origin of the universe:
    - ➤ Worldview
    - ➤ Two worldviews: Creation scientist, special creation, evolution, evolutionary scientist
    - ➤ Big bang hypothesis
  - ➤ What is a star?
    - ➤ Light-year
    - ➤ Core, corona, photosphere
  - ➤ Maria Mitchell
- Stars:
  - ➤ Size
  - Color: sun as yellow star
  - ➤ Magnitude: apparent, absolute
  - ➤ Creation science: star ages
  - Galaxy:
    - Milky Way
    - ➤ Nebula
    - ➤ Local Group
    - Other galaxies: Andromeda, Large and Small Magellanic Clouds
- Solar system:
  - Structure:
    - ➤ Geocentric, heliocentric, ellipse
    - Gravity

Science cont. p. 110

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

Science *cont.*

Astronomy *cont.*

- Planets: defined
  - ➤ Dwarf planet
- ➤ Creation science: natural laws
- Inner planets:
  - Survey of inner planets
- Outer planets:
  - Survey of outer planets
- ➤ Mary Somerville
- ➤ Other celestial bodies: asteroid, asteroid belt, comet, meteoroid
- Astronomical cycles:
  - ➤ Habitable zone
  - Earth's revolution: year
  - Earth's rotation: axis, day
  - Earth's tilt:
    - Seasons
    - ➤ Equinox, solstice
  - Lunar cycle: satellite, moon phases
  - Constellations:
    - ➤ Scientific definition: 88 zones
    - Seasonal appearance
    - Big Dipper, Great Bear, Little Dipper, Leo the Lion, Herdsman, Southern Cross, Orion, Virgo, Draco, Lyra, Cygnus, Scorpius, Sagittarius, Cassiopeia, Cepheus, Andromeda, Pegasus, Perseus, Canis Major, Geminis, Taurus
    - Stars: Regulus, Denebola, Arcturus, Polaris, Betelgeuse, Rigel
    - ➤ Survey of constellations by season
    - ➤ Creation science: star formation
- Space exploration:
  - Beginning of the space age:
    - ➤ Sputnik
    - NASA, early astronauts
  - Space stations:
    - ➤ International Space Station
  - ➤ Space telescopes:
    - ➤ Hubble Space Telescope
    - ➤ James Webb Space Telescope
    - ➤ Exoplanets
    - ➤ Creation science: amazing design
  - ➤ Mars exploration
  - ➤ Private spaceflight: SpaceX

Activities & Demonstrations

- ➤ Demonstrate apparent and absolute magnitude.
- ➤ Locate the Milky Way.
- ➤ Observe how thermal energy is affected by distance.

Geology

- Geosphere:
  - Terms:
    - Geology
    - ➤ Geosphere
  - ➤ Origin of the theory of evolution: uniformitarianism, Lyell, Darwin
  - Biblical account of Creation:
    - Creation science: Noah's ark as a picture of faith
  - Noah's Flood:
    - ➤ Flooding Stage, Recessive Stage
    - Creation science: water vapor canopy
    - Creation science: Grand Canyon
- Structure of the geosphere:
  - Layers: crust, mantle, magma, core
  - Tectonic plates and plate movement:
    - ➤ Term: plate tectonics
  - Volcanoes:
    - ➤ Magma chamber
    - ➤ Overview of types (cinder-cone, shield, composite)
    - ➤ Paricutin volcano
  - Earthquakes:
    - Fault, epicenter
    - ➤ Hypocenter
  - Mountains:
    - Types:
      - ➤ Volcanic, domed
      - Fault-block, folded
    - ➤ Mount Everest: Sir Edmund Hillary
- Minerals, soils, and rocks:
  - Mineral defined
  - Soil horizons:
    - Humus, topsoil, subsoil, bedrock
    - ➤ Organic horizon, substratum
    - ➤ Horizon letters, comparison of horizons
  - Rock types:
    - Igneous:
      - ➤ Volcanic and plutonic
      - ➤ Basalt
      - Obsidian, pumice, granite
    - Sedimentary:
      - ➤ Strata
      - ➤ Conglomerate
      - Sandstone, shale, limestone
    - Metamorphic:
      - Marble, slate
      - ➤ Quartzite
  - Rock properties: luster, texture, hardness (scratch test), color (streak test), cleavage (fracture)
  - Creation science: recyclable rocks
- Weathering, erosion, and deposition:
  - ➤ Interaction between atmosphere, biosphere, hydrosphere, and geosphere
  - Weathering:
    - ➤ Chemical weathering, physical weathering
  - Erosion and deposition:
    - ➤ Term: deposition
    - ➤ Role of glaciers and wind in erosion and deposition; moraine
    - ➤ Creation science: planation surfaces
- Fossils:
  - ➤ Fossil record, paleontologist
  - Fossil formation, transitional form
  - ➤ Work of a paleontologist, bone bed
  - ➤ Interpreting the fossil record: Creationist versus evolutionist views, geologic column
  - ➤ Mary Anning
- Precious metals, precious stones, and energy sources:
  - ➤ Metals: ore; important and valuable metals (gold, silver, copper, iron, aluminum, platinum, uranium)
  - ➤ Precious and semiprecious stones (diamond, ruby, sapphire, emerald, aquamarine; amethyst, garnet, lapis lazuli, turquoise, jade, opal)

