SRA Snapshots Video Science™: Level A
correlation to
National Science Education Standards
Grade 3

SRA Snapshots Video Science™ consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher's Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

KEY:

Reference	**Program Component**
Video	Video lessons on program DVDs
SE	Student Edition
TRB	Teacher's Resource Book
TG	Teacher's Guide

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Ask a question about objects, organisms, and events in the environment.
Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Plan and conduct a simple investigation.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Employ simple equipment and tools to gather data and extend the senses.
Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57 **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131** **Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138** **Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Use data to construct a reasonable explanation.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Communicate investigations and explanations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientific investigations involving asking and answering a question and comparing the answer with what scientists already know about the world.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing objects, events, and organisms; classifying them; and doing a fair test (experimenting).
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Simple instruments, such as magnifiers, thermometers, and rulers, provide more information than scientists obtain using only their senses.
Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57 **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131** **Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138** **Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists develop explanations using observations (evidence) and what they already know about the world (scientific knowledge. Good explanations are based on evidence from investigations,
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists review and ask questions about the results of other scientists' work.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard B: Physical Science
Properties of Objects and Materials
Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. Those properties can be measured using tools, such as rulers, balances, and thermometers.
Chapter 8, Lesson 1, Video B, SE page 158; Video C, SE page 159; Lesson 2, Process Skill, SE page167; KnowZone, SE pages 168-169; Lesson 3, Video B, SE page 172; Video C, SE page 173

Content Standard B: Physical Science
Properties of Objects and Materials
Objects are made of one or more materials, such as paper, word, and metal. Objects can be described by the properties of the materials from which they are made, and those properties can be used to separate or sort a group of objects or materials.
Chapter 4, Lesson 3, Video A, SE page 83 **Chapter 8, Lesson 1, Video B, SE page 156; Critical Thinking, SE page 161; Process Skill, SE page 161**

Content Standard B: Physical Science
Properties of Objects and Materials
Materials can exist in different states—solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.
Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Process Skills 161

Content Standard B: Physical Science
Position and Motion of Objects
The position of an object can be described by locating it relative to another object or the background.
Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE pages 140-141

Content Standard B: Physical Science
Position and Motion of Objects
An object's motion can be described by tracing and measuring its position over time.
Chapter 7, Lesson 1, Video A, SE page 135

Content Standard B: Physical Science
Position and Motion of Objects
The position and motion of objects can be changed by pushing or pulling. The size of the change is related to the strength of the push or pull.
Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144

Content Standard B: Physical Science
Position and Motion of Objects
Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of vibration.
Chapter 9, Lesson 1, Video C, SE page 181; Critical Thinking, SE page 183; Writing in Science, SE page 183; Process Skill, SE page 183

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Light travels in a straight line until it strikes an object. Light can be reflected by a mirror, refracted by a lens, or absorbed by the object.
Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another, Heat can move from one object to another by conduction.
Chapter 8, Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Electricity in circuits can produce light, heat, sound, and magnetic effects. Electrical circuits require a complete loop through which an electrical current can pass.
Chapter 9, Lesson 2, Video B, SE page 188; Video C, SE page 189; Process Skill, SE page 191

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Magnets attract and repel each other and certain kinds of other materials.
Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147

Content Standard C: Life Science
The Characteristics of Organisms
Organisms have basic needs. For example, animals need air, water, and food; plants require, air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 3, Video A, SE page 39** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; KnowZone, Se pages 52-53**

Content Standard C: Life Science
The Characteristics of Organisms
Each plant or animal has different structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing, and talking.
Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video C, SE page 19 **Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37; Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43**

Content Standard C: Life Science
The Characteristics of Organisms
The behavior of individual organisms is influenced by internal cues (such as hunger) and by external cues (such as a change in the environment). Humans and other organisms have senses that help them detect internal and external cues.
Chapter 3, Lesson 3, Video A, SE page 39; Video C, SE page 41 **Chapter 3, Lesson 3, Video B, SE page 62**

Content Standard C: Life Science
Life Cycles of Organisms
Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms.
Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

Content Standard C: Life Science
Life Cycles of Organisms
Plants and animals closely resemble their parents.
Chapter 1, Lesson 3, SE page 19

Content Standard C: Life Science
Life Cycles of Organisms
Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individual's interactions with the environment. Inherited characteristics include the color of flowers and the number of limbs of an animal. Other features, such as the ability to ride a bicycle, are learned through interactions with the environment and cannot be passed on to the next generation.
Chapter 2, Lesson 3, Video B, SE page 40; Video C, SE page 41

Content Standard C: Life Science
Organisms and Environments
All animal depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.
Chapter 2, Lesson 2, Video A, 31; Video B, SE page 32; Video C, SE page 33; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 **Energy Transfer, SE page 203**

Content Standard C: Life Science
Organisms and Environments
An organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce, and other die or more to new locations.
Chapter 2, KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video C, SE page 41; Process Skill, SE page 43

Content Standard C: Life Science
Organisms and Environments
All organisms cause changes in the environment where they live. Some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63**

