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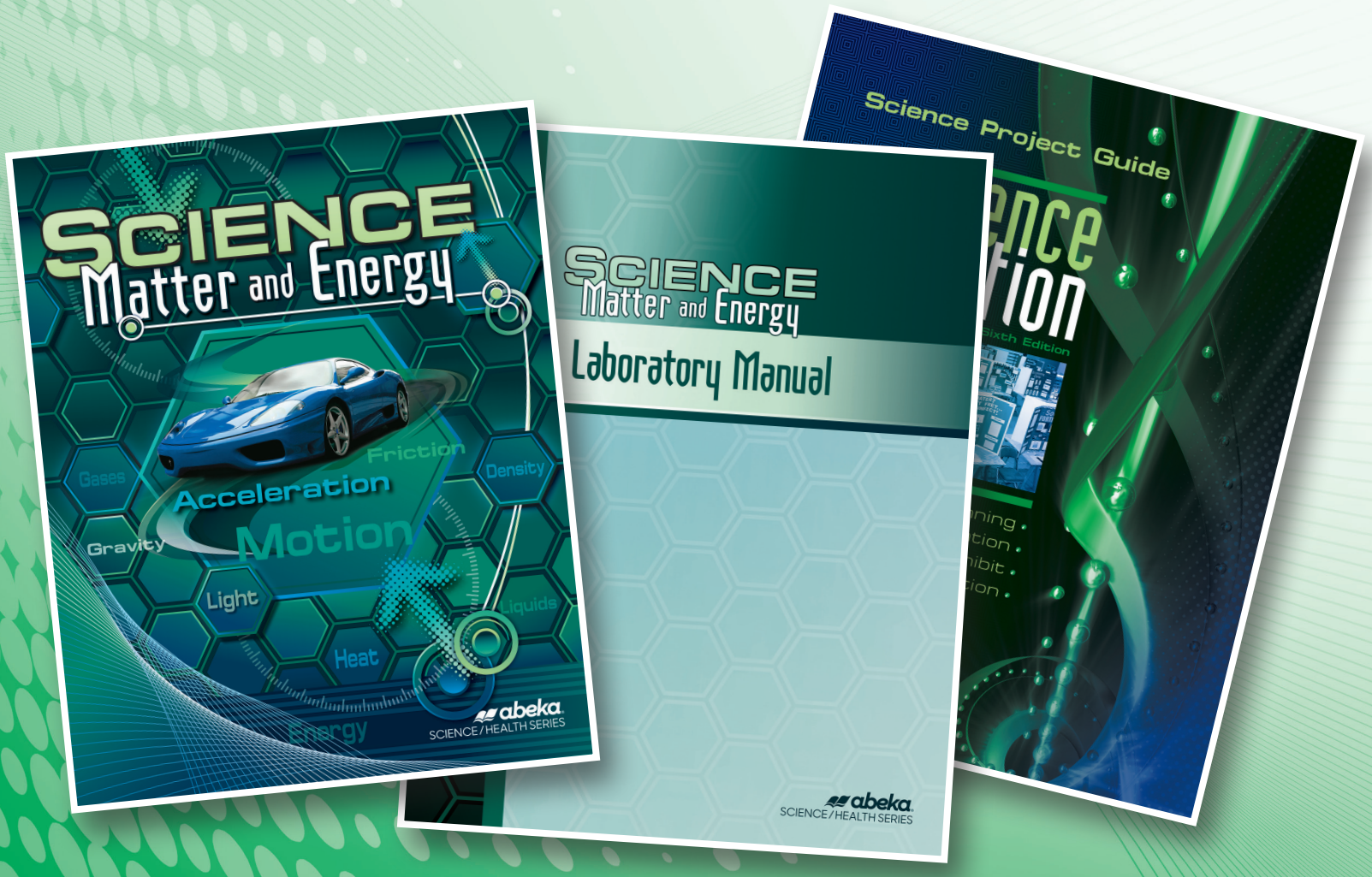
Homeschool

Physical Science

Video Manual



Homeschool

Physical Science

VIDEO MANUAL

Two Semesters

abeka
Pensacola, FL 32523-9100
an affiliate of PENSACOLA CHRISTIAN COLLEGE®

Textbooks & Materials

Student Materials

1. **Texts**
   115584 • ***Science: Matter and Energy*** *(SME)*
   115614 • ***Science: Matter and Energy Laboratory Manual*** *(LM)*
   175315 • ***Science in Action:*** **Science Project Guide** *(SIA)*
2. **Quizzes / Tests**
   115673 • ***Science: Matter and Energy*** **Quizzes**
   115657 • ***Science: Matter and Energy*** **Tests**
3. **Supplies** (may be purchased from a local vendor)
   - **Assignment notebook**
   - **Spiral notebook**

Current edition textbooks are required for students in the Abeka Academy accredited program.

Teacher Materials

1. **Texts**
   115606 • ***Science: Matter and Energy*** **Answer Key**
   115622 • ***Science: Matter and Energy Laboratory Manual*** **Teacher Edition**
2. **Quiz / Test Keys**
   115681 • ***Science: Matter and Energy*** **Teacher Quiz Key**
   115665 • ***Science: Matter and Energy*** **Teacher Test Key**
3. **Optional** (may be purchased from Abeka)
   115584 • ***Science: Matter and Energy***

Homeschool Physical Science **Video Manual**

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VIDEO TEACHER

Mr. Sean Vinaja

- Ed.S., Science Education

Introduction

Science: Matter and Energy is written from the Christian perspective with the conviction that God is the Creator and Sustainer of the universe. The Christian perspective gives the student several advantages: (1) greater insight as he studies the brilliant order and design of God's creation; (2) freedom to study creation without the hindrance of false philosophies such as evolution; and (3) an infallible source of truth—the Bible—with which to compare his observations.

An important part of this science course is the science project each student will complete. The video teacher and the text *Science in Action* will guide students from start to finish through this project.

Each video lesson is about 45 minutes in length and will best fit into a 50-minute class period. Five minutes is allotted for you to check homework. You will need to actively proctor all quizzes and tests and hear Science News Articles.

Establish accountability on the part of your student. Let him know that you expect him to listen, to learn, and to participate every day as if he were in the same classroom as the video students. Your student will receive the most benefit from these videos when he is involved in the class instead of simply watching it.

Note: Lessons have been recorded for only 170 days, although most school years are longer. The extra days are allotted for the scheduling of semester exams, field trips, or other special events of academic benefit. Time could also be allotted for standardized testing available through abeka.com (1-888-722-0044).

General Information

The course materials have been carefully outlined so that you, as the home teacher, can easily supervise your student's learning. Your main responsibilities are to ensure that the lessons are completed daily, to review material from the book for reinforcement, and to administer and supervise all quizzes and tests. In many ways, you are the key to your student's progress in his courses. Your concern and diligence in helping him complete his work according to proper procedures will let him know you are determined to help him succeed.

Note: See Appendix C for additional information about grading and recording.

Plan a definite time and an environment conducive to learning for your student to complete his work each day. The video lessons are most beneficial when he participates with the class in all oral work.

Equipment and Supplies

Before the first day of class, you should have the following items:

1. computer or DVD player
2. computer monitor or television
3. desk and chair
4. video manual
5. student textbooks
6. teacher materials
7. DVDs (if applicable)
8. additional supplies listed on p. T2

Subject Description

Responsibilities of the Home Teacher

1. **Check Equipment.** Check the equipment each day to make sure it is running properly. Be ready to start on the right lesson.
2. **Follow the Daily Guides.** Check the Daily Guides each day to determine specific responsibilities for that day.
3. **Check Homework.** Check daily at the beginning of class that your student has completed his homework. Spot-check the homework quickly (using *Science: Matter and Energy* Answer Key) to see whether he is completing the homework questions accurately. It is not necessary to grade the homework unless the Daily Guides instruct otherwise.
4. **Check Science Project Work.** The Daily Guides explain how to check each portion of the science project as it is due.
5. **Assign an Activity for Homework Check.** Each lesson of the Daily Guides has an activity for your student to do while you check the homework assignment.
6. **Give Quizzes and Tests.** You will be giving quizzes and tests as they occur in the lessons. Certain quizzes will be dictated by you (from Appendix A that is found in the back of this video manual), and others will be distributed (from *Science: Matter and Energy* Quizzes). Plan to remain in the room during any quiz or test. Grade quizzes for immediate feedback and grade tests for feedback within a day or two of the test. The tests are found in *Science: Matter and Energy* Tests. Further quizzing and testing information is provided in the Giving / Grading Quizzes and Tests section on p. T8 of this video manual.
7. **Check Science News Articles.** During second semester, students begin presentations of Science News Articles. These presentations are assigned to a few students in the video class each week. You will be responsible for assigning your student to complete one Science News Article for a grade in the final grading period. See p. T7 for detailed information about Science News Articles.
8. **Provide Additional Help as Needed.** Consistent participation with the video class in all oral work is essential to your student's success. Encourage your student to use the video class review, the textbook, and his class notes to be prepared for quizzes, tests, and exams. Do not use test questions or paraphrasing of test questions to guide his test preparation.

   Suggestions for reviewing with your student:

   - **Call out terms or definitions;** have your student give the corresponding facts.
   - **Read the rules or definitions** from the book, omitting a keyword or phrase; have your student supply the missing words.
   - **Have your student prepare** drill cards with a question on one side and the answer on the other. Use these to call out or show him the question; he gives the answer.
   - **Develop practice problems** or exercises that reinforce the course skills.

Class Schedule

The following is a typical class schedule for Physical Science with suggested times for participation.

1. **Pre-video Activities.** Check homework and give any quizzes before turning on the video for the day's lesson, unless the Daily Guides instruct otherwise.

   a. *Homework Check.* Begin each day with a five-minute homework check. The written homework usually consists of text questions from

Science: Matter and Energy (that students answer in complete sentences) and lab report sheets from the *Science: Matter and Energy* Lab Manual. You may wish to have homework completed in a spiral notebook so that it can be used as a study tool. While your student completes the homework check activity you assign from the Daily Guides, spot-check completed homework for accuracy. (Although he may not completely understand a question, he should attempt to answer every question.)

b. *Checking the Science Project.* The Daily Guides explain how to check each portion of the science project as it is due.

c. *Quizzes and Tests.* You will be giving quizzes and tests as they occur in the lessons. Quizzes are usually given after the homework check. The Daily Guides or video will indicate when to give the quiz. The Appendix quizzes and answers are located in Appendix A that is found in the back of this video manual. A grading scale is also included on p. A3 of Appendix A. The printed review quizzes are from *Science: Matter and Energy* Quizzes with answers and point values for each quiz in *Science: Matter and Energy* Teacher Quiz Key. Tests are from *Science: Matter and Energy* Tests with answers and point values for each test in Science: Matter and Energy Teacher Test Key. Further quizzing and testing information is provided in the Giving / Grading Quizzes and Tests section on p. T9 of this video manual.

2. **Video Activities.**

a. *Homework Presentation.* After these preliminary procedures, turn on the video for the homework presentation. Most of the lessons begin with a discussion of the homework questions and answers. Your student should follow the homework discussions carefully.

b. *Science Project Explanation.* The various steps in the science project will be explained and illustrated in class as your student begins to work on each step.

c. *Review and Lesson.* After homework has been discussed and necessary science project explanations given, the video teacher reviews important principles and presents new material. Your student should follow the lesson as he is instructed on video. It is vital that your student pay close attention, use his books, and follow the question-and-answer exchange given on video. Tell your student to answer the teacher's questions in his mind (or aloud) and to follow closely the answers given by the video students. Paying close attention to this portion of the video lesson will help your student to learn and retain the facts and principles he needs to know.

d. *Homework Assignment.* The video teacher gives the homework assignment at the conclusion of each lesson. Your student should copy this assignment into his assignment notebook. The homework assignment is listed at the end of each lesson in the Daily Guides. The homework assignment should require no more than 25–35 minutes to complete. If your student consistently takes longer than the recommended time, suggest efficient study methods for him.

Labs

Laboratory work is an important part of a physical science course. Since many video students may have limited scientific equipment available, all of the labs scheduled in Physical Science will be shown on video. Your student can also do the lab report sheets from the *Science: Matter and Energy* Lab Manual.

If you are able to perform lab work yourself, further details are given in the Laboratory Exercises section on p. T8 of this video manual.

Science Project

Each student works on an individual science project during the first semester and part of the second semester. The science project is introduced in les. 15. The following chart provides an overview of the project deadlines. Because of the many details necessary concerning this project, it is explained thoroughly in *Science in Action:* Science Project Guide.

Science Project Deadlines

Step	Assigned in lesson	Due in lesson
Topic Selection	15	26
First draft Background Paper	26	33
Final draft Background Paper	33	37
Problem Statement	33	39
First draft Investigation Plan	38	50
Revised draft Investigation Plan	50	55
Final draft Investigation Plan	55	61
Getting Started Worksheet	61	63
Journal (3 entries)	61	66
Journal (6 entries)	66	71
Journal (9 entries)	71	76
Journal (12 entries)	76	80
Journal (15 entries)	80	86
First draft Investigation Followup	86	93
Oral Presentation	86	102–114, 116
Final draft Investigation Followup	93	97

Science News Articles

An important part of science class is the discussion of Science News Articles. This periodic discussion will begin in les. 128. The purpose of Science News Articles is to expose students to various science magazines and web sites and to make them aware of current scientific discoveries. A few students in the video class are assigned each week to read a science news article from a scientific magazine, newspaper, or other periodical. Assign your student to complete one Science News Article for a quiz grade in the final grading period. (Some suggested science periodicals are listed on p. T8 of this manual.) You may wish to assign a special topic or article for your student to read. The student should write a one-page summary of his article and prepare to present a 1–3 minute oral report. He may use his summary or a note card for the presentation. Bibliographical information for the article needs to be at the top of the paper, directly beneath the heading. As your student prepares his reports, he should try to detect evolutionary ideas in the articles and refute them.

During homework check in which your student's article is due, make sure he has completed the written summary of his article. When directed on video, have your student present his article. After the presentation, briefly discuss the article, asking the student some pertinent questions. Be alert to evolutionary ideas presented in the article. Collect the article summary after the report is given.

Give one quiz grade based on presentation and ability to answer questions. Although the written summaries are not graded separately, the overall quality of the summary should influence the grade given for the oral presentations. The following guidelines are provided to help you grade your student; explain these guidelines to your student so that he knows what you expect.

I. **Content** (70 points)
   A. Accuracy and clarity of reporting (20 points)
   B. Significance of the news article in light of modern scientific advancements (20 points)
   C. Analysis of the content as it relates to the Christian perspective of science (30 points)

II. **Delivery** (30 points)
   A. Posture (5 points)
   B. Eye contact (5 points)
   C. Enthusiasm, smoothness, and expression (5 points)
   D. Poise (including student's approach to and from the front of the room) (5 points)
   E. Preparation for oral delivery (5 points)
   F. Gestures and mannerisms (not distracting) (5 points)

If the oral presentation is under time (1–3 minutes), the student should lose 5 points.

Suggested Science and Health Periodicals

Answers (Answers in Genesis)
Coach and Athletic Director
Consumer Reports
Creation (Creation Ministries International)
Creation Research Society Quarterly
Florida Wildlife
Journal of Creation (Creation Ministries International)
MacWorld
Mayo Clinic Health Letter
National Geographic Kids
National Wildlife
Natural History
Nutrition Action Healthletter
Popular Mechanics
Popular Science
Science
Science Digest
Science World
Scientific American
Sky and Telescope
Sky Calendar

Laboratory Exercises

The *Lab Manual* provides laboratory exercises for *Science: Matter and Energy*. The video teacher conducts all labs on video. Since many states have specific laboratory requirements for science courses, you may need to conduct a certain number of labs yourself.

Lab report sheets from the *Lab Manual* are assigned after each lab and can be checked during the homework check on the day they are due. You may wish to collect the lab report sheets to check your student's understanding of the concepts taught during the lab. Look for neatness and completeness based on the part of each lab report sheet that your student is required to complete.

Some labs may not fill the entire class time. Have your student begin homework in the remaining time.

If you are conducting a lab that is on video, you may wish to have your student do the lab along with the video. Often, seeing the procedure on the video helps the student as he conducts it on his own.

Giving/Grading Quizzes and Tests

The following procedures are used by the video teacher in the classroom. Adapt these procedures to fit your situation while providing appropriate supervision in the handling of graded items.

Students using digital assessments will complete all quizzes, tests, and exams online. See p. C5 in the back of this manual for additional information.

Procedure for Giving Appendix Quizzes

Appendix quizzes, unannounced quizzes over the reading homework, are given before the video is turned on.

1. Students clear their desks and take out two clean sheets of paper, a pen, and a pencil. Students will use one clean sheet of paper for the quiz and one for a cover sheet. Students should take quizzes in pen and grade them in pencil.
2. After each student writes his name at the top of his paper, dictate the quiz, reading each question twice. (The quizzes and answers are located in Appendix A in the back of this video manual.) Students should move their cover sheet down to cover their answers as they take the quiz.
3. The quiz should take approximately 5 minutes.

Procedure for Giving Printed Review Quizzes

1. Students clear their desks and take out one clean sheet of paper for a cover sheet, a pen, and a pencil. Students should take quizzes in pen and grade them in pencil.
2. Distribute the quizzes. (Quizzes are located in *Science: Matter and Energy* Quizzes.) Each student should write his name at the top of his quiz before beginning the quiz. Students should move their coversheets down to cover their answers as they take the quiz.
3. The quiz should take approximately 10 minutes.