Science cont. p. 111

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

Science cont.

Geology cont.

- Fossil fuels:
  - Coal
  - ➤ Emissions
  - ➤ Petroleum/crude oil, natural gas
- Alternative energy/renewable energy:
  - ➤ Geothermal energy
  - Solar energy, wind power, hydropower
  - ➤ Biofuel

Activities & Demonstrations

- ➤ Demonstrate the Recessive Stage of Noah's Flood.
- ➤ Demonstrate tectonic plate activity.
- ➤ How acids affect shells and rocks
- ➤ Demonstrate chemical and physical weathering.
- Excavate a "fossil."

Marine Geology

- Hydrosphere:
  - ➤ Term: hydrosphere
  - Importance of water:
    - Needed by living things
    - ➤ Helps regulate climate
    - Salt versus fresh water
  - Oceans:
    - Oceanography
    - Salinity
  - ➤ Drainage: tributaries, drainage basin, aquifer, drainage divide, continental divide
  - ➤ Old Faithful
- Ocean movements:
  - Ocean waves:
    - Wave definition, tsunamis
    - ➤ Circular movement of water
  - Tides:
    - High, low tides
    - ➤ Spring, neap tides
  - ➤ Matthew Maury
  - Ocean currents:
    - ➤ Surface currents
    - ➤ Subsurface currents, upwellings
- The coast:
  - ➤ Shoreline: shore, longshore drift
  - Coastal features:
    - ➤ Sandbars, barrier islands
    - Estuary, salt marsh
  - ➤ Ocean conservation
- Continental margin and ocean floor:
  - ➤ HMS *Challenger*
  - Continental margin:
    - ➤ Term: continental margin
    - Continental shelf
    - ➤ Continental crust, oceanic crust, continental slope, continental rise
  - Ocean floor:
    - Abyssal plain, ocean trenches:
      - ➤ Exploration of the deep ocean: *Trieste*, *Alvin*
    - ➤ Ooze, seamounts, mid-ocean ridges, rifts, subduction, hydrothermal vents
    - ➤ Creation science: guyots

Activities & Demonstrations

- Create a saltwater solution.

Meteorology

- Atmosphere:
  - Meteorology:
    - ➤ History of meteorology
  - Atmosphere as gases:
    - Comparison of gases with solids and liquids
    - ➤ Atmosphere as layer of gases held by a planet's gravity
    - Mixture of gases in the atmosphere
  - Atmosphere layers:
    - Lower atmosphere:
      - ➤ Troposphere, tropopause
    - Middle atmosphere:
      - ➤ Stratosphere, mesosphere
      - ➤ Term: ozone layer
    - Upper atmosphere:
      - ➤ Thermosphere, exosphere
    - ➤ Earth's magnetic field: importance, auroras
- Weather and climate:
  - ➤ Meteorologist
  - ➤ Luke Howard: Father of Meteorology
  - Weather versus climate
  - ➤ United States Weather Bureau
  - ➤ Climatologist
  - ➤ Köppen Climate Classification System:
    - Arid, temperate
  - Solar radiation and the greenhouse effect:
    - ➤ Greenhouse gases
    - ➤ Creation science: climate change
- Hydrologic cycle/water cycle:
  - Evaporation: transpiration, relative humidity, dew point, hygrometer
  - Condensation and cloud formation: requirements for condensation, role of condensation nuclei, relationship to dew point
  - ➤ Cloud classification: cumulus, stratus, cirrus
  - Precipitation: definition, nimbus clouds, rain and snow gauges
  - ➤ Cloud atlas
- Winds and air masses:
  - Air rising and falling based on temperature
  - Air pressure and wind: air pressure, wind, barometer, weathervane, anemometer
  - Global winds: uneven warming of Earth; latitude variation
  - Types of wind
  - Fronts and air masses:
    - Air mass, source region, overview of types
    - ➤ Warm front, cold front, relative speeds
  - Jet stream: effect on storms
- Thunderstorm systems:
  - ➤ Cumulonimbus cloud (thunderhead) formation:
    - Updraft, downdraft
  - Hail, lightning, stepped leader
  - Tornado, tornado watch, tornado warning
  - ➤ Enhanced Fujita Scale of Tornado Damage Intensity
  - ➤ Storm safety
- Hurricanes and other natural disasters:
  - Cyclone formation:
    - Hurricane
    - ➤ Saffir-Simpson Hurricane Wind Scale
    - Eye, eyewall, storm surge