Content Standard C: Life Science
Organisms and Environments
Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 3, Lesson 1, Video A, SE page 47; Video C, SE page 49; Lesson 3, Video A, SE page 61; Video C, SE page 63; Critical Thinking, SE page 65** **Chapter 4, Lesson 3, Video B, SE page 84; Video C, SE page 85** **Chapter 5, Lesson 2, Video C, SE page 101** **Chapter 9, Lesson 3, Video C, SE page 195**

Content Standard D: Earth and Space Science
Properties of Earth Materials
Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, or growing the plants we use as food. Earth materials provide many of the resources that humans use.
Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84 **Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 99** **Chapter 9, Lesson 3, Video C, SE page 195**

Content Standard D: Earth and Space Science
Properties of Earth Materials
Soils have properties of color and texture, capacity to retain water, and ability to support the growth of many kinds of plants, including those in our food supply.
Chapter 4, Lesson 2, Video C, SE page 77; Process Skill , SE page 79

Content Standard D: Earth and Space Science
Properties of Earth Materials
Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.
Chapter 4, Lesson 2, Video B, SE page 76; Writing in Science, SE page 79; KnowZone, SE pages 80-81

Content Standard D: Earth and Space Science
Objects in the Sky
The sun, moon, stars, clouds, birds, and airplanes all have properties, locations, and movements that can be observed and described.
Chapter 6, Lesson 1, Video A, SE page 113; Lesson 3, Video A, SE page 127; Process Skill, SE page 131

Content Standard D: Earth and Space Science
Objects in the Sky
The sun provides the light and heat necessary to maintain the temperature of the earth.
Chapter 6, Lesson 2, Video A, SE page 119

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
The surface of the earth changes. Some changes are due to the slow processes, such as erosion and weathering, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.
Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Process Skill, SE page 73; **LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84**

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.
Chapter 5, KnowZone, SE pages 96-97; Lesson 2, Process Skill, SE page 103; Lesson 3, Video A, SE page 105; Video B, SE page 106; Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
Objects in the sky have patterns of movement. The sun, for example, appears to move across the sky in the same way every day, but its path changes slowly over the seasons. The moon moves across the sky on a daily basis muck like the sun. The observable shape of the moon changes from day to day in a cycle that lasts about a month.
Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Process Skill, SE page 117; Lesson 3, Video A, SE page 127; Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Content Standard E: Science and Technology
Abilities of Technological Design
Identify a Simple Problem: In problem identification, children should develop the ability to explain a problem in their own words and identify a specific task and solution related to the problem.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard E: Science and Technology
Abilities of Technological Design
Propose a Solution: Students should make proposals to build something or get something to work better; they should be able to describe and communicate their ideas. Students should recognize that designing a solution might have constraints, such as cost, materials, time, space, or safety.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard E: Science and Technology
Abilities of Technological Design
Implementing a Solution: Children should develop abilities to work individually and collaboratively and to use suitable tools, techniques, and quantitative measurements when appropriate. Students should determine the ability to balance simple constraints in problem solving.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard E: Science and Technology
Abilities of Technological Design
Evaluate a Product or Design: Students should evaluate their own results or solutions to problems, as well as those of other children by considering how well a product or design met the challenge to solve a problem. When possible, students should use measurements and include constraints and other criteria in their evaluations. They should modify designs based on the results of evaluations.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard E: Science and Technology
Abilities of Technological Design
Communicate a Problem, Design, and Solution: Student abilities should include oral, written, and pictorial communication of the design process and product. The communication might be show and tell, group discussions, short written reports, or pictures, depending on the students' abilities and the design project.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard E: Science and Technology
Understanding about Science and Technology
People have always had questions about their world. Science is one way of answering questions and explaining the natural world.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Understanding about Science and Technology
People have always had problems and invented tools and techniques (ways of doing something) to solve problems. Trying to determine the effects of solutions help people avoid some new problems.
Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19 **Chapter 4, Lesson 3, Process Skill, SE page 87** **Chapter 5, KnowZone, SE pages 96-97**

Content Standard E: Science and Technology
Understanding about Science and Technology
Scientists and engineers often work in teams with different individuals doing different things that contribute to the results. This understanding focuses primarily on teams working together and secondarily, on the combination of scientists and engineer teams.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Understanding about Science and Technology
Women and men of all ages, backgrounds, and groups engage in a variety of scientific and technological work.
Chapter 3, Lesson 2 Process Skill, SE page 59 **Chapter 4, KnowZone, SE pages 80-81** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189**

Content Standard E: Science and Technology
Understanding about Science and Technology
Tools help scientists make better observations, measurements, and equipment for investigations. They help scientists see, measure, and do things that they could not otherwise see, measure, and do.
Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57 **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131** **Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138** **Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156**

Content Standard E: Science and Technology
Abilities to Distinguish Between Natural Objects and Objects Made by Humans
Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.
Chapter 3, Lesson 2, Video A, SE page 55 **Chapter 4, Lesson 2, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85** **Chapter 7, Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Process Skill, SE page 153** **Chapter 8, KnowZone, SE page 168-169; Lesson 3, video B, SE page 172; Video C, SE page 173**