Procedure for Grading All Quizzes

1. Instruct students to put their pens away (off their desks) and to grade in pencil.
2. Tell students how you want them to exchange papers. If you have a large class, vary the pattern from day to day (pass them forward one seat, back one seat, across, to the left, etc.).
3. Have each student sign his name (in pencil) on the paper he grades.
4. Give instructions for grading—how many points to deduct for each wrong answer and how to mark the papers. (Having students grade the papers in a uniform manner saves time when you go through the papers later.) Answers and point values are given in *Science: Matter and Energy* Teacher Quiz Key or on p. A3 of Appendix A. On all graded items, subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Give correct answers.
6. Students figure the final grade by subtracting from 100 the total number of points missed. The grade should be written in the space provided.
7. If a student has a question about the paper he is grading, have him place a question mark both by the number in question and by the grade at the top.
8. Instruct students to return papers to the owners, who should check them briefly and pass them to the front.
9. Go through the quizzes later, checking for question marks and misspelled answers. Record the grades.

Note: See Appendix C for additional information about grading and recording.

Procedure for Giving/Grading Tests

1. Students clear their desks (except for one clean sheet of paper for a cover sheet) and two pens.
2. Distribute the tests. (Tests are located in *Science: Matter and Energy* Tests.) Each student should write his name at the top of his test.
3. Explain any special directions. Students should finish during the time allotted. Also, tell the students what is to be done when they finish the test (where to turn in their tests, what to study, etc.).
4. Students take the test in pen, writing the answers directly on the test paper. Have students use the clean sheet of paper as a cover sheet. Students should move their coversheets down to cover their answers as they take the test.
5. Always provide adequate supervision until the tests are finished.
6. Check that all tests have been collected. Grade these tests yourself. Do not grade tests in class. Answers and point values are given in *Science: Matter and Energy* Teacher Test Key. Subtract 1 point for each misspelled answer; do not subtract more than 5 total points. It is best not to record grades in your grade book until after going over the test in class.
7. Have all tests graded and ready to return in the next lesson.

Note: See Appendix C for additional information about grading and recording.

Procedure for Going over Graded Tests

1. Students clear their desks of everything except a pencil. Distribute graded tests.
2. To go over a test, ask if a student has all answers correct in the first section. Choose a student to read the answers in that section. Continue this procedure until all answers have been given. Answer any questions students may have about a particular test question.
3. Watch students carefully while you are going over a test. They should not have any pens out while they have graded tests.
4. If students find a question that has been graded incorrectly, they should write (in pencil) the number of the incorrectly graded question and put a question mark at the top of the first page.
5. Collect tests, check any question marks, and record grades.

Averaging Grades

Grades should be averaged at the end of each quarter (nine weeks) following these procedures.

1. Average the **quiz grades**, including the Background Paper, Investigation Plan, and Science News Articles. This average will count as **one-third** of the quarter average.
2. Average the **test grades** for the quarter, except for the final test of the quarter. This average will count as **one-third** of the quarter average. In the third quarter, the **Science Project** will count as a test grade.
3. The final **one-third** of the quarter average is the **Quarter**, **Semester**, or **Final Exam**.
4. The **semester average** is calculated by averaging two quarter averages. For a first semester average, the first and second quarter averages are averaged; for a second semester average, the third and fourth quarter averages are averaged.

First Quarter Average

⅓ Quiz average (including Background Paper)

⅓ Test average

⅓ Test 3 (Cumulative Quarter Exam)

Example:

Quiz average:	96
Test average:	94
Cumulative exam:	+ 92
Total:	282 ÷ 3 = 94

Second Quarter Average

⅓ Quiz average (including Investigation Plan)

⅓ Test average

⅓ Test 6 (Cumulative Semester Exam)

Example:

Quiz average:	90
Test average:	93
Cumulative exam:	+ 93
Total:	276 ÷ 3 = 92

First Semester Average

First quarter average

Second quarter average

Example:

First quarter average:	94
Second quarter average:	+ 92
Total:	186 ÷ 2 = 93 (Semester average)

Third Quarter Average

⅓ Quiz average

⅓ Test average (including Science Project)

⅓ Test 9 (Cumulative Quarter Exam)

Example:

Quiz average:	93
Test average:	94
Cumulative exam:	+ 95
Total:	282 ÷ 3 = 94

Fourth Quarter Average

⅓ Quiz average

⅓ Test average (including Science News Articles)

⅓ Test 12 (Cumulative Final Exam)

Example:

Quiz average:	90
Test average:	95
Cumulative exam:	+ 97
Total:	282 ÷ 3 = 94

Second Semester Average

Third quarter average

Fourth quarter average

Example:

Third quarter average:	94
Fourth quarter average:	+ 94
Total:	188 ÷ 2 = 94 (Semester average)

Daily Guides

Before you begin . . .

The introductory material of this manual along with the Daily Guides provides the assistance needed for a successful school year. The following reminders will help you get off to a great start.

Students' daily supplies:

- current editions of Abeka textbooks required for this course (see p. T2)
- pens
- pencils
- notebook paper
- assignment notebook
- spiral notebook (for taking class notes)

Daily Guides information:

- Pages Taught — what material is covered daily
- Materials Needed — what things to have ready daily
- Teacher Instructions — what to do daily

Helpful tips:

- Explain your daily class procedures.
- View the first few lessons and other lessons as noted in the Daily Guides to familiarize yourself with the video teacher's procedures.
- Remember that your own quiet, orderly routines will be an important part of your learning environment.
- If particular procedures or activities used in the video classroom are not ideal for your unique situation, you should feel free to adjust to your needs. These may or may not be specifically mentioned in the Daily Guides.
- Mastery of key concepts as well as successful comprehension and retention naturally result from training your students to mentally participate and respond with the video class during reviews, drills, and questions.

We trust that these Daily Guides will be a great help as you begin an exciting new school year!

Lesson 1

Pages Taught:

Science: Matter and Energy (SME) pp. 1–3

Materials Needed:

Science: Matter and Energy (SME) (optional—to show students)
Science: Matter and Energy Laboratory Manual (LM) (optional—to show students)
Science in Action: Science Project Guide (SIA) (optional—to show students)

Teacher Instructions:

1. Prepare a seating chart. Assign seats before starting the video.
2. Explain school procedures / rules for your classroom.
3. Check to see that each student has a copy of *Science: Matter and Energy (SME)* and *Lab Manual (LM).*
4. Turn on the video. (You may wish to watch this first video lesson with the class to become familiar with classroom procedures.)
5. If time remains after each video lesson, allow students to begin their homework.

Homework:

Read *Science: Matter and Energy (SME)* pp. 3–6 up to Causality. Answer p. 4, questions 5–7 and pp. 6–7, questions 1–3.

Lesson 2

Pages Taught:

Science: Matter and Energy (SME) pp. 3–6

Materials Needed:

Science: Matter and Energy (SME) Answer Key (needed daily)

Teacher Instructions:

1. Homework Check. Instruct students to have homework on their desks for you to check when class begins. (Refer to the guidelines for Checking Homework in the front of this video manual.) Check homework for completeness. It is not necessary for you to grade the homework, but check that the answers are neat and in complete sentences. The video teacher goes over the answers on video. Occasionally spot-check your students' answers for accuracy, using the Answer Key.
   (During Homework [HW] check, students answer p. 7, questions 4–5 and Think.)
2. Turn on the video.

Homework:

Read *Science: Matter and Energy (SME)* pp. 6–8. Answer pp. 8–9, questions 1–4.

Lesson 3

Pages Taught:

Science: Matter and Energy (SME) pp. 6–8

Teacher Instructions:

1. Homework Check. Instruct students to have homework on their desks for you to check when class begins. (Refer to the guidelines for Checking Homework in the front of this video manual.) Check homework for completeness. It is not necessary for you to grade the homework, but check that the answers are neat and in complete sentences. The video teacher goes over the answers on video. Occasionally spot-check your students' answers for accuracy, using the Answer Key. Follow this procedure for the remainder of the year.
   (During Homework [HW] check, students answer p. 9, Chapter 1 Review, Define 7 and Explain 2.)
2. Turn on the video.

Homework:

Read *Science: Matter and Energy (SME)* pp. 10–14 up to Significant Figures. Answer p. 17, questions 1–3.

Note: Beginning in lesson (les.) 4, random "pop" reading quizzes will be given over homework reading. These will be unannounced to keep students accountable for reading homework.

Lesson 4

Pages Taught:

Science: Matter and Energy (SME) pp. 10–14

Materials Needed:

Appendix Quiz A and Answers (located in Appendix A in the back of this video manual)

Teacher Instructions:

1. Homework Check. Check homework for completeness. Spot-check for accuracy, using the Answer Key.
   (During Homework [HW] check, students answer p. 30, Chapter 2 Review, Define 2.)
2. Students clear their desks and take out quiz materials (two clean sheets of paper, a pen, and a pencil) before quiz is dictated.
3. Students will take **Appendix Quiz A**. You will be dictating all Appendix quizzes. Refer to the Giving/Grading Quizzes and Tests section in the front of this video manual for detailed instructions for giving/grading quizzes.
4. Collect quizzes and record grades. For all Appendix quizzes, use the following grading scale (also found on p. A3 of Appendix A):

Number Missed	Score
0	100
1	90
2	80
3	70
4	60
5	0

   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:

Read *Science: Matter and Energy (SME)* pp. 14–15 up to Scientific Notation. Answer p. 15, questions 1, 3, 6, 7 and p. 17, question 4. Read *Lab Manual (LM)* Lab 1.

Note: Lab 1 will be conducted on video in the next lesson. Refer to the guidelines for labs in the front of this video manual. You may wish to view the video to see the video teacher's introduction. See the *Lab Manual (LM)* for details of the lab.

Lesson 5

Pages Taught:

SME pp. 14–15

Materials Needed:

Quiz 1 (one for each student; located in *Science: Matter and Energy [SME]* Quizzes)
Teacher Key for Quiz 1 (from *Science: Matter and Energy [SME]* Teacher Quiz Key)
Lab Manual (LM) Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During Homework [HW] check, students review Lab Manual [LM] *Lab 1 procedures.)*
2. Students clear their desks and take out quiz materials (one clean sheet of paper for a cover sheet, a pen, and a pencil) before quizzes are distributed.
3. Students will take **Quiz 1**. You will be giving all quizzes. Refer to the Giving/Grading Quizzes and Tests section in the front of this video manual for detailed instructions for giving/grading quizzes.
4. Collect quizzes and record grades. (See the *Science: Matter and Energy [SME]* Teacher Quiz Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video. The video teacher will conduct **Lab 1** on video. Students fill in *Lab Manual (LM)* p. 3, Lab Report Sheet 1 as information is given on video and answer the questions at the bottom of the page.

Homework:

Read *SME* pp. 15–20 up to Measuring volume. Answer p. 17, Application questions 2, 7; p. 17, question 5; and p. 25, question 1. Complete *Lab Manual (LM)* Lab Report Sheet 1.

Lesson 6

Pages Taught:
SME pp. 15–20

Materials Needed:
Lab Manual (LM) Teacher Edition

Teacher Instructions:
1. Homework Check. Check/Collect *Lab Manual (LM)* Lab Report Sheet 1. Answers may vary based on observations.
   (During Homework [HW] check, students answer p. 25, questions 2–3.)
2. Turn on the video.

Homework:
Read *SME* pp. 20–24. Answer p. 24, questions 1, 3, 5 and p. 25, questions 4–5. Begin studying Chapters (Ch.) 1–2 for Test 1 in lesson (les.) 11.

Lesson 7

Pages Taught:
SME pp. 20–24

Teacher Instructions:
1. Homework Check.
   (During Homework [HW] check, students answer p. 30, Explain 2.)
2. Turn on the video.

Homework:
Read *SME* pp. 25–27 up to Density. Answer p. 25, A Closer Look: Converting between Units of Measurement, questions 1, 4; p. 25, question 6; and p. 29, question 1. Continue studying Chapters (Ch.) 1–2 for Test 1 in lesson (les.) 11.

Lesson 8

Pages Taught:
SME pp. 25–27

Materials Needed:
Quiz 2 (one for each student; located in *SME* Quizzes)
Teacher Key for Quiz 2 (from *SME* Teacher Quiz Key)

Teacher Instructions:
1. Homework Check.
   (During Homework [HW] check, students answer p. 30, Explain 3.)
2. Students clear their desks and take out quiz materials (one clean sheet of paper for a cover sheet, a pen, and a pencil) before quizzes are distributed.
3. Students will take **Quiz 2**. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading quizzes.
4. Collect quizzes and record grades. (See the *SME* Teacher Quiz Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:
Read *SME* pp. 27–29. Answer p. 29, questions 2–3 and Think. Read *LM* Lab 2. Continue studying Chapters (Ch.) 1–2 for Test 1 in lesson (les.) 11.

Lesson 9

Pages Taught:
SME pp. 27–29

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During Homework [HW] check, students answer p. 30, Apply 4.)
2. Turn on the video. **Lab 2** is conducted in this lesson. Have students watch/perform this lab.

Homework:
Answer *SME* p. 30, Apply 1–2. Complete *LM* Lab Report Sheet 2. Continue studying Chapters (Ch.) 1–2 for Test 1 in lesson (les.) 11.

Lesson 10

Materials Needed:

Quiz 3 (one for each student; located in *SME* Quizzes)
Teacher Key for Quiz 3 (from *SME* Teacher Quiz Key)
LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check/Collect *LM* Lab Report Sheet 2.
   (During Homework [HW] check, students answer p. 9, Chapter 1 Review, Identify 4 and p. 30, Explain 3.)
2. Students clear their desks and take out quiz materials (one clean sheet of paper for a cover sheet, a pen, and a pencil) before quizzes are distributed.
3. Students will take **Quiz 3**. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading quizzes.
4. Collect quizzes and record grades. (See the *SME* Teacher Quiz Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:

Study *SME* Chapters (Ch.) 1–2 for Test 1 in the next lesson.

Lesson 11

Materials Needed:

Test 1 (one for each student; located in *SME* Tests)
Teacher Key for Test 1 (from *SME* Teacher Test Key)

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 1** over Chapters (Ch.) 1–2. You will be giving all tests. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading tests.
6. Collect and grade tests. (See the *SME* Teacher Test Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
7. Plan to return graded Test 1 in lesson (les.) 12.

Homework:

Read *SME* pp. 31–34 up to Solids. Answer p. 34, questions 1–5.

Lesson 12

Pages Taught:

SME pp. 31–34

Materials Needed:

Graded Test 1 (return to students)
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During Homework [HW] check, students answer p. 34, questions 6–8.)
2. Hand back and go over graded Test 1. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for going over graded tests. Collect tests and record grades.
3. Turn on the video.

Homework:

Read *SME* pp. 34–36 up to Types of Deformation. Answer p. 37, questions 1–3. Read *LM* Lab 3.

Lesson 13

Pages Taught:

SME pp. 34–36

Materials Needed:

Appendix Quiz B and Answers (located in Appendix A in the back of this manual)
LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 69, Explain 2.)
2. Students clear their desks and take out quiz materials (two clean sheets of paper, a pen, and a pencil) before quiz is dictated.
3. Students will take **Appendix Quiz B**. Refer to the Giving / Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving / grading quizzes.
4. Collect quizzes and record grades.
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video. **Lab 3** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 3. Read *SME* pp. 36–39 up to Pressure in Liquids. Answer p. 37, questions 4–5 and Think.

Lesson 14

Pages Taught:

SME pp. 36–39

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Lab Report Sheet 3.
   (During HW check, students answer p. 44, questions 1–3.)
2. Turn on the video.

Homework:

Read *SME* pp. 39–42 up to Hydraulics. Answer p. 40, Application and p. 44, questions 4–5. Bring *Science in Action (SIA)*.

Lesson 15

Pages Taught:

SME pp. 39–42

Materials Needed:

Science in Action (SIA)

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 69, Identify 7.)
2. Turn on the video.
3. Science Project Explanation: The **science project** is introduced in this lesson. Plan to watch this portion of the video. Choosing a science project topic is discussed near the beginning of the video. Refer to *Science in Action (SIA)* for more detailed information regarding the science project.

Homework:

Read *SME* pp. 42–45 up to Gases. Answer p. 44, Application question 2 and p. 44, question 6 and Think. Read *LM* Lab 4. Science project Topic Selection is due in lesson (les.) 26.

Lesson 16

Pages Taught:

SME pp. 42–45

Materials Needed:

Quiz 4 (one for each student; located in *SME* Quizzes)
Teacher Key for Quiz 4 (from *SME* Teacher Quiz Key)
LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 69, Apply 1.)
2. Students clear their desks and take out quiz materials (one clean sheet of paper for a cover sheet, a pen, and a pencil) before quizzes are distributed.
3. Students will take **Quiz 4**. Refer to the Giving / Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving / grading quizzes.

4. Collect quizzes and record grades. (See the *SME* Teacher Quiz Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video. **Lab 4** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 4. Read *SME* pp. 45–48 up to Gas Laws and the Kinetic Theory. Answer p. 46, Application question 1; p. 48, Application question 3; and p. 49, questions 1–4.