Science cont. p. 112

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

Science *cont.*

Meteorology *cont.*

- Recovering from natural disasters

Activities & Demonstrations

- Demonstrate the greenhouse effect.
- Make a pinecone hygrometer.
- Make your own anemometer.
- Make an updraft tower.
- Make your own weather station.

Life Science (Unit 2)

Biology

- The living cell:
  - Biosphere:
    - Organism
  - Cell structure:
    - Cell membrane, cytoplasm, organelle, nucleus
    - Robert Hooke, Antonie van Leeuwenhoek
    - Heredity
  - Creation science: DNA
- Classifying organisms:
  - Taxonomy:
    - Carl Linnaeus
    - Microorganisms
  - Six Kingdoms: Animalia, Plantae, Fungi, Protista, Eubacteria, Archaebacteria
    - Multicellular, unicellular
    - Bacterium
  - Two types of cells:
    - Prokaryote, eukaryote
  - Creation science: the flagellum
- Kingdom Animalia:
  - Zoology
  - Vertebrate characteristics:
    - Endoskeleton
  - Invertebrate characteristics:
    - Exoskeleton
  - Symmetry, asymmetry, bilateral symmetry, radial symmetry
  - Arthropods:
    - Characteristics of arthropods
    - Crustaceans, arachnids, centipedes, millipedes
  - Great Scientist: Jean Henri Fabre
- Insect life cycles:
  - An insect's head:
    - Simple eye, compound eye
    - Sensilla, mandibles
  - An insect's thorax
  - An insect's abdomen:
    - Spiracles, trachea, ovipositor
  - Metamorphosis:
    - Complete metamorphosis, incomplete metamorphosis
  - The law of biogenesis, Francesco Redi
  - Creation science: eye design
- Kingdom Plantae:
  - Botany
  - Process of photosynthesis:
    - Cell wall, chloroplast, glucose
  - Cellular respiration
  - Vascular plants, nonvascular plants:
    - Types of tissue: xylem, phloem
    - Stomata
  - Great Scientist: Carl Linnaeus
- Life cycle of a seed plant:
  - Cone-bearing seed plants:
    - Conifer trees
  - Flowering seed plants:
    - Broadleaf trees, deciduous
  - Pollination and fertilization of flowering plants:
    - Pistil, stamen, ovary, ovule
    - Pollination, fertilization
    - Embryo, endosperm, cotyledon
  - Germination and growth
- Life cycle of a seedless plant:
  - Spores
  - Two forms of a fern
  - Life cycle of a fern:
    - Rhizome, fronds, rhizoids
  - Seedless nonvascular plants:
    - Hornworts, liverworts
  - Creation science: Did plants evolve?

Activities & Demonstrations

- Observe an egg's membrane.
- Dissect a flower to observe its reproductive parts.
- Observe fern spores under a microscope.

Marine Biology

- Arthropods of the ocean:
  - Marine biology and taxonomy:
    - Phylum, class
  - Crustaceans: shrimp, lobster, crab:
    - Tissue, organ
    - Carapace: shell of crustacean
    - Scavenger, range
  - Sea spiders and horseshoe crabs
  - Creation science: living fossils
- Mollusks and cnidarians:
  - Mollusk phylum:
    - Bivalves: clams, mussels, oysters
      - Parasite, host
      - Nacre
    - Univalves: cowries, conchs, and whelks:
      - Carnivore, herbivore
    - Octopus, squid:
      - Regenerate, jet propulsion
  - Cnidarian phylum:
    - Polyp, medusa
    - Jellyfish
    - Sea anemones and corals
- Echinoderms, poriferans, annelids, and protozoa:
  - Starfish, sea urchin:
    - Omnivore
  - Sea sponge
  - Annelids: segmented worms
    - Setae
  - Protozoa:
    - Phytoplankton, zooplankton
    - Flagellate, amoeba, pseudopod