Lesson 17

Pages Taught:
SME pp. 45–48

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 4.
   (During HW check, students answer p. 68, Chapter 3 Review, Define 11.)
2. Turn on the video.

Homework:
Read *SME* pp. 48–51 up to Altimeters. Answer p. 55, questions 1–3 and Think 1–2. Read *LM* Lab 5. Science project Topic Selection is due in lesson (les.) 26.

Lesson 18

Pages Taught:
SME pp. 48–51

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 69, Explain 6.)
2. Turn on the video. **Lab 5** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 5. Read *SME* pp. 51–55 up to Fluid Displacement. Answer p. 55, questions 5–6.

Lesson 19

Pages Taught:
SME pp. 51–55

Materials Needed:
Quiz 5 (one for each student; located in *SME* Quizzes)
Teacher Key for Quiz 5 (from *SME* Teacher Quiz Key)
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 5.
   (During HW check, students answer p. 55, Think 3.)
2. Students clear their desks and take out quiz materials (one clean sheet of paper for a cover sheet, a pen, and a pencil) before quizzes are distributed.
3. Students will take **Quiz 5**. Refer to the Giving / Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving / grading quizzes. Follow this procedure for the remainder of the year.
4. Collect quizzes and record grades. (See the *SME* Teacher Quiz Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:
Read *SME* pp. 55–58 up to Floating steel. Answer p. 57, question 1 and p. 61, questions 1–2 and Think 1. Read *LM* Lab 6. Science project Topic Selection is due in lesson (les.) 26.

Lesson 20

Pages Taught:
SME pp. 55–58

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 69, Apply 2.)
2. Turn on the video. **Lab 6** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 6. Read *SME* pp. 58–61 up to Bernoulli's Principle. Answer p. 61, questions 3–6 and Think 2. Read *LM* Lab 7. Begin studying Chapter (Ch.) 3 for Test 2 in lesson (les.) 25.

Lesson 21

Pages Taught:
SME pp. 58–61

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 6.
   (During HW check, students answer p. 69, Explain 7.)
2. Turn on the video. **Lab 7** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 7. Read *SME* pp. 61–65 up to Streamlining. Answer p. 68, Section Review 3.7, questions 1–3 and Think 1. Science project Topic Selection is due in lesson (les.) 26. Continue studying Chapter (Ch.) 3 for Test 2 in les. 25.

Lesson 22

Pages Taught:
SME pp. 61–65

Materials Needed:
Appendix Quiz C and Answers (located in Appendix A in the back of this manual)
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 7.
   (During HW check, students answer p. 69, Explain 8.)
2. Students clear their desks and take out quiz materials (two clean sheets of paper, a pen, and a pencil) before quiz is dictated.
3. Students will take **Appendix Quiz C**. Refer to the Giving / Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving / grading quizzes.
4. Collect quizzes and record grades.
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:
Read *SME* pp. 65–68. Answer p. 68, Section Review 3.7, questions 4–5 and Think 2–3. Read *LM* Lab 8. Continue studying Chapter (Ch.) 3 for Test 2 in les. 25.

Lesson 23

Pages Taught:
SME pp. 65–68

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 68, Chapter 3 Review, Define 17–19.)
2. Turn on the video. **Lab 8** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 8. Answer *SME* p. 68, Chapter 3 Review, Define 3, 8 and Identify 4–6. Continue studying Chapter (Ch.) 3 for Test 2 in les. 25. Science project Topic Selection is due in les. 26.

Lesson 24

Materials Needed:

Quiz 6
Teacher Key
LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check/Collect *LM* Lab Report Sheet 8.
   (During HW check, students answer p. 68, Chapter 3 Review, Define 16.)
2. Give, grade, and collect **Quiz 6**.
3. Turn on the video.

Homework:

Study Ch. 3 for Test 2 in the next lesson.

Lesson 25

Materials Needed:

Test 2 (one for each student; located in *SME* Tests)
Teacher Key for Test 2 (from *SME* Teacher Test Key)

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 2** over Ch. 3. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading tests. Follow this procedure for the remainder of the year.
6. Collect and grade tests. (See the *SME* Teacher Test Key for answers and point values; subtract from 100 the total number of points missed.)
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
7. Plan to return graded Test 2 in les. 26.

Homework:

Read *SME* pp. 70–72 up to Forms of Kinetic Energy. Answer p. 72, questions 1–6 and Think. Bring *Science in Action (SIA)*. Science project Topic Selection is due in the next lesson; complete Topic Selection Worksheet.

Lesson 26

Pages Taught:

SME pp. 70–72

Materials Needed:

Graded Test 2 (return to students)
Teacher Key
Science in Action (SIA)

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 79, Define 2–3.)
2. Science Project Check: Check Topic Selection and approve project topic ideas.
3. Hand back and go over graded Test 2. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for going over graded tests. Follow this procedure for the remainder of the year. Collect tests and record grades.
4. Turn on the video.
5. Science Project Explanation: The video teacher will introduce the Background Paper in this lesson. First draft of the Background paper is due in les. 33.

Homework:

Read *SME* pp. 72–75 up to Fundamental Forces and Potential Energy. Answer p. 75, questions 1–6. First draft of the Background Paper is due in les. 33.

Lesson 27

Pages Taught:
SME pp. 72–75

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 74, question 3.)
2. Turn on the video.

Homework:
Read *SME* pp. 75–78. Answer p. 78, questions 1–5.

Lesson 28

Pages Taught:
SME pp. 75–78

Materials Needed:
Appendix Quiz D and Answers (located in Appendix A in the back of this manual)

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 79, Explain 5.)
2. Students clear their desks and take out quiz materials (two clean sheets of paper, a pen, and a pencil) before quiz is dictated.
3. Students will take **Appendix Quiz D**. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading quizzes.
4. Collect quizzes and record grades.
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
5. Turn on the video.

Homework:
Read *SME* pp. 80–83 up to Measuring Thermal Energy. Answer p. 85, questions 1–7 and Think. First draft of the Background Paper is due in les. 33.

Lesson 29

Pages Taught:
SME pp. 80–83

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Identify 3 and Explain 2.)
2. Turn on the video.

Homework:
Read *SME* pp. 83–85. Answer p. 85, Application questions 3–4 and p. 85, questions 8–9.

Lesson 30

Pages Taught:
SME pp. 83–85

Materials Needed:
Quiz 7
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Define 1–2.)
2. Give, grade, and collect **Quiz 7**.
3. Turn on the video.

Homework:
Read *SME* pp. 86–90 up to Convection. Answer p. 95, questions 1–4 and Think 1. Read *LM* Lab 9. First draft of the Background Paper is due in les. 33.

Lesson 31

Pages Taught:
SME pp. 86–90

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Identify 5 and Explain 3.)

2. Turn on the video. **Lab 9** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 9. Read *SME* pp. 90–94 up to Heating homes. Answer p. 95, questions 5–7 and Think 2.

Lesson 32

Pages Taught:

SME pp. 90–94

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Lab Report Sheet 9.
   (During HW check, students answer p. 111, Chapter 5 Review, Explain 5.)
2. Turn on the video.

Homework:

Read *SME* p. 94. Read *LM* Lab 10. First draft of the Background Paper is due in the next lesson. Bring *Science in Action (SIA)* to the next lesson.

Lesson 33

Pages Taught:

SME p. 94

Materials Needed:

Quiz 8
Teacher Key
LM Teacher Edition
Science in Action (SIA)

Teacher Instructions:

1. Homework Check.
   (During HW check, students read Science in Action [SIA] *pp. 25–26.)*
2. Science Project Check: Check first draft of the Background Paper and give suggestions. Follow the guidelines in *Science in Action (SIA).*
3. Give, grade, and collect **Quiz 8**.
4. Science Project Explanation: At the beginning of the video, the teacher explains the final draft of the Background Paper, due in les. 37. The teacher also introduces the Investigation Plan and explains how to choose a problem or question. The Problem Selection Worksheet (from *SIA*) outlining the problem statement is due in les. 39.
5. Turn on the video. **Lab 10** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 10. Read *SME* pp. 95–99 up to Heat and Changes of State. Answer p. 99, questions 1–4 and Think. Final draft of the Background Paper is due in les. 37. Problem Statement is due in les. 39.

Lesson 34

Pages Taught:

SME pp. 95–99

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Lab Report Sheet 10.
   (During HW check, students answer p. 111, Chapter 5 Review, Explain 7.)
2. Turn on the video.

Homework:

Read *SME* pp. 99–102 up to Boiling and pressure. Answer p. 105, question 1 and p. 110, questions 1–5.

Lesson 35

Pages Taught:

SME pp. 99–102

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Identify 7.)
2. Turn on the video.

Homework:

Read *SME* pp. 102–104. Answer pp. 110–111, questions 6 and Think 1. Final draft of the Background Paper is due in les. 37. Problem Statement is due in les. 39.

Lesson 36

Pages Taught:

SME pp. 102–104

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Explain 8.)
2. Turn on the video.

Homework:

Read *SME* pp. 105–107. Answer p. 110, question 7 and p. 111, Chapter 5 Review, Identify 8. Final draft of the Background Paper is due in the next lesson; attach Background Grade Form. Bring *SIA* to the next lesson.

Lesson 37

Pages Taught:

SME pp. 105–107

Materials Needed:

Quiz 9
Teacher Key
SIA

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Explain 6.)
2. Science Project Check: Collect and grade the **Background Paper**. (Refer to *SIA* for suggested grading procedures.) Attach the Background Grade Form from *SIA*.
3. Plan to return graded Background Papers in les. 39.
4. Give, grade, and collect **Quiz 9**.
5. Turn on the video.

Homework:

Read *SME* p. 108 up to Refrigerators and air conditioners. Answer p. 110, question 8. Read *LM* Lab 11. Problem Statement is due in les. 39. Begin studying Ch. 1–5 for Test 3 (Nine-Weeks Exam) in les. 42. Bring *SIA* to the next lesson.

Lesson 38

Pages Taught:

SME p. 108

Materials Needed:

LM Teacher Edition
SIA

Teacher Instructions:

1. Homework Check.
   (During HW check, students read SIA *pp. 29–30.)*
2. Science Project Explanation: At the beginning of the video, the teacher explains how to prepare the first draft of the Investigation Plan. You may wish to watch this portion of the video. First draft of the Investigation Plan is due in les. 50.
3. Turn on the video. **Lab 11** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 11. Read *SME* pp. 108–110. Answer p. 111, Section Review 5.4, questions 9–10 and Think 2. Continue studying Ch. 1–5 for Test 3 (Nine-Weeks Exam) in les. 42. Problem Selection Worksheet (from *SIA*) is due in the next lesson. First draft of the Investigation Plan is due in les. 50. Bring *SIA* to the next lesson.

Lesson 39

Pages Taught:

SME pp. 108–110

Materials Needed:

Appendix Quiz E and Answers (located in Appendix A in the back of this manual)
Graded Background Papers (return to students)
LM Teacher Edition
SIA

Teacher Instructions:

1. Homework Check. Check/Collect *LM* Lab Report Sheet 11.
   (During HW check, students answer p. 111, Chapter 5 Review, Identify 10.)
2. Return graded Background Papers.
3. Science Project Check: Check Problem Selection Worksheet. Follow the guidelines in *SIA*. If a student's problem is unacceptable for some reason, have him submit another problem (due in the next lesson).
4. Students clear their desks and take out quiz materials (two clean sheets of paper, a pen, and a pencil) before quiz is dictated.
5. Students will take **Appendix Quiz E**. Refer to the Giving/Grading Quizzes and Tests section in the front of this manual for detailed instructions for giving/grading quizzes. Follow this procedure for the remainder of the year.
6. Collect quizzes and record grades.
   Note: Subtract 1 point for each misspelled answer; do not subtract more than 5 total points.
7. Turn on the video.
8. Science Project: If time permits, discuss several of the students' problem statements and make specific suggestions for writing their Investigation Plans. The first draft of the Investigation Plan is due in les. 50.

Homework:

Answer *SME* p. 9, Chapter 1 Review, Define 4–6; p. 30, Define 1–2 and Explain 2; p. 68, Chapter 3 Review, Define 3, 11, 13, 15–16. Continue studying Ch. 1–5 for Test 3 (Nine-Weeks Exam) in les. 42.

Lesson 40

Materials Needed:

Quiz 10
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 68, Chapter 3 Review, Identify 4–6.)
2. Give, grade, and collect **Quiz 10**.
3. Turn on the video.

Homework:

Answer *SME* p. 79, Define 4–7 and Identify 4; p. 111, Chapter 5 Review, Define 7, 11 and Identify 6, 8. Continue studying Ch. 1–5 for Test 3 (Nine-Weeks Exam) in les. 42. First draft of the Investigation Plan is due in les. 50.

Lesson 41

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 111, Chapter 5 Review, Explain 6.)
2. Turn on the video.

Homework:

Study Ch. 1–5 for Test 3 (Nine-Weeks Exam) in the next lesson.

Lesson 42

Materials Needed:

Test 3 (Nine-Weeks Exam)
Teacher Key

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 3** (Nine-Weeks Exam) over Ch. 1–5. Collect and grade tests.
6. Plan to return graded Test 3 in les. 43.

Homework:

Read *SME* pp. 113–116 up to Inside the Atom. Answer p. 116, questions 1–4 and Think. Read *LM* Lab 12. First draft of the Investigation Plan is due in les. 50.

Lesson 43

Pages Taught:

SME pp. 113–116

Materials Needed:

Graded Test 3 (return to students)
Teacher Key
LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Identify 2 and Explain 1.)
2. Hand back and go over graded Test 3. Collect tests and record grades.
3. Turn on the video. **Lab 12** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Memorize bolded elements on pp. 116–117 for a quiz in les. 47. Read *LM* Lab 13.

Lesson 44

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. There is no written homework to check.
2. Turn on the video. **Lab 13** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 13. Read *SME* pp. 116–119 up to Atomic Measurements. Answer p. 123, questions 1–3. The first draft of the Investigation Plan is due in les. 50.

Lesson 45

Pages Taught:

SME pp. 116–119

Materials Needed:

Appendix Quiz F and Answers
LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Lab Report Sheet 13.
   (During HW check, students answer p. 123, Think.)
2. Give, grade, and collect **Appendix Quiz F**.
3. Turn on the video.

Homework:

Read *SME* pp. 119–122 up to Quantum Numbers. Answer p. 123, questions 4–6.

Lesson 46

Pages Taught:

SME pp. 119–122

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Identify 4 and Explain 3.)
2. Turn on the video.

Homework:

Read *SME* pp. 122–125 up to Nuclear Fission. Answer p. 129, questions 1–3. The first draft of the Investigation Plan is due in les. 50. Study the bolded elements on pp. 116–117 for the chemical symbols quiz in the next lesson.

Lesson 47

Pages Taught:

SME pp. 122–125

Materials Needed:

Quiz 11
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Define 5 and Identify 5.)
2. Give, grade, and collect **Quiz 11**.
3. Turn on the video.

Homework:

Read *SME* pp. 125–128. Answer p. 130, questions 4–6.

Lesson 48

Pages Taught:

SME pp. 125–128

Materials Needed:

Appendix Quiz G and Answers

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Define 8–9.)
2. Give, grade, and collect **Appendix Quiz G**.
3. Turn on the video.

Homework:

Read *SME* pp. 129–132 up to A Survey of the Elements. Answer p. 130, question 7 and p. 134, questions 1–5. The first draft of the Investigation Plan is due in les. 50.

Lesson 49

Pages Taught:

SME pp. 129–132

Materials Needed:

Quiz 12
Teacher Key

Teacher Instructions:

1. Homework Check
   (During HW check, students answer p. 135, Section Review 6.4, Think and p. 135, Chapter 6 Review, Explain 5.)
2. Give, grade, and collect **Quiz 12**.
3. Turn on the video.

Homework:

Read *SME* pp. 132–134. Answer pp. 134–135, questions 6–10. The first draft of the Investigation Plan is due in the next lesson. Attach the Investigation Plan Evaluation (*SIA* p. 83). Bring *SIA* to the next lesson.

Lesson 50

Pages Taught:

SME pp. 132–134

Materials Needed:

SIA

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Explain 7.)
2. Science Project Check: Check first draft of the Investigation Plan and make suggestions as needed. Assign revised Investigation Plan for les. 55.
3. Turn on the video.

Homework:

Read *SME* pp. 136–140 up to Chemical Bonds: Forces within Molecules. Answer p. 136, questions 1, 3, 5 and p. 140, questions 1–6. The revised Investigation Plan is due in les. 55.

Lesson 51

Pages Taught:

SME pp. 136–140

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 153, Chapter 7 Review, Define 3–4.)
2. Turn on the video.

Homework:

Read *SME* pp. 140–142 up to Lewis structures. Answer p. 149, questions 1–3. Read Lab 14.

Lesson 52

Pages Taught:
SME pp. 140–142

Materials Needed:
Quiz 13
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 154, Explain 5–6.)
2. Give, grade, and collect **Quiz 13**.
3. Turn on the video. **Lab 14** is conducted in this lesson. Have your students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 14. Read *SME* pp. 142–144 up to Ionic Bonding: Transferring Electrons. Answer p. 149, questions 4–5. The revised Investigation Plan is due in les. 55.

Lesson 53

Pages Taught:
SME pp. 142–144

Materials Needed:
Appendix Quiz H and Answers
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 14.
   (During HW check, students answer p. 153, Chapter 7 Review, Define 7–8.)
2. Give, grade, and collect **Appendix Quiz H**.
3. Turn on the video.