Science cont. p. 113

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

Science *cont.*

Marine Biology *cont.*

- Fish of the sea:
  - Fish body design and function:
    - Gills, swim bladder, lateral line, dorsal fin, caudal fin
  - Bony fish:
    - Salmon, tuna, sailfish, lantern fish, hatchet fish
    - Spawn
    - Bioluminescence: nature's light show
  - Cartilaginous fish:
    - Denticle, pups, spiracles
    - Largest great white shark
    - Shark safety
    - Rays and skates
- Marine reptiles:
  - Sea turtles:
    - Scute, clutch
    - Instinct
  - Crocodiles
  - Sea snakes:
    - Lateral undulation, fangs
  - Lizards:
    - Creation science: marine iguanas
  - There are no marine amphibians.
- Water birds:
  - Bird body design and function:
    - Plumage, preen, crop, gizzard
  - Nesting, incubation:
    - Precocial birds, altricial birds
  - Notable water birds: arctic tern, brown pelican, great blue heron, stilt sandpiper
  - Migration, rookery, flyway
- Marine mammals:
  - Whales:
    - Fluke, blubber, calves, pod
    - Toothed whale:
      - Sperm whale, beluga whale, narwhal
      - Dolphin, porpoise, orca
      - Echolocation
    - Baleen whale:
      - Humpback whale
  - Pinnipeds:
    - Walruses, seals, sea lions
    - Seal and sea lion babies are called pups
  - Manatees and dugongs

Activities & Demonstrations

- Start a seashell collection.
- Demonstrate buoyancy.
- Demonstrate why polar waters do not freeze.

Ecology

- The biomes of the biosphere:
  - What is a biome?
    - Terrestrial biomes, aquatic biomes
  - What is an ecosystem?
    - Community, population, biodiversity
  - The history of ecology
  - Ecology: the study of ecosystems
  - Levels of ecology: biosphere, biome, ecosystem, community, population, organism
  - Biotic factors:
    - Niche, interdependence
    - The food chain:
      - Primary producers, primary consumers, secondary consumers, apex predators
      - Detritus, decomposers
    - Food webs:
    - Creation science: the nitrogen cycle
  - Abiotic factors:
    - Tolerance range, optimum range
    - Temperature:
      - Solar radiation
    - Sunlight:
      - Direct sunlight, indirect sunlight
    - Wind, water, air, soil
  - Ecological relationships and ecological change:
    - Ecological relationships: symbiosis, mutualism, parasitism, predation, competition
    - Ecological changes: extinction, ecological succession
- Terrestrial biomes:
  - The tundra biome:
    - Arctic tundra, permafrost
    - Alpine tundra, tree line
- The grasslands biome:
  - Temperate grassland, prescribed burning
  - Tropical grassland, browsers, savanna
- The desert biome:
  - Rain shadow, subtropical deserts, coastal deserts, semi-arid desert
  - Creation science: kangaroo rat
- What makes a forest?
  - Undergrowth, closed and open canopy, carbon sink, clear-cutting, sustainable forestry
  - Camping safety tips
- Temperate deciduous forest biome: grows in climates that have four seasons
  - Dormancy
- Boreal forest biome: contains mostly coniferous trees
- Tropical rainforest biome

Activities & Demonstrations

- Create an ecology pyramid.
- Observe biotic factors interacting with abiotic factors.
- Observe plant transpiration.

Marine Ecology

- Aquatic biomes:
  - Freshwater biomes
  - Marine biomes:
    - Vertical zones: sunlight, twilight, midnight, abyssal, hadal zones
    - Horizontal zones: intertidal, neritic, oceanic
    - Why is the ocean blue?
- The intertidal zone:
  - Regions of the intertidal zone: splash, high tide, middle, low tide regions
  - Ecosystems of the intertidal zone:
    - Seashores, estuaries
- The neritic zone:
  - Life in the neritic zone, sessile
  - Sea sponges

Science cont. p. 114

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

Science *cont.*

Marine Ecology *cont.*

- ➤ Ecosystems of the neritic zone:
  - ➤ Seagrass meadows
  - ➤ Kelp forests
  - ➤ Coral reefs, lagoon
- ➤ Creation science: the Great Barrier Reef
- ▪ The oceanic zone and below:
  - ▪ The vertical zones of the ocean:
    - ▪ Photosynthesis in the sunlight zone
    - ▪ Dim twilight zone
    - ➤ Strange creatures of the midnight zone
    - ➤ The mysterious abyss, marine snow
    - ➤ The trenches of the hadal zone
  - ➤ Deep-sea ecosystems of the oceanic zone:
    - ➤ Seamounts
    - ➤ Shipwrecks and whale falls
    - ➤ Hydrothermal vents, chemosynthesis
  - ➤ Caring for the ocean

Activities & Demonstrations

- ➤ Observe protists in pond water under a microscope.