Homework:
Read *SME* pp. 144–146 up to Naming Compounds. Answer p. 149, question 6.

Lesson 54

Pages Taught:
SME pp. 144–146

Materials Needed:
Quiz 14
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 153, Chapter 7 Review, Define 9.)
2. Give, grade, and collect **Quiz 14**.
3. Turn on the video.

Homework:
Read *SME* pp. 146–149. Answer p. 149, Application 4, 9 and p. 149, questions 7–9. The revised Investigation Plan is due in the next lesson; attach the Investigation Plan Evaluation (*SIA* p. 85). Bring *SIA*. Begin studying Ch. 6–7 for Test 4 in les. 59.

Lesson 55

Pages Taught:
SME pp. 146–149

Materials Needed:
SIA

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 149, Think.)
2. Science Project Check: Check revised draft of the Investigation Plan and make suggestions as needed. Assign the final Investigation Plan for les. 61.
3. Turn on the video.

Homework:
Read *SME* pp. 150–152 up to Effects of Intermolecular Forces. Answer p. 153, Section Review 7.3, questions 1–4. The final draft of the Investigation Plan is due in les. 61. Continue studying Ch. 6–7 for Test 4 in les. 59.

Lesson 56

Pages Taught:
SME pp. 150–152

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 154, Apply 2.)
2. Turn on the video.

Homework:
Read *SME* pp. 152–153. Answer p. 153, Section Review 7.3, questions 5–6 and Think. Continue studying Ch. 6–7 for Test 4 in les. 59.

Lesson 57

Pages Taught:
SME pp. 152–153

Materials Needed:
Quiz 15
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 154, Explain 7.)
2. Give, grade, and collect **Quiz 15**.
3. Turn on the video.

Homework:
Answer pp. 153–154, Chapter 7 Review, Define 10, Identify 4–6, and Apply 4. Continue studying Ch. 6–7 for Test 4 in les. 59. The final draft of the Investigation Plan is due in les. 61.

Lesson 58

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 135, Chapter 6 Review, Identify 1, 7.)
2. Turn on the video.

Homework:
Study Ch. 6–7 for Test 4 in the next lesson.

Lesson 59

Materials Needed:
Test 4
Teacher Key

Teacher Instructions:
1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 4** over Ch. 6–7. Collect and grade tests.
6. Plan to return graded Test 4 in les. 60.

Homework:
Read *SME* pp. 155–157 up to Chemical Thermodynamics. Answer p. 156, questions 1, 4 and p. 166, questions 1–2. The final draft of the Investigation Plan is due in les. 61.

Lesson 60

Pages Taught:
SME pp. 155–157

Materials Needed:
Graded Test 4 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 192, Chapter 8 Review, Define 1 and Identify 2.)
2. Hand back and go over graded Test 4. Collect tests and record grades.
3. Turn on the video.

Homework:
Read *SME* pp. 157–160 up to Catalysts. Answer p. 157, Application 1, 5 and p. 166, questions 3–5. The final draft of the Investigation Plan is due in the next lesson; attach the Investigation Plan Grade Form (*SIA* p. 87). Bring *SIA*.

Lesson 61

Pages Taught:
SME pp. 157–160

Materials Needed:
SIA

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Explain 1.)
2. Science Project Check: Collect and grade final draft of the Investigation Plan. (Refer to *SIA* for detailed instructions for grading the science project.) Attach Investigation Plan Grade Form (*SIA* p. 87) to Investigation Plan.
3. Plan to return graded Investigation Plans by les. 63. Students should now begin investigations.
4. Science Project Explanation: At the beginning of the video, the teacher introduces the Journal using *SIA*. Assign first journal check of 3 entries for les. 66.
5. Turn on the video.

Homework:
Read *SME* pp. 160–163 up to Double-displacement reactions. Answer pp. 166–167, questions 6–7 and Think. The Getting Started Worksheet (*SIA* p. 45) is due in les. 63. Journal Check (minimum of 3 entries) is due in les. 66.

Lesson 62

Pages Taught:
SME pp. 160–163

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Apply 1.)
2. Turn on the video.

Homework:
Read *SME* pp. 163–164 up to Acids and bases. Answer p. 192, Chapter 8 Review, Define 2. Read *LM* Lab 15. The Getting Started Worksheet (*SIA* p. 45) is due in the next lesson.

Lesson 63

Pages Taught:
SME pp. 163–164

Materials Needed:
Graded Investigation Plans (return to students)
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Apply 2.)
2. Return graded Investigation Plans.
3. Science Project Check: Check the Getting Started Worksheet and make suggestions as needed.
4. Turn on the video. **Lab 15** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 15. Read *SME* pp. 164–166. Answer p. 167, questions 8–9. Journal Check (minimum of 3 entries) is due in les. 66. Read *LM* Lab 16.

Lesson 64

Pages Taught:
SME pp. 164–166

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 15.
   (During HW check, students answer p. 192, Chapter 8 Review, Define 3.)
2. Turn on the video. **Lab 16** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 16. Read *SME* pp. 167–168 up to Voltaic cells. Answer p. 172, questions 1–4 and Think. Read *LM* Lab 17.

Lesson 65

Pages Taught:
SME pp. 167–168

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check/Collect *LM* Lab Report Sheet 16.
   (During HW check, students answer pp. 192–193, Chapter 8 Review, Define 4 and Apply 3.)
2. Turn on the video. **Lab 17** is conducted in this lesson. Have students watch/perform this lab.

Homework:
Complete *LM* Lab Report Sheet 17. Read *SME* pp. 168–171. Answer p. 172, questions 5–6. Journal Check (minimum of 3 entries) is due in the next lesson.

Lesson 66

Pages Taught:
SME pp. 168–171

Materials Needed:
Quiz 16
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check/Collect *LM* Lab Report Sheet 17.
   (During HW check, students answer p. 192, Chapter 8 Review, Identify 6.)
2. Science Project Check: Carefully check journals and mark appropriate comments. Next journal check (minimum of 6 cumulative entries) is due in les. 71.
3. Give, grade, and collect **Quiz 16**.
4. Turn on the video.

Homework:
Read *SME* pp. 172–174. Answer pp. 180–181, questions 1–2 and Think 1. Journal Check (minimum of 6 cumulative entries) is due in les. 71.

Lesson 67

Pages Taught:
SME pp. 172–174

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Explain 5–6.)
2. Turn on the video.

Homework:
Read *SME* pp. 175–177 up to Esters. Answer pp. 180–181, questions 3–4 and Think 2.

Lesson 68

Pages Taught:
SME pp. 175–177

Materials Needed:
Quiz 17
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Apply 4.)
2. Give, grade, and collect **Quiz 17**.
3. Turn on the video.

Homework:
Read *SME* pp. 177–180. Answer pp. 180–181, questions 5–7. Next journal check (minimum of 6 cumulative entries) is due in les. 71.

Lesson 69

Pages Taught:
SME pp. 177–180

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Apply 5.)
2. Turn on the video.

Homework:
Read *SME* pp. 181–183 up to Lipids. Answer p. 192, Section Review 8.4, questions 1–3. Read *LM* Lab 18.

Lesson 70

Pages Taught:
SME pp. 181–183

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 192, Chapter 8 Review, Identify 7.)
2. Turn on the video. **Lab 18** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 18. Read *SME* pp. 183–186 up to Peptide bonds. Answer p. 192, Section Review 8.4, questions 4–6. Next journal check (minimum of 6 cumulative entries) is due in the next lesson. Begin studying Ch. 8 for Test 5 in les. 75.

Lesson 71

Pages Taught:
SME pp. 183–186

Materials Needed:
Quiz 18
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 18.
   (During HW check, students answer p. 192, Chapter 8 Review, Identify 8.)
2. Science Project Check: Carefully check journals and mark appropriate comments. Next journal check (minimum of 9 cumulative entries) is due in les. 76.
3. Give, grade, and collect **Quiz 18**.
4. Turn on the video.

Homework:
Read *SME* pp. 186–189. Answer p. 192, Section Review 8.4, questions 7–8 and Think. Next journal check (minimum of 9 cumulative entries) is due in les. 76. Continue studying Ch. 8 for Test 5 in les. 75.

Lesson 72

Pages Taught:
SME pp. 186–189

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 192, Chapter 8 Review, Define 12–13.)
2. Turn on the video.

Homework:
Read *SME* pp. 190–192. Answer p. 192, Section Review 8.4, question 9 and p. 192, Chapter 8 Review, Define 14. Continue studying Ch. 8 for Test 5 in les. 75.

Lesson 73

Pages Taught:
SME pp. 190–192

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 193, Identify 10.)
2. Turn on the video.

Homework:
Answer pp. 192–193, Chapter 8 Review, Identify 3–5 and Explain 8. Next journal check (minimum of 9 cumulative entries) is due in les. 76. Continue studying Ch. 8 for Test 5 in les. 75.

Lesson 74

Materials Needed:
Quiz 19
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 192, Chapter 8 Review, Identify 9.)
2. Give, grade, and collect **Quiz 19**.
3. Turn on the video.

Homework:
Study Ch. 8 for Test 5 in the next lesson.

Lesson 75

Materials Needed:
Test 5
Teacher Key

Teacher Instructions:
1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 5** over Ch. 8. Collect and grade tests.
6. Plan to return graded Test 5 in les. 76.

Homework:
Read *SME* pp. 194–196 up to Evolution moves to the United States. Answer p. 201, questions 1–3 and Think 1–2. Next journal check (minimum of 9 cumulative entries) is due in the next lesson.

Lesson 76

Pages Taught:
SME pp. 194–196

Materials Needed:
Appendix Quiz I and Answers
Graded Test 5 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 212, Define 2 and Identify 1–2.)
2. Give, grade, and collect **Appendix Quiz I**.
3. Science Project Check: Carefully check journals and mark appropriate comments. Next journal check (minimum 12 cumulative entries) is due in les. 80.
4. Hand back and go over graded Test 5. Collect tests and record grades.
5. Turn on the video.

Homework:
Read *SME* pp. 196–199 up to The rise of Creation science. Answer p. 201, questions 4–8. Next journal check (minimum of 12 cumulative entries) is due in les. 80.

Lesson 77

Pages Taught:
SME pp. 196–199

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 212, Apply 1.)
2. Turn on the video.

Homework:
Read *SME* pp. 199–202 up to Chemistry. Answer p. 201, question 9 and Think 3 and p. 211, question 1.

Lesson 78

Pages Taught:
SME pp. 199–202

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 212, Apply 2.)
2. Turn on the video.

Homework:
Read *SME* pp. 202–205 up to DNA to protein (including A Closer Look: The RATE Project: A Brief Summary). Answer p. 211, question 2 and Think 1. Next journal check (minimum of 12 cumulative entries) is due in les. 80.

Lesson 79

Pages Taught:
SME pp. 202–205

Materials Needed:
Quiz 20
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 212, Explain 5.)
2. Give, grade, and collect **Quiz 20**.
3. Turn on the video.

Homework:

Read *SME* pp. 205–208 up to A Closer Look: Noted Physicist Sees Limitations to Science. Answer p. 211, questions 3–4. Next journal check (minimum of 12 cumulative entries) is due in the next lesson.

Lesson 80

Pages Taught:

SME pp. 205–208

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 212, Explain 6.)
2. Science Project Check: Carefully check journals and mark appropriate comments. Next journal check (minimum 15 cumulative entries) is due in les. 86.
3. Turn on the video.

Note: Students will take Test 6 (Semester Exam) in les. 85. Plan to allow 20–30 minutes extra for this exam. Students should not have more than two major exams in one day.

Homework:

Read *SME* pp. 208–211. Answer p. 211, question 5 and Think 2. Next journal check (minimum of 15 cumulative entries) is due in les. 86. Begin studying Ch. 1–9 for Test 6 (Semester Exam) in les. 85.

Lesson 81

Pages Taught:

SME pp. 208–211

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 212, Apply 4.)
2. Turn on the video.

Homework:

Answer *SME* p. 30, Define 2, 9–11; p. 68, Chapter 3 Review, Define 7, 9, 16 and Identify 4. Continue studying Ch. 1–9 for Test 6 (Semester Exam) in les. 85.

Lesson 82

Materials Needed:

Quiz 21
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 9, Chapter 1 Review, Define 3 and Identify 4.)
2. Give, grade, and collect **Quiz 21**.
3. Turn on the video.

Homework:

Answer *SME* p. 111, Chapter 5 Review, Identify 5–6, 9–10; p. 135, Chapter 6 Review, Define 1–3 and Identify 6. Continue studying Ch. 1–9 for Test 6 (Semester Exam) in les. 85. Next journal check (minimum of 15 cumulative entries) is due in les. 86.

Lesson 83

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 79, Define 1 and Explain 6.)
2. Turn on the video.

Homework:

Answer *SME* p. 192, Chapter 8 Review, Define 11–14 and Identify 4; p. 212, Identify 1–5. Continue studying Ch. 1–9 for Test 6 (Semester Exam) in les. 85.

Lesson 84

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 153, Chapter 7 Review, Define 10 and Identify 8.)
2. Turn on the video.

Homework:

Study Ch. 1–9 for Test 6 (Semester Exam) in les. 85. Next journal check (minimum of 15 cumulative entries) is due in les. 86.

Lesson 85

Materials Needed:

Test 6 (Semester Exam)
Teacher Key

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 6** (Semester Exam) over Ch. 1–9. Collect and grade tests.
   Note: Students will take the Semester Exam. Plan to allow 20–30 minutes extra for this exam. Students should not have more than two major exams in one day.
6. Plan to return graded Test 6 in les. 86.

Homework:

Read *SME* pp. 213–215 up to Distance and displacement in two dimensions. Answer p. 222, questions 1–3. Next journal check (minimum of 15 cumulative entries) is due in the next lesson. Bring *SIA*.

Lesson 86

Pages Taught:

Science: Matter and Energy (SME) pp. 213–215

Materials Needed:

Appendix Quiz J and Answers
SIA
Graded Test 6 (return to students)
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 250, Define 1 and Identify 1.)
2. Give, grade, and collect **Appendix Quiz J**.
3. Science Project Check: Check journals to note progress; mark appropriate comments.
4. Science Project Explanation: Have students sign up for science project oral presentations to be given in les. 102–115. (Give actual dates to your students.) Plan 2–3 presentations per day; adjust number to fit the size of your class. Describe how to complete the investigation; introduce the Investigation Followup using *SIA*. Assign the investigation to be completed, the journal to be completed, and the first draft of the Investigation Followup to be written for les. 93.
5. Hand back and go over graded Test 6. Collect tests and record grades.
6. Turn on the video.

Homework:

Read *SME* pp. 215–218 up to Velocity. Answer p. 217, Application 2–4 and p. 222, questions 4–5. The first draft of the Investigation Followup is due in les. 93. Bring *SIA*.

Lesson 87

Pages Taught:

SME pp. 215–218

Materials Needed:

SIA

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 250, Define 2–3.)

2. Science Project Explanation: Explain the oral presentation using *SIA*. Explain the exhibit and project notebook. Both the exhibit and the project notebook are due on the same day as the oral presentation that students have already signed up for.
3. Turn on the video.

Homework:

Read *SME* pp. 218–220 up to Acceleration. Answer p. 218, Application 2–3; p. 220 Application 2; and p. 222, question 6. Read *LM* Lab 19.

Lesson 88

Pages Taught:

SME pp. 218–220

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 250, Identify 2.)
2. Turn on the video. **Lab 19** is conducted in this lesson. Have students watch / perform this lab.

Homework:

Complete *LM* Lab Report Sheet 19. Read *SME* pp. 220–223 up to The First Law. Answer p. 222, questions 7–8 and Think; and p. 229, question 1. The first draft of the Investigation Followup is due in les. 93.

Lesson 89

Pages Taught:

SME pp. 220–223

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Lab Report Sheet 19.
   (During HW check, students answer p. 250, Apply 1.)
2. Turn on the video.

Homework:

Read *SME* pp. 223–226. Answer p. 229, questions 2–3.

Lesson 90

Pages Taught:

SME pp. 223–226

Materials Needed:

Quiz 22
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 250, Apply 2.)
2. Give, grade, and collect **Quiz 22**.
3. Turn on the video.

Homework:

Read *SME* pp. 227–229 up to Forces in Nature. Answer p. 226, Application 3 and p. 229, question 4 and Think 1–2. Read *LM* Lab 20. The first draft of the Investigation Followup is due in les. 93.

Lesson 91

Pages Taught:

SME pp. 227–229

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 250, Apply 3.)
2. Turn on the video. **Lab 20** is conducted in this lesson; it will be completed in les. 92. Have students watch / perform this lab.

Homework:

Read *SME* pp. 229–232 up to Solids in Circular Motion. Answer p. 235, questions 1–2.

Lesson 92

Pages Taught:
SME pp. 229–232

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Define 5–7.)
2. Turn on the video. **Lab 20** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 20. Read *SME* pp. 232–235. Answer p. 235, questions 3–6. The first draft of the Investigation Follow-up is due in the next lesson.

Lesson 93

Pages Taught:
SME pp. 232–235

Materials Needed:
Quiz 23
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 20.
   (During HW check, students answer p. 250, Apply 4.)
2. Give, grade, and collect **Quiz 23**.
3. Science Project Check: Check first draft of Investigation Followup and make appropriate suggestions. Final draft is due in les. 97.
4. Turn on the video.