Physical Science (Unit 3)

Chemistry

- ➤ Physical science: study of matter and energy
  - ▪ Matter, motion, inertia, force, energy
  - ➤ Branches of physical science: chemistry, physics
- ▪ Properties of matter:
  - ▪ Physical properties:
    - ▪ Measurable physical properties: mass, weight, volume, density
    - ▪ Observable physical properties: state of matter
      - ▪ Solid, liquid, gas
  - ➤ Chemical properties
  - ➤ Plasma, the fourth state of matter
- ➤ Physical changes in matter:
  - ➤ Transitions between states of matter: melting, evaporation, condensation, and freezing
    - ▪ Melting point, boiling point, freezing point
    - ➤ Vaporize: liquid becomes a gas
    - ➤ Temperature scales
- ➤ Atomic theory of matter:
  - ▪ Atom, element
  - ➤ Aristotle, Robert Boyle
  - ➤ Discovery of the atom and the atomic theory of matter:
    - ➤ Antoine Lavoisier: Father of Chemistry
    - ➤ John Dalton
  - ▪ Structure of an atom:
    - ➤ Subatomic particles
    - ▪ Nucleus: proton, neutron
    - ▪ Electron
  - ➤ Atomic number
- ➤ Periodic table of the elements:
  - ➤ Dmitri Mendeleev
  - ➤ Chemical symbols
  - ➤ Types of elements:
    - ➤ Metal, nonmetal, semimetal
  - ➤ Molecule, compound:
    - ➤ Chemical change
    - ➤ Creation science; spontaneous generation
- ➤ Homogeneous mixtures:
  - ▪ Mixture
  - ▪ Solution:
    - ➤ Solubility
    - ▪ Parts of a solution: solute, solvent
    - ➤ Concentration
    - ➤ Dissolving rate
- ➤ Heterogeneous mixtures:
  - ➤ Suspension
  - ➤ Colloid
  - ➤ Law of conservation of mass
- ➤ Separating mixtures:
  - ➤ Filtration, sifting, evaporation, skimming, magnetism
- ➤ Chemical changes in matter:
  - ➤ Chemical reaction
  - ➤ Parts of a chemical reaction: reactant, product
  - ➤ Evidence of chemical reactions
  - ➤ Creation science: early chemists
- ➤ pH scale:
  - ➤ Salt
  - ➤ Acid, base, neutral

Activities & Demonstrations

- ➤ Demonstrate the results of heating and cooling matter.
- ➤ Demonstrate matter.
- ➤ Demonstrate varying concentrations of a solution.
- ➤ Observe suspensions and determine which ingredient has the greatest density.
- ➤ Observe a chemical reaction with vinegar and baking soda.
- ➤ Perform chemical analysis to determine if a material is acidic or basic.

Energy

- ▪ What is energy?
  - ▪ Energy does work and changes matter.
  - ▪ Converted energy:
    - ▪ Kinetic energy
    - ▪ Potential energy
  - ➤ Mechanical energy
  - ➤ Nonmechanical energy
  - ➤ Law of conservation of energy
  - ▪ Transferred, or transmitted, energy
  - ▪ Creation science: God transcends natural laws
- ▪ Thermal energy:
  - ➤ Temperature
  - ➤ Heat:
    - ➤ Joule: unit of energy
  - ➤ Ways heat moves:
    - ➤ Conduction:
      - ▪ Conductor, insulator
    - ➤ Convection
    - ➤ Radiation
- ▪ Electrical energy:
  - ▪ Static electricity:
    - ➤ Electricity, electric charge
    - ➤ Voltage, volt (V)
    - ➤ Grounding

Science cont. p. 115

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

Science *cont.*

Energy *cont.*

- Current electricity: the flow of electrons along a path called a circuit
  - Generator
  - ➤ Load
  - Closed circuit
  - Open circuit
  - ➤ Measuring energy (with volts and amps)
- Wave energy:
  - How waves work:
    - ➤ Medium
    - ➤ Oscillation
  - Structure of a wave:
    - ➤ Wave train, crest, trough, resting position
  - ➤ Types of waves:
    - ➤ Transverse waves
    - ➤ Longitudinal waves:
      - ➤ Compressed
  - ➤ Seismic waves
- Properties and behavior of waves:
  - Wavelength, amplitude, frequency, speed:
    - ➤ Hertz (Hz)
  - ➤ Reflected wave, refracted wave
  - ➤ Refracted seismic waves
- Light waves and electromagnetic energy:
  - Luminous objects
  - ➤ Robert Hooke, James Clerk Maxwell, Max Planck, Albert Einstein
  - ➤ Physicist
  - ➤ Electromagnetic wave, vacuum, visible light
  - Light reflection
  - Light refraction:
    - ➤ Convex, concave lens
  - Light transmission:
    - Transparent, opaque, translucent
- Sound waves:
  - ➤ Acoustics
  - ➤ Pulses of longitudinal waves: compression and rarefaction pulses
  - ➤ Intensity, decibels (dB)
  - ➤ Pitch, audible sounds, echo
  - ➤ Timbre