Homework:
Read *SME* pp. 236–238 up to Momentum: Quantity of Motion. Answer p. 235, Think and p. 240, questions 1–3. The final draft of the Investigation Followup is due in les. 97.

Lesson 94

Pages Taught:
SME pp. 236–238

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Explain 7.)
2. Turn on the video.

Homework:
Read *SME* pp. 238–240. Answer p. 240, questions 4–5 and Think.

Lesson 95

Pages Taught:
SME pp. 238–240

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Define 9.)
2. Turn on the video.

Homework:
Read *SME* pp. 241–243 up to Six Simple Machines. Answer p. 249, questions 1–3. The final draft of the Investigation Followup is due in les. 97.

Lesson 96

Pages Taught:
SME pp. 241–243

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Define 10.)
2. Turn on the video.

Homework:
Read *SME* pp. 243–245. Answer p. 243, Application 2, 4 and p. 249, questions 4–5. The final draft of the Investigation Followup is due in the next lesson; attach the Followup Grade Form (*SIA* p. 89). Bring *SIA*. Begin studying Ch. 10 for Test 7 in les. 101.

Lesson 97

Pages Taught:
SME pp. 243–245

Materials Needed:
Quiz 24
Teacher Key
SIA

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Explain 8–9.)
2. Give, grade, and collect **Quiz 24**.
3. Science Project Check: Collect and grade Investigation Followups. Use *SIA* to briefly remind students how to prepare for their oral presentations, which begin in les. 102.
   Note: This grading is intended to be a quick check for completion (all parts included) and neatness (follows format). The actual content will be the same basic material that is incorporated into the students' display boards and oral presentations and will, therefore, be reflected in their presentation grades.
4. Plan to return graded Investigation Followups in les. 98.
5. Turn on the video.

Homework:
Read *SME* pp. 246–247 up to The wedge. Answer p. 249, questions 6–7 and Think. Read *LM* Lab 21. Continue studying Ch. 10 for Test 7 in les. 101.

Lesson 98

Pages Taught:
SME pp. 246–247

Materials Needed:
Graded Investigation Followups (return to students)
Appendix Quiz K and Answers
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Define 12.)
2. Return graded Investigation Followups.
3. Give, grade, and collect **Appendix Quiz K**.
4. Turn on the video. **Lab 21** is conducted in this lesson. Have students watch/perform this lab.

Homework:
Read *SME* pp. 247–249. Answer p. 247, Application 4–5 and p. 249, question 8. Read *LM* Lab 22. Continue studying Ch. 10 for Test 7 in les. 101.

Lesson 99

Pages Taught:
SME pp. 247–249

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Apply 5.)
2. Turn on the video. **Lab 22** is conducted in this lesson. Have students watch/perform this lab.

Homework:
Complete *LM* Lab Report Sheets 21–22. Answer *SME* p. 249, Application 2–3. Continue studying Ch. 10 for Test 7 in les. 101.

Lesson 100

Materials Needed:
Quiz 25
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check/Collect *LM* Lab Report Sheets 21–22.
   (During HW check, students answer p. 250, Identify 9.)
2. Give, grade, and collect **Quiz 25**.
3. Turn on the video.

Homework:
Study Ch. 10 for Test 7 in the next lesson.

Lesson 101

Materials Needed:

Test 7
Teacher Key

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 7** over Ch. 10. Collect and grade tests.
6. Plan to return graded Test 7 in les. 102.

Homework:

Read *SME* pp. 251–252 up to Wave Attributes. Answer p. 257, questions 1–3. Prepare for assigned Oral Presentations; bring grade form (*SIA* pp. 91–92) on the day of presentation.

Lesson 102

Pages Taught:

SME pp. 251–252

Materials Needed:

Appendix Quiz L and Answers
Graded Test 7 (return to students)
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Explain 1.)
2. Give, grade, and collect **Appendix Quiz L**.
3. Hand back and go over graded Test 7. Collect tests and record grades.
4. Science Project Presentations: Three students give their oral presentations on video today. Plan to watch these presentations. The grades for today are as follows:

Student 1	A
Student 2	B
Student 3	C+

   See Appendix B in the back of this manual for filled-in sample grading forms for each of these projects. Grade your own students' exhibits and presentations. Try to examine the display boards and Science Project Notebooks before or after class. Use the Grade Forms in *SIA* (pp. 91–92) and follow the grading guidelines presented there. See *SIA* for grade distribution for the science project. In each of the next four lessons, one student presents a project on video and 12–15 minutes is allotted for your students to present theirs. If you need more time for presentations, turn off the video before the sample presentations and use 20 minutes in each of the next four lessons for your students to present. Additional time will be available in les. 107–114 and 116.
5. Turn on the video.

Homework:

Oral Presentations continue. Read *SME* pp. 252–254 up to Wave Behavior. Answer p. 254, Application 2 and p. 257, questions 4–5.

Lesson 103

Pages Taught:

SME pp. 252–254

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Define 2 and Identify 2.)
2. Science Project Presentations: At the end of the lesson, one student presents a science project. About 20 minutes is allotted for one or two of your students to give presentations. If you do not have enough presentations to fill this time, your students may start their homework. This procedure continues through les. 114.
3. Turn on the video.

Homework:

Oral Presentations continue. Read *SME* pp. 254–257 up to Interference. Answer p. 258, questions 6–9.

Lesson 104

Pages Taught:
SME pp. 254–257

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Explain 2.)
2. Science Project Presentations: At the end of the lesson, one student presents a science project. About 23 minutes is allotted for one or two of your students to give presentations. If you do not have enough presentations to fill this time, your students may start their homework.
3. Turn on the video.

Homework:
Oral Presentations continue. Read *SME* p. 257. Answer p. 258, question 10 and Think. Read *LM* Lab 23.

Lesson 105

Pages Taught:
SME p. 257

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Define 3 and Identify 4.)
2. Science Project Presentations: At the end of the lesson, one student presents a science project. About 16 minutes is allotted for one or two of your students to give presentations. If you do not have enough presentations to fill this time, your students may start their homework.
3. Turn on the video. **Lab 23** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Oral Presentations continue. Complete *LM* Lab Report Sheet 23. Read *SME* pp. 258–260 up to Characteristics of Sound. Answer p. 265, question 1.

Lesson 106

Pages Taught:
SME pp. 258–260

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 23.
   (During HW check, students answer p. 279, Apply 1.)
2. Science Project Presentations: At the end of the lesson, one student presents a science project. About 17 minutes is allotted for one or two of your students to give presentations. If you do not have enough presentations to fill this time, your students may start their homework.
3. Turn on the video.

Homework:
Oral Presentations continue. Read *SME* pp. 260–262 up to Pitch. Answer pp. 265–266, questions 2–3 and Think 1.

Lesson 107

Pages Taught:
SME pp. 260–262

Materials Needed:
Quiz 26
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 279, Explain 6.)
2. Give, grade, and collect **Quiz 26**.
3. Science Project Presentations: Video class students will continue giving presentations in this lesson as well as in les. 109–114 and 116. (Les. 115 is a test.) These presentations were not videoed. If all of your students have finished giving their presentations, have them begin their homework assignments during this time each day. Fifteen minutes is allotted at the end of this lesson for presentations.
4. Turn on the video.

Homework:
Oral Presentations continue. Read *SME* pp. 262–264 up to Speed of sound. Answer p. 265, questions 4–6.

Lesson 108

Pages Taught:
SME pp. 262–264

Materials Needed:
Appendix Quiz M and Answers

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 279, Explain 7.)
2. Give, grade, and collect **Appendix Quiz M**.
3. Science Project Presentations: Oral presentations may continue today as needed. Fifteen minutes is allotted at the end of this lesson for these presentations.
4. Turn on the video.

Homework:
Oral Presentations continue. Read *SME* pp. 264–265. Answer p. 266, questions 7–8 and Think 2. Read *LM* Lab 24.

Lesson 109

Pages Taught:
SME pp. 264–265

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 279, Explain 8.)
2. Science Project Presentations: Oral presentations may continue today as needed. Fifteen minutes is allotted at the end of this lesson for these presentations.
3. Turn on the video. **Lab 24** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Oral Presentations continue. Complete *LM* Lab Report Sheet 24. Read *SME* pp. 266–267 up to Minimizing reflection. Answer p. 269, questions 1–2. Begin studying Ch. 11 for Test 8 in les. 115.

Lesson 110

Pages Taught:
SME pp. 266–267

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 24.
   (During HW check, students answer p. 278, Chapter 11 Review, Define 5 and Identify 7.)
2. Science Project Presentations: Oral presentations may continue today as needed. Twenty minutes is allotted at the end of this lesson for these presentations.
3. Turn on the video.

Homework:
Oral Presentations continue. Read *SME* pp. 267–269. Answer p. 269, questions 3–4. Continue studying Ch. 11 for Test 8 in les. 115.

Lesson 111

Pages Taught:
SME pp. 267–269

Materials Needed:
Quiz 27
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Define 6–7.)
2. Give, grade, and collect **Quiz 27**.

3. Science Project Presentations: Oral presentations may continue today as needed. Ten minutes is allotted at the end of this lesson for these presentations.
4. Turn on the video.

Homework:

Oral Presentations continue. Read *SME* pp. 270–273 up to Resonance. Answer p. 278, Section Review 11.4, questions 1–4. Continue studying Ch. 11 for Test 8 in les. 115.

Lesson 112

Pages Taught:

SME pp. 270–273

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 278, Section Review 11.4, Think.)
2. Science Project Presentations: Oral presentations may continue today as needed. Sixteen minutes is allotted at the end of this lesson for these presentations.
3. Turn on the video.

Homework:

Oral Presentations continue. Read *SME* pp. 273–277. Answer p. 278, Section Review 11.4, questions 5–9. Continue studying Ch. 11 for Test 8 in les. 115.

Lesson 113

Pages Taught:

SME pp. 273–277

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer pp. 278–279, Chapter 11 Review, Define 12 and Explain 11.)
2. Science Project Presentations: Oral presentations may continue today as needed. Seventeen minutes is allotted at the end of this lesson for these presentations.
3. Turn on the video.

Homework:

Oral Presentations continue. Answer p. 279, Apply 2–4. Continue studying Ch. 11 for Test 8 in les. 115.

Lesson 114

Materials Needed:

Quiz 28
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 278, Chapter 11 Review, Identify 1–3 and 5–6.)
2. Give, grade, and collect **Quiz 28**.
3. Science Project Presentations: Oral presentations may continue today as needed. Ten minutes is allotted at the end of this lesson for these presentations.
4. Turn on the video.

Homework:

Study Ch. 11 for Test 8 in the next lesson.

Lesson 115

Materials Needed:

Test 8
Teacher Key

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 8** over Ch. 11. Collect and grade tests.
6. Plan to return graded Test 8 in les. 116.

Homework:

Read *SME* pp. 280–282 up to Light and Color. Answer p. 286, questions 1–3. Oral Presentations continue (if needed).

Lesson 116

Pages Taught:
SME pp. 280–282

Materials Needed:
Graded Test 8 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 308, Explain 1.)
2. Hand back and go over graded Test 8. Collect tests and record grades.
3. Science Project Presentations: Oral presentations may continue today as needed. Ten minutes is allotted at the end of this lesson for these presentations. This is the final lesson in which class time is allotted for presentations.
4. Turn on the video.

Homework:
Read *SME* pp. 282–283 up to Adding colors. Answer p. 286, questions 4–5 and Think 1–2. Read *LM* Lab 25.

Lesson 117

Pages Taught:
SME pp. 282–283

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 308, Identify 4 and Explain 2.)
2. Turn on the video. **Lab 25** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 25. Read *SME* pp. 283–285. Answer p. 286, questions 6–7. Read *LM* Lab 26.

Lesson 118

Pages Taught:
SME pp. 283–285

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 25.
   (During HW check, students answer p. 308, Explain 3.)
2. Turn on the video. **Lab 26** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 26. Read *SME* pp. 286–289 up to Effects of refraction. Answer p. 293, questions 1–2.

Lesson 119

Pages Taught:
SME pp. 286–289

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 26.
   (During HW check, students answer p. 308, Apply 3.)
2. Turn on the video.

Homework:
Read *SME* pp. 289–292 up to The Doppler Effect and Light. Answer p. 293, questions 3–6.

Lesson 120

Pages Taught:
SME pp. 289–292

Materials Needed:
Quiz 29
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 308, Define 6–7.)
2. Give, grade, and collect **Quiz 29**.
3. Turn on the video.

Homework:

Read *SME* pp. 292–296 up to Ultraviolet radiation. Answer p. 293, question 7 and p. 302, questions 1–2.

Lesson 121

Pages Taught:

SME pp. 292–296

Materials Needed:

Appendix Quiz N and Answers

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 308, Identify 7.)
2. Give, grade, and collect **Appendix Quiz N**.
3. Turn on the video.

Homework:

Read *SME* pp. 296–299 up to Characteristics of laser light. Answer p. 302, questions 3–4. Read *LM* Lab 27.

Lesson 122

Pages Taught:

SME pp. 296–299

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 308, Define 11.)
2. **Lab 27** is conducted in this lesson. Have students watch / perform this lab.
3. Turn on the video.

Homework:

Complete *LM* Lab Report Sheet 27. Read *SME* pp. 299–302. Answer p. 302, questions 5–6 and Think. Begin studying Ch. 10–12 for Test 9 (Nine-Weeks Exam) in les. 127.

Lesson 123

Pages Taught:

SME pp. 299–302

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check / Collect *LM* Report Sheet 27.
   (During HW check, students answer p. 308, Define 12–13.)
2. Turn on the video.

Homework:

Read *SME* pp. 303–307. Answer p. 307, questions 1–6. Continue studying Ch. 10–12 for Test 9 (Nine-Weeks Exam) in les. 127.

Lesson 124

Pages Taught:

SME pp. 303–307

Materials Needed:

Quiz 30
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 308, Define 14.)
2. Give, grade, and collect **Quiz 30**.
3. Turn on the video.

Homework:

Answer p. 307, Think and p. 308, Apply 3–4. Continue studying Ch. 10–12 for Test 9 (Nine-Weeks Exam) in les. 127.

Lesson 125

Materials Needed:
Quiz 31
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 250, Identify 9–12.)
2. Give, grade, and collect **Quiz 31**.
3. Turn on the video.

Homework:
Continue studying Ch. 10–12 for Test 9 (Nine-Weeks Exam) in les. 127.

Lesson 126

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 308, Apply 1.)
2. Turn on the video.

Homework:
Study Ch. 10–12 for Test 9 (Nine-Weeks Exam) in the next lesson.

Lesson 127

Materials Needed:
Test 9 (Nine-Weeks Exam)
Teacher Key

Teacher Instructions:
1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 9** (Nine-Weeks Exam) over Ch. 10–12. Collect and grade tests.
6. Plan to return graded Test 9 in les. 128.

Homework:
Read *SME* pp. 309–311 up to A Closer Look: Charge Confusion. Answer p. 313, questions 1–3.

Lesson 128

Pages Taught:
SME pp. 309–311

Materials Needed:
Graded Test 9 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 325, Define 2–3.)
2. Hand back and go over graded Test 9. Collect tests and record grades.
3. Science News Article Explanation: Science News Articles are introduced during the first 15 minutes of the lesson. You may wish to watch this portion of the video to acquaint yourself with the requirements. Also refer to the Science News Articles section in the front of this manual for detailed instructions for assigning and grading Science News Articles.
4. Turn on the video.

Homework:
Read *SME* pp. 311–313. Answer p. 313, questions 4–5 and Think 1–2. Science News Articles are due in les. 133.

Lesson 129

Pages Taught:
SME pp. 311–313

Materials Needed:
Appendix Quiz O and Answers

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 325, Explain 1–2.)
2. Give, grade, and collect **Appendix Quiz O**.
3. Turn on the video.

Homework:
Read *SME* pp. 314–317 up to Detecting Charges. Answer p. 318, questions 1–3.

Lesson 130

Pages Taught:
SME pp. 314–317

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 325, Explain 3.)
2. Turn on the video.

Homework:
Read *SME* pp. 317–320 up to Nature's electrostatic generators. Answer p. 318, question 4 and Think and p. 324, question 1. Science News Articles are due in les. 133.

Lesson 131

Pages Taught:
SME pp. 317–320

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 325, Define 8.)
2. Turn on the video.

Homework:
Read *SME* pp. 320–322 up to Storing Charges, including A Closer Look: St. Elmo's Fire. Answer p. 324, questions 2–3 and Think. Read *LM* Lab 28.

Lesson 132

Pages Taught:
SME pp. 320–322

Materials Needed:
Quiz 32
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 325, Explain 4.)
2. Give, grade, and collect **Quiz 32**.
3. **Lab 28** is conducted in this lesson. Have students watch/perform this lab.
4. Turn on the video.

Homework:
Complete *LM* Lab Report Sheet 28. Read *SME* pp. 322–324. Answer p. 324, questions 4–6. Science News Articles are due in the next lesson.

Lesson 133

Pages Taught:
SME pp. 322–324

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check/Collect *LM* Lab Report Sheet 28.
   (During HW check, students answer p. 325, Define 9.)
2. Science News Article Check (for students' assigned articles): Briefly scan each student's report for appropriateness. Do not allow a student to present an article that deals with a questionable topic. (Refer to the Science News Articles section in the front of this manual for detailed instructions for grading Science News Articles.)
3. Turn on the video.
4. Science News Articles: Immediately after the homework presentation, five news article presentations will be given. Plan to watch these with your class. The presentations on video received these grades:

Student 1	A
Student 2	A
Student 3	A
Student 4	B
Student 5	B

5. Turn off the video for your students' presentations. Approximately 10 minutes is allotted for these presentations. Make appropriate comments and allow students to ask questions as time allows. Assign students to present articles in les. 139 as directed in the front of this manual. If you do not have enough presentations to fill this time, allow students to study or work on homework. Assign a quiz grade to each student who presents a Science News Article. Follow this procedure for the remainder of the year.
6. Turn the video back on.

Homework:
Read *SME* pp. 326–328 up to Law of magnetic force. Answer p. 330, questions 1–3. Science News Articles are due in les. 139.

Lesson 134

Pages Taught:
SME pp. 326–328

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 345, Identify 1–2.)
2. Turn on the video.

Homework:
Read *SME* pp. 328–330 up to Understanding Magnetism. Answer p. 330, question 4 and Think. Read *LM* Lab 29.

Lesson 135

Pages Taught:
SME pp. 328–330

Materials Needed:
Quiz 33
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 345, Identify 3.)
2. Give, grade, and collect **Quiz 33**.
3. **Lab 29** is conducted in this lesson. Have students watch / perform this lab.
4. Turn on the video.

Homework:
Complete *LM* Lab Report Sheet 29. Read *SME* pp. 330–333 up to Methods of Magnetization. Answer p. 338, questions 1–4. Science News Articles are due in les. 139.

Lesson 136

Pages Taught:
SME pp. 330–333

Materials Needed:
Appendix Quiz P and Answers
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 29.
   (During HW check, students answer p. 344, Chapter 14 Review, Define 4–5.)
2. Give, grade, and collect **Appendix Quiz P**.
3. Turn on the video.

Homework:
Read *SME* pp. 333–335 up to The electromagnet. Answer p. 338, Think. Read *LM* Lab 30.

Lesson 137

Pages Taught:
SME pp. 333–335

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 345, Explain 3.)
2. **Lab 30** is conducted in this lesson. Have students watch / perform this lab.
3. Turn on the video.

Homework:
Complete *LM* Lab Report Sheet 30. Read *SME* pp. 335–336 up to Demagnetization. Answer p. 338, question 5. Read *LM* Lab 31. Science News Articles are due in les. 139.

Lesson 138

Pages Taught:
SME pp. 335–336

Materials Needed:
Quiz 34
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 30.
   (During HW check, students answer p. 345, Explain 4.)
2. Give, grade, and collect **Quiz 34**.
3. **Lab 31** is conducted in this lesson. Have students watch / perform this lab.

Note: Part II, Trial 3, is not performed on video and may be omitted.

4. Turn on the video.

Homework:
Complete *LM* Lab Report Sheet 31. Read *SME* pp. 336–339. Answer p. 338, questions 6–7 and p. 344, Section Review 14.3, question 1. Science News Articles are due in the next lesson. Begin studying Ch. 13–14 for Test 10 in les. 143.

Lesson 139

Pages Taught:
SME pp. 336–339

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 31.
   (During HW check, students answer p. 345, Identify 6–7.)
2. Hear, discuss, and grade Science News Articles. Assign students to present in les. 144 (if needed).
3. Turn on the video.

Homework:
Read *SME* pp. 340–342 up to The Magnetosphere. Answer p. 344, Section Review 14.3, questions 2–3. Science News Articles are due in les. 144. Continue studying Ch. 13–14 for Test 10 in les. 143.

Lesson 140

Pages Taught:
SME pp. 340–342

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 345, Explain 5–6.)
2. Turn on the video.

Homework:
Read *SME* pp. 342–344. Answer p. 344, Section Review 14.3, questions 4–6. Read *LM* Lab 32. Continue studying Ch. 13–14 for Test 10 in les. 143.

Lesson 141

Pages Taught:
SME pp. 342–344

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 344, Define 10–11.)
2. Turn on the video. **Lab 32** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 32. Answer p. 345, Apply 1–2. Science News Articles are due in les. 144. Continue studying Ch. 13–14 for Test 10 in les. 143.

Lesson 142

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 32.
   (During HW check, students answer p. 344, Define 3–5.)
2. Turn on the video.

Homework:
Study Ch. 13–14 for Test 10 in the next lesson.

Lesson 143

Materials Needed:
Test 10
Teacher Key

Teacher Instructions:
1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 10** over Ch. 13–14. Collect and grade tests.
6. Plan to return graded Test 10 in les. 144.

Homework:
Read *SME* pp. 346–348 up to Current. Answer p. 353, questions 1–2. Science News Articles are due in the next lesson.

Lesson 144

Pages Taught:
SME pp. 346–348

Materials Needed:
Graded Test 10 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 373, Define 1–2.)
2. Hand back and go over graded Test 10. Collect tests and record grades.
3. Hear, discuss, and grade Science News Articles. Assign students to present in les. 149 (if needed).
4. Turn on the video.

Homework:
Read *SME* pp. 348–350 up to Joule heat. Answer p. 353, questions 3–5. Science News Articles are due in les. 149.

Lesson 145

Pages Taught:
SME pp. 348–350

Materials Needed:
Appendix Quiz Q and Answers

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 373, Define 3.)
2. Give, grade, and collect **Appendix Quiz Q**.
3. Turn on the video.

Homework:
Read *SME* pp. 350–351 up to Semiconductors. Answer p. 353, questions 6–7 and Think. Read *LM* Lab 33.

Lesson 146

Pages Taught:
SME pp. 350–351

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 373, Apply 1.)
2. Turn on the video. **Lab 33** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 33. Read *SME* pp. 351–354. Answer p. 353, questions 8–10 and p. 358, questions 1–2. Science News Articles are due in les. 149.

Lesson 147

Pages Taught:
SME pp. 351–354

Materials Needed:
LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check/Collect *LM* Lab Report Sheet 33.
   (During HW check, students answer p. 373, Define 7–8.)
2. Turn on the video.

Homework:

Read *SME* pp. 355–357. Answer p. 358, questions 3–6 and Think.

Lesson 148

Pages Taught:

SME pp. 355–357

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 373, Apply 3.)
2. Turn on the video.

Homework:

Read *SME* pp. 358–359 up to Neon lamps. Answer p. 364, questions 1–2. Science News Articles are due in the next lesson. Read *LM* Lab 34.

Lesson 149

Pages Taught:

SME pp. 358–359

Materials Needed:

Quiz 35
Teacher Key
LM Teacher Edition

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 373, Explain 4.)
2. Give, grade, and collect **Quiz 35**.
3. Hear, discuss, and grade Science News Articles. Assign students to present in les. 154 (if needed).
4. Turn on the video. **Lab 34** is conducted in this lesson. Have students watch/perform this lab.

Note: Part II, 4 bulbs, is not performed on video and may be omitted. Question 2 (c–g) may also be omitted.

Homework:

Complete *LM* Lab Report Sheet 34. Read *SME* pp. 359–363 up to Other motors. Answer p. 364, questions 3–8. Science News Articles are due in les. 154.

Lesson 150

Pages Taught:

SME pp. 359–363

Materials Needed:

LM Teacher Edition

Teacher Instructions:

1. Homework Check. Check/Collect *LM* Lab Report Sheet 34.
   (During HW check, students answer p. 373, Explain 5.)
2. Turn on the video.

Homework:

Read *SME* pp. 363–367 up to Simple AC generator. Answer p. 364, Think and p. 372, questions 1–4. Begin studying Ch. 15 for Test 11 in les. 155.

Lesson 151

Pages Taught:

SME pp. 363–367

Materials Needed:

Quiz 36
Teacher Key

Teacher Instructions:

1. Homework Check.
   (During HW check, students answer p. 373, Define 12–13.)
2. Give, grade, and collect **Quiz 36**.
3. Turn on the video.

Homework:

Read *SME* pp. 367–368 up to Simple DC generator. Answer p. 372, question 5 and Think. Science News Articles are due in les. 154. Read *LM* Lab 35. Continue studying Ch. 15 for Test 11 in les. 155.

Lesson 152

Pages Taught:
SME pp. 367–368

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 373, Identify 8.)
2. Turn on the video. **Lab 35** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 35. Read *SME* pp. 368–372. Answer p. 372, question 6. Continue studying Ch. 15 for Test 11 in les. 155.

Lesson 153

Pages Taught:
SME pp. 368–372

Materials Needed:
Quiz 37
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 35.
   (During HW check, students answer p. 373, Explain 8.)
2. Give, grade, and collect **Quiz 37**.
3. Turn on the video.

Homework:
Answer p. 373, Apply 3–4. Science News Articles are due in the next lesson. Continue studying Ch. 15 for Test 11 in les. 155.

Lesson 154

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 373, Explain 1.)
2. Hear, discuss, and grade Science News Articles. Assign students to present in les. 159 (if needed).
3. Turn on the video.

Homework:
Study Ch. 15 for Test 11 in the next lesson. Science News Articles are due in les. 159.

Lesson 155

Materials Needed:
Test 11
Teacher Key

Teacher Instructions:
1. There is no written homework to check.
2. There is no video today.
3. Announce the homework assignment.
4. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
5. Give **Test 11** over Ch. 15. Collect and grade tests.
6. Plan to return graded Test 11 in les. 156.

Homework:
Read *SME* pp. 374–376 up to The Vacuum-Tube Diode. Answer p. 378, questions 1–2.

Lesson 156

Pages Taught:
SME pp. 374–376

Materials Needed:
Appendix Quiz R and Answers
Graded Test 11 (return to students)
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Explain 1.)
2. Give, grade, and collect **Appendix Quiz R**.
3. Hand back and go over graded Test 11. Collect tests and record grades.
4. Turn on the video.

Homework:
Read *SME* pp. 376–378. Answer p. 378, questions 3–6. Science News Articles are due in les. 159.

Lesson 157

Pages Taught:
SME pp. 376–378

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Apply 1.)
2. Turn on the video.

Homework:
Read *SME* pp. 379–381 up to Other Applications of Semiconductors. Answer p. 386, questions 1–5.

Lesson 158

Pages Taught:
SME pp. 379–381

Materials Needed:
Appendix Quiz S and Answers

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Explain 2.)
2. Give, grade, and collect **Appendix Quiz S**.
3. Turn on the video.

Homework:
Read *SME* pp. 381–384 up to Benefits of integrated circuits. Answer p. 386, questions 6–8. Science News Articles are due in the next lesson.

Lesson 159

Pages Taught:
SME pp. 384–385

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Explain 4.)
2. Hear, discuss, and grade Science News Articles. Assign students to present in les. 164 (if needed).
3. Turn on the video.

Homework:
Read *SME* pp. 384–385. Answer p. 386, question 9. Read *LM* Lab 36. Science News Articles are due in les. 164.

Lesson 160

Pages Taught:
SME pp. 384–385

Materials Needed:
Quiz 38
Teacher Key
LM Teacher Edition

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Define 1–3.)
2. Give, grade, and collect **Quiz 38**.
3. Turn on the video. **Lab 36** is conducted in this lesson. Have students watch / perform this lab.

Homework:
Complete *LM* Lab Report Sheet 36. Read *SME* pp. 386–389 up to A Closer Look: Base Conversions. Answer p. 401, questions 1–4.

Lesson 161

Pages Taught:
SME pp. 386–389

Materials Needed:
LM Teacher Edition

Teacher Instructions:
1. Homework Check. Check / Collect *LM* Lab Report Sheet 36.
   (During HW check, students answer p. 402, Identify 4–6.)
2. Turn on the video.

Homework:
Read *SME* pp. 389–392 up to Hardware. Answer p. 401, question 5 and Think and p. 402, Explain 6. Science News Articles are due in les. 164.

Lesson 162

Pages Taught:
SME pp. 389–392

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Define 5.)
2. Turn on the video.

Homework:
Read *SME* pp. 392–395 up to Connecting the systems. Answer p. 401, questions 6–9.

Lesson 163

Pages Taught:
SME pp. 392–395

Materials Needed:
Appendix Quiz T and Answers

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Identify 8–9.)
2. Give, grade, and collect **Appendix Quiz T**.
3. Turn on the video.

Homework:
Read *SME* pp. 395–398 up to Servers. Answer p. 401, questions 10–12. Science News Articles are due in the next lesson.

Lesson 164

Pages Taught:
SME pp. 395–398

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Define 9–11.)
2. Hear, discuss, and grade Science News Articles.
3. Turn on the video.

Homework:
Read *SME* pp. 398–401. Answer p. 401, questions 13–14. Begin studying Ch. 1–16 for Test 12 (Final Exam) in les. 170.

Lesson 165

Pages Taught:
SME pp. 398–401

Materials Needed:
Quiz 39
Teacher Key

Teacher Instructions:
1. Homework Check.
   (During HW check, students answer p. 402, Apply 3.)
2. Give, grade, and collect **Quiz 39**.
3. Turn on the video.

Note: Students will take Test 12 (Final Exam) in les. 170. Plan to allow 20–30 minutes extra for this exam. Students should not have more than two major exams in one day.

Homework:
Continue studying Ch. 1–16 for Test 12 (Final Exam) in les. 170. Answer p. 402, Identify 1–2.

Lesson 166

Teacher Instructions:
1. Homework Check.
   (During HW check, students define principle of causality, density, Boyle's law, potential energy, *and* entropy.*)*
2. Turn on the video.

Homework:
Continue studying Ch. 1–16 for Test 12 (Final Exam) in les. 170. Answer p. 402, Identify 3 and Explain 3.

Lesson 167

Teacher Instructions:

1. Homework Check.
   (During HW check, students define proton, atomic number, ionic bond, metabolism, *and* mutation.*)*
2. Turn on the video.

Homework:

Continue studying Ch. 1–16 for Test 12 (Final Exam) in les. 170. Answer p. 402, Define 6–8.

Lesson 168

Teacher Instructions:

1. Homework Check.
   (During HW check, students define acceleration, IMA, power, diffraction, *and* electromagnetic wave.*)*
2. Turn on the video.

Homework:

Continue studying Ch. 1–16 for Test 12 (Final Exam) in les. 170. Answer p. 402, Identify 10–12.

Lesson 169

Teacher Instructions:

1. Homework Check.
   (During HW check, students define diamagnetic, declination, load, motor, *and* microprocessor.*)*
2. Turn on the video.

Homework:

Study Ch. 1–16 for Test 12 (Final Exam) in the next lesson.

Lesson 170

Materials Needed:

Test 12 (Final Exam)
Teacher Key

Teacher Instructions:

1. There is no written homework to check.
2. There is no video today.
3. Students clear their desks and take out test materials (one clean sheet of paper for a cover sheet and two pens) before tests are distributed.
4. Students will take **Test 12** (Final Exam) over Ch. 1–16. Collect and grade tests.
   Note: Students will take the Final Exam. Plan to allow 20–30 minutes extra for this exam. Students should not have more than two major exams in one day.

Congratulations!

We trust you had a successful and enjoyable school year. Please let us know how we can serve your commitment to Christian education in the future.

Sincerely,
the Abeka team

Appendix A

Appendix Quizzes

Quizzes

Grading Scale (for all Appendix Quizzes)

Number Missed	Score
0	100
1	90
2	80
3	70
4	60
5	0

Appendix Quiz A

Science: *Matter and Energy*

Lesson 4

pp. 10–14

QUESTIONS

1. What is called the language of science?
2. Science put to use is __?__.
   (a) mathematics (c) equations
   (b) technology (d) measurement
3. The most important part of an equation is the __?__.
4. True or False: Fibonacci numbers are commonly found in nature.
5. What is defined as how close a measurement is to the actual value?

ANSWERS

1. *mathematics*
2. *(b) technology*
3. *equal sign*
4. *true*
5. *accuracy*

Appendix Quiz B

Science: *Matter and Energy*

Lesson 13

pp. 34–36

QUESTIONS

1. True or False: Crystalline solids have a well-defined melting point.
2. What is the term that means "change in shape"?
3. What is the ability of a solid to recover to its original shape?
   (a) elasticity (c) hardness
   (b) plasticity (d) amorphous
4. The resistance of a material to being deformed is called __?__.
5. What scale is used to identify minerals by their ability to be scratched?

ANSWERS

1. *true*
2. *deformation*
3. *(a) elasticity*
4. *hardness*
5. *Mohs scale*

Appendix Quiz C

Science: *Matter and Energy*

Lesson 22

pp. 61–65

QUESTIONS

1. True or False: The lateral pressure exerted by a moving fluid increases as the fluid's speed increases.
2. The name for the shape of airplanes' wings is __?__.
3. What is the force that propels a plane forward through the air?
4. What is the force that tends to slow an object moving through a fluid?
   (a) lift (c) drag
   (b) thrust (d) weight
5. True or False: Elevators are stabilizers near the rear of the airplane.

ANSWERS

1. *false*
2. *airfoil*
3. *thrust*
4. *(c) drag*
5. *true*

Appendix Quiz D

Science: *Matter and Energy*

Lesson 28

pp. 75–78

QUESTIONS

1. What is the energy associated with the position of an object?
2. Which fundamental force is an attractive force between two objects?
   (a) weak nuclear force
   (b) strong nuclear force
   (c) electromagnetic force
   (d) gravitational force
3. Name one of the factors gravitational force depends on.
4. True or False: Electromagnetic force only affects objects with an electric charge.
5. The potential energy that is caused by the restorative force that an object experiences after being deformed is __?__ potential energy.