Activities & Demonstrations

- ➤ Observe static electricity jump from one charged object to another and discharge.
- ➤ Observe the magnetic field created by an electrical current by creating an electromagnet.
- ➤ Test materials for light absorption and reflection.

Force and Motion

- Action of forces:
  - Motion, work, force, inertia
  - Balanced and unbalanced forces
  - ➤ Contact and noncontact forces
  - Creation science: laws of motion
- Contact forces:
  - ➤ Tension force
  - ➤ Spring force
  - ➤ Normal force
  - ➤ Frictional force:
    - ➤ Drag force, fluid
    - ➤ Air resistance, water resistance
  - Center of gravity
- Noncontact forces:
  - Force field
  - Magnetic force:
    - Polarity
  - Electric force
  - Gravitation force:
    - Weight
- Newton's first law of motion:
  - Sir Isaac Newton, newton (N)
  - Inertia
  - ➤ Calculating motion:
    - ➤ Speed equation
  - ➤ Graphing motion:
    - ➤ Motion graphs
- Newton's second law of motion:
  - ➤ Acceleration:
    - ➤ Positive acceleration
    - ➤ Negative acceleration
  - ➤ Quantifying motion:
    - ➤ Momentum
  - ➤ Graphing acceleration
  - Collisions
- ➤ Newton's third law of motion:
  - ➤ Action force
  - ➤ Reaction force:
    - ➤ Thrust
- Buoyancy and lift:
  - Objects that float on water through buoyancy:
    - Displaced water
    - Surface area
  - Objects that reduce drag:
    - Streamlining
  - Achieving lift:
    - Foils, lift
  - Balloons use buoyancy
- Simple machines:
  - ➤ Mechanical advantage
  - ➤ Input, output
  - Lever:
    - Fulcrum, pivot, load
    - ➤ Input arm, output arm
  - Wheel and axle
  - Pulley
  - Inclined plane
  - Wedges and screws
- ➤ Engineering design:
  - ➤ Technology, engineers
  - ➤ Engineering design process (six steps):
    - ➤ Criteria, constraint
    - ➤ Prototype
  - ➤ Branches of engineering
  - Glorifying God through investigation

Activities & Demonstrations

- ➤ Observe contact and noncontact forces.
- ➤ Construct and test a parachute to demonstrate air resistance.
- ➤ Identify lines of magnetic force.
- ➤ Observe negative and positive acceleration after collisions.
- ➤ Test a boat for thrust.
- ➤ Create and test a paper airfoil.

Health

Through the new *Enjoying Good Health*, students will gain a deeper knowledge of the anatomy and function of each of the body systems. Fifth graders will learn about nutrition, fitness, hygiene, and safety concepts that they can apply in their own lives. This knowledge will help them to understand the influence of healthy habits on physical, mental, and spiritual health. Hands-on Health and Live It Out! activities provide practical applications of concepts.

Added Enrichment

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

Evaluation

- Quizzes (7)
- Tests (2)
- 9-weeks exam (1)

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

Enjoying a Healthy Life

- Fearfully and wonderfully made
  - Anatomy
  - ➤ Health stewardship
    - Health
    - ➤ Factors that affect health: health behaviors, genetic and environmental factors
    - ➤ Health stewardship skills
      - ➤ Understand how the body works.
      - ➤ Develop good health habits.
      - ➤ Set health goals and make plans to meet goals.
      - ➤ Seek help and support.
      - ➤ Help others maintain good health.
    - ➤ Finding health information and services
      - ➤ Reliable, current, unbiased sources
  - ➤ Physician

Cells, Tissues, Organs, and Systems

- Human anatomy
  - Cell, tissue, organ, system
  - ➤ Organ donation
- Circulatory system
  - Blood
    - Plasma, red blood cell, hemoglobin, white blood cell, platelet
  - Pumping blood
    - Circulation, heart
    - Blood vessels
      - Arteries, capillaries, veins
  - Cardiologist
- ➤ Respiratory system
  - ➤ Respiratory organs
    - ➤ Pharynx, trachea, larynx, bronchi, lungs, bronchioles, alveoli
  - ➤ Breathing process
  - ➤ Respiration, diaphragm
  - ➤ Air pollution
  - ➤ Pulmonologist
- ➤ Two systems in coordination
  - Pumping heart
    - Septum, atria, ventricles
    - ➤ Venae cavae, aorta
  - Blood pressure, pulse
  - Aerobic endurance, lung capacity, atherosclerosis
  - Managing asthma

Activities & Demonstrations

- ➤ Make a stethoscope.
- ➤ Live It Out! Stewardship: air pollution
- ➤ Live It Out! Planning for aerobic endurance
- ➤ Recipe: heart-healthy snack platter

The Nervous System

- Neurology
  - Nervous system
  - Parts of the nervous system
  - Neurologist
  - ➤ Neurons
    - ➤ Cell body, dendrite, axon
- Central nervous system
  - Brain
    - Cerebrum, cerebellum, brain stem, limbic system
    - ➤ Brain development
  - Spinal cord, reflex
- Peripheral nervous system
  - Nerves
  - Sensory nerve fiber, motor nerve fiber
  - ➤ Sense receptor
  - ➤ Spinal nerves, cranial nerves
  - ➤ Stress management
- Vision and hearing
  - Structure of the eye
    - Sclera, cornea, pupil, iris, lens, retina, optic nerve
  - ➤ Protecting your eyes
  - ➤ Eye diseases
  - Structure of the ear
    - Outer ear, auditory canal, eardrum, middle ear, inner ear, cochlea, auditory nerve, semicircular canals
  - ➤ Protecting your ears, ruptured eardrum
  - ➤ Noise pollution

Activities & Demonstrations

- ➤ Make a neuron model.
- ➤ Live It Out! hearing protection

Nutrition

- Macronutrients
  - Nutrients
  - Carbohydrates, simple carbohydrates, complex carbohydrates, fiber
  - Protein
  - Fats, saturated fats, unsaturated fats, hydrogenated oil
  - ➤ Dietitian

Health cont. p. 117

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

Health *cont.*

Nutrition *cont.*

- Micronutrients
  - Vitamins
    - ➤ Water-soluble vitamins
      - Vitamin C, B-complex vitamins
    - ➤ Fat-soluble vitamins
      - Vitamins A, D, E, and K, carotene
  - Minerals
    - Calcium, phosphorus, magnesium, sodium, potassium
    - ➤ Trace elements, iron, iodine, zinc
  - Liquids
- Nutrient needs
  - Energy for activity
    - Calories, metabolism
  - ➤ Recommended Dietary Allowance
  - Reading food labels
    - Nutrition Facts label
      - Serving size, percent Daily Value, added sugar
    - Ingredients, food allergy, allergen, anaphylaxis
- Choosing healthy eating
  - MyPlate
    - Balanced diet, vegan
    - Fruits, vegetables, protein, grains, dairy
    - Making nutrition decisions
  - Food safety
    - Storing food, perishable food, nonperishable food
    - Preparing food, cross-contamination
  - ➤ Disordered Eating

Activities & Demonstrations

- ➤ Recipe: build-it yourself baked potato bar
- ➤ Live It Out! Identifying macronutrients
- ➤ Live It Out! Evaluating nutrition claims
- ➤ Live It Out! Making nutrition decisions

The Digestive and Urinary Systems

- Digestion, digestive system, alimentary canal
  - ➤ Types of teeth, saliva, salivary glands, enzymes
  - Esophagus, stomach
  - ➤ Dr. Beaumont and St. Martin
  - Absorption, small intestine, villi
  - Elimination, large intestine
  - ➤ Liver, gallbladder, pancreas
  - ➤ Gastroenterologist
- Hydration and excretion
  - Importance of water
  - ➤ Excretory system
    - ➤ Urinary system, kidneys, bladder
  - ➤ Caffeine
  - ➤ Urologist and nephrologist

Activities & Demonstrations

- ➤ Acid attack

Disease Prevention

- Types of disease
  - Communicable disease
    - Microorganisms, pathogen, bacterium, virus, vector
    - ➤ Effects of diseases
  - Noncommunicable diseases
    - ➤ Heart disease, cancer, diabetes mellitus, obesity
- Immune System
  - Immunity
  - Protective barrier
    - Mucus, cilia, lysozyme
  - White blood cells
    - Phagocyte, lymphocyte, antibodies, histamine, inflammation
  - Vaccinations
- Lymphatic system
  - Tissue fluid, lymph, lymph capillary, lymph vessel, lymph node
  - Tonsils, adenoids, Peyer's patches, spleen, thymus
  - Preventing the spread of pathogens
  - ➤ The CDC