ANSWERS

1. *potential energy*
2. *(d) gravitational force*
3. *height off the ground, strength of gravity,* or *mass of object*
4. *true*
5. *elastic*

Appendix Quiz E

Science: *Matter and Energy*

Lesson 39

pp. 108–110

QUESTIONS

1. True or False: The most important part of a heat pump is the refrigerant.
2. What is the name of the part of the heat pump where the gas cools to room temperature?
   (a) compressor (c) evaporator
   (b) condenser (d) refrigerator
3. True or False: A heat pump does not require any work to be done.
4. When a solid changes directly into a gas, the process is called __?__.
5. What special state of matter occurs at extremely high temperatures that cause the molecules to break down into charged particles?

ANSWERS

1. *true*
2. *(b) condenser*
3. *false*
4. *sublimation*
5. *plasma*

Appendix Quiz F

Science: *Matter and Energy*

Lesson 45

pp. 116–119

QUESTIONS

1. What is the name for the positively charged subatomic particle?
   (a) neutron (c) electron
   (b) proton (d) nucleon
2. True or False: The number of electrons in the nucleus determines the atomic number of an element.
3. Atoms that are the same element but have different numbers of neutrons are called __?__.
4. What is the name for the "building blocks" of subatomic particles?
5. Name the term for a positive ion.

ANSWERS

1. *(b) proton*
2. *false*
3. *isotopes*
4. *quarks*
5. *cation*

Appendix Quiz G

Science: *Matter and Energy*

Lesson 48

pp. 125–128

QUESTIONS

1. What process occurs when a uranium-235 nucleus splits into several pieces?
2. The "domino effect" caused by a splitting uranium atom is called a(n) __?__.
3. What term refers to the amount of fissionable material needed for a nuclear chain reaction to occur?
   (a) fusion volume (c) reaction quantity
   (b) critical mass (d) atomic density
4. True or False: The special type of nuclear reactor that produces more nuclear fuel than it uses is called a plutonium reactor.
5. True or False: In 1986, a nuclear accident took place at a nuclear plant in Chernobyl, Ukraine.

ANSWERS

1. *nuclear fission*
2. *chain reaction*
3. *(b) critical mass*
4. *false*
5. *true*

Appendix Quiz H

Science: *Matter and Energy*

Lesson 53

pp. 142–144

QUESTIONS

1. The diagram that can be used to represent a covalently bonded molecule is a(n) __?__.
2. True or False: A partial charge describes how strongly atoms pull on electrons in a chemical bond.
3. Which type of bond forms if one atom has a greater electronegativity than another?
   (a) nonpolar bond (c) formula unit
   (b) covalent network (d) polar bond
4. The simplest ratio of atoms in a covalent network is called a(n) __?__.
5. True or False: Covalent networks combine in fixed ratios.

ANSWERS

1. *Lewis structure*
2. *false*
3. *(d) polar bond*
4. *formula unit*
5. *true*

Appendix Quiz I

Science: *Matter and Energy*

Lesson 76

pp. 194–196

QUESTIONS

1. The word *ex nihilo* means "out of _?_."
2. True or False: The Bible specifically mentions energy being created.
3. Who wrote *Principles of Geology*?
   (a) Charles Darwin (c) Thomas Huxley
   (b) Stanley Miller (d) Charles Lyell
4. Who received the nickname "Darwin's bulldog"?
   (a) Charles Darwin (c) Thomas Huxley
   (b) Stanley Miller (d) Charles Lyell
5. The belief that the universe and life formed by gradual processes is _?_.

ANSWERS

1. *nothing*
2. *false*
3. *(d) Charles Lyell*
4. *(c) Thomas Huxley*
5. *evolution*

Appendix Quiz J

Science: *Matter and Energy*

Lesson 86

pp. 213–215

QUESTIONS

1. True or False: Classical physics is the branches of physics developed before 1900.
2. True or False: Classical physics includes optics and electromagnetism.
3. What type of quantity has both a magnitude and a direction?
4. What term describes an object's change in position?
5. What is the branch of science that studies matter and energy and the interactions between them?

ANSWERS

1. *true*
2. *true*
3. *vector quantity (vector)*
4. *displacement*
5. *physics*

Appendix Quiz K

Science: *Matter and Energy*

Lesson 98

pp. 246–247

QUESTIONS

1. True or False: The AMA of a pulley is greater than the IMA.
2. A combination of one or more fixed pulleys and one or more movable pulleys is a __?__.
   (a) block and tackle (c) movable
   (b) fixed (d) single movable pulley
3. True or False: A wheel and axle is a simple machine consisting of a wheel over which a rope passes.
4. Which simple machine is a sloping surface that allows an object to be raised without lifting it straight up?
   (a) block and tackle (c) pulley
   (b) lever (d) inclined plane
5. Which type of pulley is attached directly to a moving load?

ANSWERS

1. *false*
2. *(a) block and tackle*
3. *false*
4. *(d) inclined plane*
5. *movable pulley*

Appendix Quiz L

Science: *Matter and Energy*

Lesson 102

pp. 251–252

QUESTIONS

1. What is the term for a substance through which a wave transfers its energy?
2. What is the high point of a wave?
3. Which type of wave consists of compressions and rarefactions?
4. Which type of pulse occurs when particles are squeezed together?
5. True or False: Transverse waves oscillate at right angles to their direction of travel.

ANSWERS

1. *medium*
2. *crest*
3. *longitudinal*
4. *compression*
5. *true*

Appendix Quiz M

Science: *Matter and Energy*

Lesson 108

pp. 262–264

QUESTIONS

1. What term describes the human perception of frequency?
2. True or False: Sounds with pitches below the audible range are called infrasonic sounds.
3. True or False: When a source of sound moves toward a listener, the sound waves seem compressed.
4. True or False: When a listener moves toward a sound source, the sound waves seem compressed.
5. What is the name for the change in a sound's frequency caused by an object's motion?

ANSWERS

1. *pitch*
2. *true*
3. *true*
4. *true*
5. *Doppler effect*

Appendix Quiz N

Science: *Matter and Energy*

Lesson 121

pp. 292–296

QUESTIONS

1. True or False: The Doppler effect occurs with light.
2. True or False: Light containing waves that are aligned in the same direction are called dipolar.
3. True or False: Infrared rays are red-colored rays of light.
4. Which type of electromagnetic waves can be used for both communication and cooking food?
5. What name is given to electromagnetic waves that have frequencies perceived by human eyes?

ANSWERS

1. *true*
2. *false*
3. *false*
4. *microwaves*
5. *visible light*

Appendix Quiz O

Science: *Matter and Energy*

Lesson 129

pp. 311–313

QUESTIONS

1. What is the region around a charged object in which other objects are attracted or repelled by an electric force?
   (a) charge field (c) force field
   (b) electric field (d) static field
2. True or False: According to the law of electric charges, like charges attract.
3. True or False: According to the law of electric charges, opposite charges attract.
4. True or False: According to the law of electric force, charges exert more force on each other when they are farther apart.
5. What is the SI unit of electric charge?

ANSWERS

1. *(b) electric field*
2. *false*
3. *true*
4. *false*
5. *coulomb*

Appendix Quiz P

Science: *Matter and Energy*

Lesson 136

pp. 330–333

QUESTIONS

1. True or False: Molecular motion is the most important cause of magnetism.
2. What is the name for a group of aligned atoms having a single magnetic field?
3. Which type of substance has the most unpaired electrons per atom?
   (a) diamagnetic (c) paramagnetic
   (b) ferromagnetic (d) terramagnetic
4. Which type of substance is strongly attracted to either magnetic pole?
   (a) diamagnetic (c) paramagnetic
   (b) ferromagnetic (d) terramagnetic
5. True or False: A permanent magnet is made from magnetically soft materials.

ANSWERS

1. *false*
2. *domain*
3. *(b) ferromagnetic*
4. *(b) ferromagnetic*
5. *false*

Appendix Quiz Q

Science: *Matter and Energy*

Lesson 145

pp. 348–350

QUESTIONS

1. What is the SI unit of resistance?
   (a) ampere (c) ohm
   (b) coulomb (d) watt
2. What is the SI unit of current?
   (a) ampere (c) ohm
   (b) coulomb (d) watt
3. What type of materials allow the easy flow of current?
4. True or False: Power is equal to voltage times current.
5. Which device is used to measure an object's resistance?
   (a) ammeter (c) ohmmeter
   (b) electric meter (d) voltmeter

ANSWERS

1. *(c) ohm*
2. *(a) ampere*
3. *conductors*
4. *true*
5. *(c) ohmmeter*

Appendix Quiz R

Science: *Matter and Energy*

Lesson 156

pp. 374–376

QUESTIONS

1. Which branch of the study of electricity deals with the behavior and motion of electrons in a vacuum or special material?
2. What is another name for a glass tube containing electrodes sealed in a vacuum?
3. True or False: The cathode of a vacuum tube is a negative electrode.
4. True or False: Cathode rays were given their name because they are emitted from the cathode.
5. True or False: Thomas Edison discovered the x-ray.

ANSWERS

1. *electronics*
2. *vacuum tube*
3. *true*
4. *true*
5. *false*

Appendix Quiz S

Science: *Matter and Energy*

Lesson 158

pp. 379–381

QUESTIONS

1. A material that is neither a good conductor nor a good insulator is a(n) __?__.
2. What is the process of increasing the conductivity of a semiconductor crystal by replacing some atoms of the semiconductor with an impurity?
3. What device allows current to pass in only one direction?
   (a) semiconductor diode (c) transistor
   (b) semiconductor triode (d) junction transistor
4. True or False: A *p*-type semiconductor has additional electrons.
5. Which type of transistor is found in computer chips?
   (a) field effect (c) point-contact
   (b) junction (d) np-type

ANSWERS

1. *semiconductor*
2. *doping*
3. *(a) semiconductor diode*
4. *false*
5. *(a) field effect*

Appendix Quiz T

Science: *Matter and Energy*

Lesson 163

pp. 392–395

QUESTIONS

1. Name one of the three basic systems of hardware.
2. The brain of the computer is the __?__.
3. True or False: A computer stores information temporarily in ROM, or read-only memory.
4. Name the basic input device on a modern computer.
5. True or False: A device that converts digital data into analog data is called a modem.

ANSWERS

1. *processing*, *memory*, or *input and output*
2. *CPU* or *central processing unit*
3. *false*
4. *keyboard*
5. *true*

Appendix B

Sample Science Project Final Grade Forms

Student 1

Science Project Final Grade Form

Oral Presentation Criteria

I. Delivery/Content ..... 20 points

Consider the following:

- **Gave effective presentation**—posture, gestures, eye contact, vocal quality, interesting
- Delivered presentation **without relying too heavily on notes**
- Kept presentation **within the time range** assigned

8th grade (4–6 min.)	10th grade (6–8 min.)
9th grade (5–7 min.)	11th grade (7–9 min.)

Evaluate the oral presentation for adequate explanation of background, problem, hypothesis, variable, results, data, and conclusion.

Comments: Great presentation, just a little short.

Total points Section I: 18

II. Experimental Design of Project ..... 50 points

Consider the following:

- Constitutes **legitimate scientific investigation** (rather than a demonstration or model)
- Adheres to **investigation plan** (creative improvements are fine)
- Investigates a **specific problem** and offers a **sound hypothesis** regarding the solution
- Employs **controlled experiment(s)** having one variable and other factors held constant
- Reflects adequate **level of difficulty**
- Includes sufficient **sample size** and **number of experiments** or trials
- Applies **accurate measurement techniques** (reflected in journal) to ensure a valid conclusion

Comments: Excellent idea and execution of plan.

Total points Section II: 50

Exhibit Criteria

III. Design of Display/Content/Notebook

Consider the following concerning
the student's exhibit board: . . . . . 20 points 18

- Interesting and informative **title**
- Good **color** combination
- **Creative** display of information
- Straight, **neat,** logical arrangement
- **Pictures** or **drawings** that illustrate the topic/procedures; equipment/materials displayed if possible
- Type size and style that is **easily read**
- Clear, accurate **charts** and **graphs,** each titled and labeled

Check the display board for clear,
logical statements of the following: . . . . . 8 points 8

- Background
- Problem
- Hypothesis
- Procedure
- Variable
- Results
- Conclusion

Consider the following concerning
the student's notebook: . . . . . 2 points 2

- All the parts are included.
- The student has followed directions.

Comments: The title got lost in the blue background a little. The graphs could use some straightening; otherwise, an excellent board.

Total points Section III: 28

Points for Section I: 18
Points for Section II: + 50
Points for Section III: + 28
FINAL GRADE: 96
(counts as one test)

Approved for Science Fair: _____

Student 2

Science Project Final Grade Form

Oral Presentation Criteria

I. Delivery/Content ..... 20 points

Consider the following:

- **Gave effective presentation**—posture, gestures, eye contact, vocal quality, interesting
- Delivered presentation **without relying too heavily on notes**
- Kept presentation **within the time range** assigned

8th grade (4–6 min.)	10th grade (6–8 min.)
9th grade (5–7 min.)	11th grade (7–9 min.)

Evaluate the oral presentation for adequate explanation of background, problem, hypothesis, variable, results, data, and conclusion.

Comments: *Presentation was short, but it was complete. Read from cards a bit, but looked up frequently. Conclusion would have been better with application.*

Total points Section I: 13

II. Experimental Design of Project ..... 50 points

Consider the following:

- Constitutes **legitimate scientific investigation** (rather than a demonstration or model)
- Adheres to **investigation plan** (creative improvements are fine)
- Investigates a **specific problem** and offers a **sound hypothesis** regarding the solution
- Employs **controlled experiment(s)** having one variable and other factors held constant
- Reflects adequate **level of difficulty**
- Includes sufficient **sample size** and **number of experiments** or trials
- Applies **accurate measurement techniques** (reflected in journal) to ensure a valid conclusion

Comments: *Project was not extensive (three colored lights and white light control), but the sample size and number of experiments (germination and growth) was very good.*

Total points Section II: 46

Exhibit Criteria

III. Design of Display/Content/Notebook

Consider the following concerning
the student's exhibit board: . . . . . 20 points 20

- Interesting and informative **title**
- Good **color** combination
- **Creative** display of information
- Straight, **neat,** logical arrangement
- **Pictures** or **drawings** that illustrate the topic/procedures; equipment/materials displayed if possible
- Type size and style that is **easily read**
- Clear, accurate **charts** and **graphs,** each titled and labeled

Check the display board for clear,
logical statements of the following: . . . . . 8 points 8

- Background
- Problem
- Hypothesis
- Procedure
- Variable
- Results
- Conclusion

Consider the following concerning
the student's notebook: . . . . . 2 points 1

- All the parts are included.
- The student has followed directions.

Comments: Excellent board—colorful and attractive! Notebook needed title pages.

Total points Section III: 29

Points for Section I: 13

Points for Section II: + 46

Points for Section III: + 29

FINAL GRADE: 88

(counts as one test)

Approved for Science Fair: _____

Student 3

Science Project Final Grade Form

Oral Presentation Criteria

I. Delivery/Content ..... 20 points

Consider the following:

- **Gave effective presentation**—posture, gestures, eye contact, vocal quality, interesting
- Delivered presentation **without relying too heavily on notes**
- Kept presentation **within the time range** assigned

8th grade (4–6 min.)	10th grade (6–8 min.)
9th grade (5–7 min.)	11th grade (7–9 min.)

Evaluate the oral presentation for adequate explanation of background, problem, hypothesis, variable, results, data, and conclusion.

Comments: *Very short presentation—talked fast and could have explained procedure and results much better.*

Total points Section I: *8*

II. Experimental Design of Project ..... 50 points

Consider the following:

- Constitutes **legitimate scientific investigation** (rather than a demonstration or model)
- Adheres to **investigation plan** (creative improvements are fine)
- Investigates a **specific problem** and offers a **sound hypothesis** regarding the solution
- Employs **controlled experiment(s)** having one variable and other factors held constant
- Reflects adequate **level of difficulty**
- Includes sufficient **sample size** and **number of experiments** or trials
- Applies **accurate measurement techniques** (reflected in journal) to ensure a valid conclusion

Comments: *Project and plan were well thought through. Good execution and extensiveness.*

Total points Section II: *50*

Exhibit Criteria

III. Design of Display/Content/Notebook

Consider the following concerning
the student's exhibit board: . . . . . 20 points 12

- Interesting and informative **title**
- Good **color** combination
- **Creative** display of information
- Straight, **neat,** logical arrangement
- **Pictures** or **drawings** that illustrate the topic/procedures; equipment/materials displayed if possible
- Type size and style that is **easily read**
- Clear, accurate **charts** and **graphs,** each titled and labeled

Check the display board for clear,
logical statements of the following: . . . . . 8 points 8

- Background
- Problem
- Hypothesis
- Procedure
- Variable
- Results
- Conclusion

Consider the following concerning
the student's notebook: . . . . . 2 points 1

- All the parts are included.
- The student has followed directions.

Comments: Board could have used some more color and creativity— adding some photos would have filled in empty spaces. Graphs need titles. Heading titles look a little small. Notebook needed title pages.