Activities & Demonstrations

- ➤ Recipe: immune-boosting chicken soup
- ➤ See the effects of soap.
- ➤ Live It Out! Family health history

Maintaining Physical Health

- Caring for yourself
  - Puberty, adolescence, hormone
  - Hygiene
  - Integumentary system, epidermis, dermis, hypodermis, hair follicle, sebum
  - Skin care, acne, hair care
  - Dental care
    - Enamel, dentin, pulp, plaque, dental caries
    - ➤ Dentist
- Physical fitness
  - Muscular system
    - Involuntary muscles, voluntary muscles, tendons
    - Trapezius, deltoid, biceps, triceps, abdominal muscles, quadriceps, hamstrings
  - Exercise, muscle tone
    - Aerobic exercise, anaerobic exercise
    - Healthy exercise habits
  - Rest and sleep, lactic acid
    - ➤ Managing screen time
- Skeletal system
  - Structure of a bone
    - Long bone, spongy bone, bone marrow
    - ➤ Types of bones
  - Joints
    - Ligament
    - Types of freely movable joints
  - Axial skeleton
    - Skull, cranium, vertebrae, sternum, rib cage
  - Appendicular skeleton
    - Scapula, clavicle, humerus, ulna and radius, carpal, phalanges, pelvis, femur, patella, tibia, tarsal
  - ➤ Growing pains

Activities & Demonstrations

- ➤ Plaque attack
- ➤ Live It Out! Developing good hygiene habits
- ➤ Exercise to build strength.
- ➤ Recipe: protein-packed yogurt bowl

Health cont. p. 118

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

Health cont.

Safety and First Aid

- Staying safe
  - Sports safety
  - Weather safety
    - ➤ Cold-weather safety, frostbite
    - ➤ Warm-weather safety, electrolyte, dehydration, heat exhaustion
    - Sun safety, ultraviolet radiation, SPF
  - Water safety
  - Fire safety
- Being aware, alert, and careful
  - Being aware and alert in public places
  - Being alert to danger
    - ➤ Run-Hide-Fight
  - Being careful about boundaries
    - ➤ Abuse
  - Being careful around others
  - Being careful around bullies
    - ➤ Gang
  - Being careful online
    - ➤ Cyberbullying
- First aid
  - Medical emergency
    - ➤ Check-call-care
  - Burns
  - Bleeding
  - Choking
  - ➤ CPR, cardiac arrest
  - Poisoning, poison
  - Sports injuries
    - Strain, sprain, concussion
- Deciding to say no!
  - Drug, drug misuse
  - Addiction, withdrawal
  - Commonly misused drugs
  - Alcohol, nicotine, marijuana, inhalants, OTC drugs
  - How to say no!

Activities & Demonstrations

- ➤ Live It Out! Preparing for disasters
- ➤ Live It Out! Poison Control

Pursuing a Healthy Spirit

- Spiritual wellness
  - Spiritual birth
  - Spiritual growth
  - Spiritual cleansing
  - Spiritual peace
  - Spiritual development
  - ➤ Character development: courage, trustworthiness, leadership
- Social wellness
  - Friendship
    - Making new friends
    - Being a good friend
    - Being considerate
    - ➤ Respecting personal space
    - Avoiding unhealthy friendships
  - Communication
  - ➤ Communicating online
  - Conflict resolution
- Mental and emotional wellness
  - Healthy thoughts
    - ➤ Self-image
  - Spirit-controlled emotions
    - Anger
    - Fear
    - Jealousy
    - Sadness
    - Grief
  - ➤ God's special plan
    - ➤ God's design for marriage
    - ➤ Special friendships

Activities & Demonstrations

- ➤ Live It Out!: Applying God's Word
- ➤ Live It Out!: Prayer journal
- ➤ Live It Out!: Refusing peer pressure
- ➤ Live It Out!: Coping with emotions

Bible

Fifth-grade Bible is filled with many astounding stories about men and women from the Bible 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 quizzes (12)

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

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

Bible cont. p. 119

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

Bible cont.

Music *84 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 Truths *59 questions/answers*
- Increase Bible knowledge of basic doctrines: the Bible, God, sin, salvation, heaven, assurance of salvation, Satan
- 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

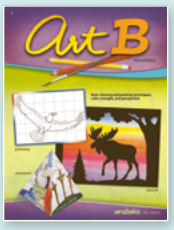
One important foundation of a nation's heritage is its music. *Songs We Enjoy 5* contains songs that reflect the spirit and strength of the American people. These traditional, patriotic, holiday, and fun songs have been delighting students for generations. The sing-along CD makes song time easy for the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

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

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)