Total points Section III: 21

Points for Section I: 8
Points for Section II: + 50
Points for Section III: + 21
FINAL GRADE: 79
(counts as one test)

Approved for Science Fair: _____

Appendix C

Home Teacher Materials Overview
Contact Information
Progress Reports

Home Teacher Materials Overview

Introduction

This section gives additional information about Abeka Academy policies and procedures to help you with grading, recording, and submitting your student's work in the **accredited program**. Please read all of the following information.

General Information

Course Requirements

1. Current edition textbooks are required for students in the Abeka Academy accredited program. This will ensure that students are able to follow along with all video instructions, including quizzes and tests.
2. For academic credit to be granted, a student must complete all courses in which he is enrolled. This includes watching all video lessons. A grade level may not be completed in less than six months.
3. Requests to change the enrollment (switching from Accredited to Independent Study [Unaccredited]) must be processed by our office. Please contact us if you have any questions regarding your student's enrollment.
4. **You must receive approval from Abeka Academy to drop a course** (only available in grades 9–12). Request must be made within thirty days of your assigned begin date for no academic penalty. **Courses dropped after thirty days or without approval will receive a "withdrawn failing" grade.**
5. Because Abeka Academy's primary objective is to provide a distinctly Christian distance-learning education, **Bible is a required course**. Grades will not be issued in other courses unless Bible work is received for that grading period. The Authorized King James Version is used for all Bible courses and verse memorization.
6. Abeka Academy provides video instruction for 170 days, giving you the opportunity to plan instruction, review, or enrichment specific to your student's needs for the remaining 10 days to complete a standard 180-day school year. The 10 extra days should be used throughout the year for added instruction, additional review, field trips, or other special events of academic benefit. Time could also be allotted for standardized testing available through abeka.com.

Projects

Please note the following regarding projects:

- **Follow all instructions** for projects. If you do the work as described, the project will move smoothly and efficiently.
- **Full credit can be given** only if the project meets the guidelines from the Daily Guides. Any project amendments must be cleared *in advance* with the Abeka Academy office.
- **Students living outside** the United States who have limited access to research resources may contact Abeka for guidance with project requirements. (See p. C7 for contact information.)
- **Students taking only second semester** courses may omit the science project.

Communication

Abeka Academy sends important communication by email. Please regularly check the email address that you provided for information related to your student's progress. If you are concerned you might not be receiving email from Abeka Academy, check your junk email folder or contact Abeka Academy to check your email address on file. See p. C7 for contact information.

Getting Started

Responsibilities of the Home Teacher

For the school year to run smoothly, it is important that you read the introductory information in the front of this manual and follow the instructions in the Daily Guides. At the end of each quarter, you will need to organize and mail (or upload) your student's Progress Reports. (See Academic Calendar at academy.abeka.com.)

Student Schedule

You and your student may arrange the order of classes as you prefer. We have found the order listed below to be best for most students.

1. Bible
2. Math
3. English
4. Science
5. History
6. Physical Education and optional elective

To avoid lengthening the school day, have your student do his homework at the end of the day rather than after each class.

You may want to **view the first day's video lesson** and watch the first two weeks of lessons with your student to become familiar with the procedures the video teachers use and to ensure that your student is developing correct study habits.

Semester exams are generally scheduled in lessons 85 and 170. You may want to allow one or more additional days after these lessons so that no more than two exams are taken in a single day.

Written Assignments

Require neat, legible work from your student. Do not accept messy work. Have him recopy any work that is poorly written or has too many corrections. Have your student write in ink. When a mistake is made, have him neatly draw a line through it and rewrite the word. Be sure he does not write over a mistake to correct it.

When writing reports and compositions, have your student use his own words. Teach him that material quoted or copied from other sources must be in quotation marks and properly referenced. Be sure to check work for plagiarism; otherwise, your student's grade will be lowered if the work is plagiarized. Reports and compositions may be handwritten or typed based on the home teacher's discretion.

Grading Policies

This section begins with general grading information and ends with specific information regarding digital assessments.

Administering Quizzes, Tests, and Exams

Quizzes are important for three reasons:

1. To evaluate mastery of recent material
2. To determine whether your student is understanding his work and reading
3. To effectively motivate your student to learn

Be sure to administer all pages of a test or exam, front and back. When your student has finished a test or exam, check for incomplete sections. It is the student's responsibility to complete all pages of each test and exam.

Handling Graded Materials

Quizzes, tests, exams, and answer keys are to be opened, administered, and stored only by you. They should not be left where your student will have access to them. **Your student may not use the video manuals to plan his work.** Keep all quizzes, tests, and exams in a locked location.

A student who cheats robs himself of a good education, and a home teacher who allows quizzes, tests, exams, or answer keys to be available to a student does great harm to the student's character.

Because it is of the utmost importance to teach your student to be absolutely honest, follow these guidelines in giving a quiz, a test, or an exam.

- **Completely read the instructions** for Giving / Grading Quizzes and Tests in the front of this manual.
- **Remove the quizzes, tests, and exams** from the book before the student takes them.
- **Closely supervise** all assessment periods. Do not leave your student alone with his materials.
- **Be sure all course materials** are out of sight while the student takes the quiz, test, or exam. **Open-book quizzes / tests are not allowed.**
- **Do not** help your student with answers or procedures on any quiz, test, or exam. If he needs any assistance at all, it should be only to explain the directions if he does not understand them. His work must be his own.
- **Quizzes, tests, and exams** cannot be retaken. If you think your student is not prepared, give extra help before the assessment is taken.

Grading

When grading student work, please remember the following:

- **Grade quizzes and tests** using the guidelines given in the front of this manual, appendices, or teacher keys.
- **Graded original tests and ungraded exams** (not copies) must be sent to the Abeka Academy office with the Progress Report.

- **Write the numerical grade** on the top of the test page and on the Progress Report before sending it to Abeka Academy.
- **If you have a question** on one of your student's answers, put a question mark instead of a grade on the Progress Report. On the test, make a note of your question.
- **Subtract 1 point** for each spelling error, up to 5 points for all quizzes and tests.

Grading Scale

A+	98–100	B	83–86	C–	70–72
A	93–97	B–	80–82	D+	67–69
A–	90–92	C+	77–79	D	60–66
B+	87–89	C	73–76	F	0–59

Progress Reports

Two sets of Progress Reports are included in this appendix. They provide a convenient way for you to organize the grades and materials that you must send to our office. The Progress Report must be sent to Abeka Academy as soon as the grading period is completed. (See Academic Calendar at academy.abeka.com for expected schedule.)

The Home Teacher's Progress Reports are included for your records. If for some reason Abeka Academy does not receive the Progress Report, your copies will be *the only record of the student's work*. It is imperative that you take the following precautions:

- **Enter all grades on both sets of Progress Reports** before mailing the report.
- **Promptly mail Progress Reports** at the end of each grading period.
- **Keep all Home Teacher's Progress Reports** permanently.

If these guidelines are not followed and work is not received, no grades or transcripts will be issued, and the student will be required to repeat the course.

Progress Reports should include the following items:

- Progress Report sheet with all information entered
- All original graded tests and ungraded exams for the course
- Any item which the Progress Report sheet directs to "check that this item is enclosed"

Please note the following:

- **Send a Progress Report** only when all items on the Progress Report have been completed. Do not include student work with DVD returns.
- **Include all items** requested on each Progress Report sheet, or the grade will be lowered accordingly. Quizzes are NOT sent with the Progress Report sheet.
- **Return DVDs** (if applicable) as soon as all items on the final Progress Report have been completed. Full year courses have three sets of DVDs.

Upon receipt of each progress report, Abeka Academy will validate your student's work, adjusting grades as needed to meet accredited requirements. Once all work is validated, you may check your student's grades online at academy.abeka.com.

Contact our office if a report card is not received within six weeks. Final report cards and transcripts cannot be completed until all work and all DVDs (if applicable) are received.

Digital Assessments

Students using digital assessments will complete all quizzes, tests, and exams online. These assessments are accessible by logging in to the student dashboard when an assessment is assigned in the Daily Guides. When logging in for the first time, your student will notice on the "To-Do List" that there is a practice test designed to familiarize him with the features and functions of digital assessments. Make sure he is comfortable with the practice test before taking the first quiz. All missed short answer and essay questions are double-checked by the Abeka Academy office before grades are finalized. Graded assessments may be viewed on the parent dashboard at any time.

For those using digital assessments, the Progress Reports are also completed and submitted online. These Progress Reports are accessible to you by logging in to your home teacher's dashboard. Digital assessment scores will be automatically filled in as grades are validated by the Abeka Academy office. For items graded by the home teacher, enter numerical grades in the boxes provided on the online Progress Reports. For courses that require uploading documents, forms, videos, or sound recordings, these uploads are required before the Progress Report can be submitted.

Additional Physical Science Information

Science Project

The science project will be graded by the home teacher using the guidelines in the manual and the directions given by the video teacher. The grade should be reported on the Progress Report form.

Sample video students' oral presentations are shown in lesson 102. The home teacher should watch these to help you when grading your own student. It is not necessary to send the science project to the Abeka Academy office.

All science project topics should meet parents' approval. Care must be taken that experiments are conducted in such a way that risk is minimal. Be sure that your student is following appropriate

safety measures under the supervision of a qualified scientist or responsible adult. Abeka Academy is not responsible for any injury sustained in the process of conducting the science project.

Science News Articles

The news articles are introduced in lesson 128. Your student should complete at least one news article, and you should record that grade as a quiz in lesson 164.

Calculators

Due to the mathematical nature of this course, there is work that requires math computation. Due to the level of skill required, students are to work the problems rather than use a calculator.

Tests

You will grade Tests 1, 2, 4, 5, 7, 8, 10, and 11 and send them to the Abeka Academy office. Record test grades on the appropriate Progress Report.

Quarter exams (Tests 3, 6, 9, and 12) are to be sent to the Abeka Academy office with the appropriate Progress Report to be graded.

Second Semester

Second-semester students should begin with lesson 86. The following questions will be omitted from the final examination for students taking only the second semester — 1–17, 27–31, 61, 69–70, 74–75, and 77–80.

How Can We Help You?

Contact Information

We are interested in helping your student successfully complete his work. Please let us know early if any problems are encountered. Enrollment, customer service, and academic agents are available to help with all your questions.

You may contact Abeka Academy by one of the following methods:

ONLINE **abeka.com/ContactInfo**

EMAIL **ABAsecondary@abeka.com**

PHONE U.S. and Canadian Inquiries **1-800-874-3592**
International Inquiries **1-850-479-6585**

MAIL For Progress Reports and office correspondence only:

USPS
Abeka Academy
PO Box 17600
Pensacola, FL 32522-7750
USA

Other Carriers
Abeka Academy
240 Waveland St.
Suite A
Pensacola, FL 32503

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

PHYSICAL SCIENCE
Progress Report

First Grading Period
Lessons 1–42
431J

Account No. ☐☐☐☐☐☐☐☐

Student ID No. ☐☐☐☐☐☐

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the background paper to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
5	1	_____
8	2	_____
10	3	_____
16	4	_____
19	5	_____
24	6	_____
30	7	_____
33	8	_____
37	9	_____
37	Background Paper*	_____
40	10	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
4	A	_____
13	B	_____
22	C	_____
28	D	_____
39	E	_____

SCIENCE TESTS

Lesson	Test	Grade
11	1	_____
25	2	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
42	3	( )

18

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

Home Teacher's Copy

PHYSICAL SCIENCE

Progress Report

First Grading Period
Lessons 1–42
431J

Account No. | | | | | | | | |

Student ID No. | | | | | | |

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the background paper to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
5	1	_____
8	2	_____
10	3	_____
16	4	_____
19	5	_____
24	6	_____
30	7	_____
33	8	_____
37	9	_____
37	Background Paper*	_____
40	10	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
4	A	_____
13	B	_____
22	C	_____
28	D	_____
39	E	_____

SCIENCE TESTS

Lesson	Test	Grade
11	1	_____
25	2	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
42	3	( )

18

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

PHYSICAL SCIENCE
Progress Report

Second Grading Period
Lessons 43–85
432J

Account No. ☐☐☐☐☐☐☐☐

Student ID No. ☐☐☐☐☐☐

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the Investigation Plan to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
47	11	_____
49	12	_____
52	13	_____
54	14	_____
57	15	_____
61	Investigation Plan*	_____
61	Investigation Plan*	_____
66	16	_____
68	17	_____
71	18	_____
74	19	_____
79	20	_____
82	21	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
45	F	_____
48	G	_____
53	H	_____
76	I	_____

SCIENCE TESTS

Lesson	Test	Grade
59	4	_____
75	5	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
85	6	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

Home Teacher's Copy

PHYSICAL SCIENCE

Progress Report

Second Grading Period
Lessons 43–85
432J

Account No. ☐☐☐☐☐☐☐☐

Student ID No. ☐☐☐☐☐☐

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the Investigation Plan to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
47	11	_____
49	12	_____
52	13	_____
54	14	_____
57	15	_____
61	Investigation Plan*	_____
61	Investigation Plan*	_____
66	16	_____
68	17	_____
71	18	_____
74	19	_____
79	20	_____
82	21	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
45	F	_____
48	G	_____
53	H	_____
76	I	_____

SCIENCE TESTS

Lesson	Test	Grade
59	4	_____
75	5	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
85	6	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

PHYSICAL SCIENCE
Progress Report

Third Grading Period
Lessons 86–127
433J

Account No. ☐☐☐☐☐☐☐☐

Student ID No. ☐☐☐☐☐☐

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the Science Project to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
90	22	_____
93	23	_____
97	24	_____
97	Followup	_____
100	25	_____
107	26	_____
111	27	_____
114	28	_____
120	29	_____
124	30	_____
125	31	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
86	J	_____
98	K	_____
102	L	_____
108	M	_____
121	N	_____

SCIENCE TESTS

Lesson	Test	Grade
101	7	_____
102	Science Project*	_____
115	8	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
127	9	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

Home Teacher's Copy

PHYSICAL SCIENCE

Progress Report

Third Grading Period
Lessons 86–127
433J

Account No. | | | | | | | | |

Student ID No. | | | | | | |

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

*It is not necessary to send the Science Project to the Abeka Academy office.

SCIENCE QUIZZES

Lesson	Quiz	Grade
90	22	_____
93	23	_____
97	24	_____
97	Followup	_____
100	25	_____
107	26	_____
111	27	_____
114	28	_____
120	29	_____
124	30	_____
125	31	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
86	J	_____
98	K	_____
102	L	_____
108	M	_____
121	N	_____

SCIENCE TESTS

Lesson	Test	Grade
101	7	_____
102	Science Project*	_____
115	8	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
127	9	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

PHYSICAL SCIENCE
Progress Report

Fourth Grading Period
Lessons 128–170
434J

Account No. ☐☐☐☐☐☐☐☐

Student ID No. ☐☐☐☐☐☐

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

SCIENCE QUIZZES

Lesson	Quiz	Grade
132	32	_____
135	33	_____
138	34	_____
149	35	_____
151	36	_____
153	37	_____
160	38	_____
164	Science News Article	_____
165	39	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
129	O	_____
136	P	_____
145	Q	_____
156	R	_____
158	S	_____
163	T	_____

SCIENCE TESTS

Lesson	Test	Grade
143	10	_____
155	11	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
170	12	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

You may check your student's grades online at academy.abeka.com.

Accredited students send Progress Reports to the address below. Do not send with any DVD or book returns. Independent Study (Unaccredited) students should keep these reports for their own records.

abeka Academy

Home Teacher's Copy

PHYSICAL SCIENCE

Progress Report

Fourth Grading Period
Lessons 128–170
434J

Account No. | | | | | | | | |

Student ID No. | | | | | | |

Student Name _____
Last First Middle

Home Teacher _____

Mailing Address _____

City _____ State _____

Country / ZIP Code _____

Abeka Academy
PO Box 17600
Pensacola, Florida 32522-7750

Date _____

Phone Number _____

Check if the above is a change of address for
☐ Shipping ☐ Mailing ☐ Billing ☐ Phone

Home Teacher:

All student work sent to our office becomes the unconditional property of Abeka Academy and is not returned to you.

Did you remember to:

- Subtract the number of wrong points from 100?
- Record numerical grades on lines?
- Attach all tests to this report? (It is not necessary to send quizzes.)
- Sign the video statement if you are able?

SCIENCE QUIZZES

Lesson	Quiz	Grade
132	32	_____
135	33	_____
138	34	_____
149	35	_____
151	36	_____
153	37	_____
160	38	_____
164	Science News Article	_____
165	39	_____

APPENDIX QUIZZES

Lesson	Quiz	Grade
129	O	_____
136	P	_____
145	Q	_____
156	R	_____
158	S	_____
163	T	_____

SCIENCE TESTS

Lesson	Test	Grade
143	10	_____
155	11	_____

To be graded by the Abeka Academy office; please check (✔) that it is enclosed.

Lesson	Exam	Check (✔)
170	12	( )

I personally verify that the student has watched all video lessons covered by this Progress Report and that all graded work was completed by the student under a proctor's supervision without any assistance or study materials. I understand that all grades are final following the validation of the work included in this packet and that all work submitted becomes the unconditional property of Abeka Academy and will not be returned.

Home Teacher's signature _____

Student's signature _____

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abeka
Pensacola, Florida

abeka.com