Content Standard E: Science and Technology
Abilities to Distinguish Between Natural Objects and Objects Made by Humans
Objects can be categorized into two groups, natural and designed.
Chapter 3, Lesson 2, Video A, SE page 55 **Chapter 4, Lesson 2, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85** **Chapter 7, Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Process Skill, SE page 153** **Chapter 8, KnowZone, SE page 168-169; Lesson 3, video B, SE page 172; Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Safety and security are basic needs of humans. Safety involves freedom from danger, risk, or injury. Security involves feelings of confidence and lack of anxiety and fear. Student understandings include following safety rules for home and school, preventing abuse and neglect, avoiding injury, knowing whom to ask for help, and when and how to say no.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Individuals have some responsibility for their own health. Students should engage in personal care—dental hygiene, cleanliness, and exercise—that will maintain and improve health. Understandings include how communicable diseases, such as colds, are transmitted and some of the body defense mechanisms that prevent or overcome illness.
Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Nutrition is essential to health. Students should understand how the body uses food and how various foods contribute to health. Recommendations for good nutrition include eating a variety of foods, eating less sugar, and eating less fat.
Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Different substances can damage the body and how it functions. Such substances include tobacco, alcohol, over-the-counter medicines, and illicit drugs, Students should understand that some substances, such as prescription drugs, can be beneficial, but that any substance can be harmful is used inappropriately.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Characteristics and Changes in Populations
Human populations include groups of individual living in a particular location. One important characteristic of a human population is the population density—the number of individuals of a particular population that lives in a given amount of space.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Characteristics and Changes in Populations
The size of a human population can increase or decrease. Populations will increase unless other factors such as disease or famine decrease the population.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
Resources are things that we get from the living and nonliving environment to meet the needs and wants of a population.
Chapter 3, Lesson 3, Video A, SE page 61 **Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85** **Chapter 5, Lesson 2, Video A, SE page 99; Video C, SE page 101; Critical Thinking, SE page 103** **Chapter 9, Lesson 3, Video C, SE page 195**

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.
Chapter 3, Lesson 1, Video C, SE page 49 **Chapter 4, Lesson 2, Video C, SE page 77; Critical Thinking, SE page 79; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85** **Chapter 9, Lesson 3, Video C, SE page 195**

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
The supply of many resources is limited. If used, resources can be extended through recycling and decreased use.
Chapter 4, Lesson 3, Video C, SE page 85

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.
Chapter 1, Lesson 1, Video A, SE page 3 **Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Lesson 3, Video A, SE page 39**

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Changes in environments can be natural or influenced by humans. Some changes are good, some are bad, and some are neither good nor bad. Pollution is a change in the environment that can influence the health, survival, or activities of organisms, including humans.
Chapter 2, Lesson 1, Video C, SE page 27; Critical Thinking, SE page 29; Lesson 2, Critical Thinking, SE page 35; Process Skill, SE page 35 **Chapter 3, Lesson 3, Video B, SE page 62; Critical Thinking, SE page 65**

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Some environmental changes occur slowly, and others occur rapidly. Students should understand the different consequences of changing environments in small increments over long period as compared with changing environments in large increments over short periods.
Chapter 2, Lesson 1, Video C, SE page 27; Critical Thinking, SE page 29; Lesson 2, Critical Thinking, SE page 35; Process Skill, SE page 35 **Chapter 3, Lesson 3, Video A, SE page 671; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65** **Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Local Challenges
People continue inventing new ways of doing things, solving problems, and getting work done. New ideas and inventions often affect other people; sometimes the effects are good and sometimes they are bad. It is helpful to try to determine in advance how ideas and inventions will affect other people.
Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Math in Science, SE page 59 **Chapter 5, KnowZone SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video BC, SE page 128; Video C, 129**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Local Challenges
Science and technology have greatly improved food quality and quantity, transportation, health, sanitation, and communication. These benefits of science and technology are not available to all the people in the world.
Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Math in Science, SE page 59 **Chapter 4, Lesson 1, Process Skill, SE page 73** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, 105** **Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 8, KnowZone, SE pages 168-169**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Science and technology have been practiced by people for a long time.
Chapter 3, Lesson 2 Process Skill, SE page 59 **Chapter 4, KnowZone, SE pages 80-81** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Men and women have made a variety of contributions throughout the history of science and technology.
Chapter 3, Lesson 2 Process Skill, SE page 59 **Chapter 4, KnowZone, SE pages 80-81** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Although men and women using scientific inquiry have learned much about the objects, events, and phenomena in nature, much more remains to be understood. Science will never be finished.
Chapter 3, Lesson 2, Process Skill, SE page 59 **Chapter 4, Lesson 1, Video C, SE page 71; Critical Thinking, SE page 73; Lesson 3, Critical Thinking, SE page 87** **Chapter 5, Lesson 3, Video B, SE page 106; Video C, SE page 107; Process Skill, SE page 109** **Chapter 6, KnowZone, SE pages 124-125; Lesson 2, Video A, SE page 118; Video B, SE page 1 20; Critical thinking, SE page 123; Lesson 3, Video B, SE page 128; Video C, SE page 129**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Many people choose science as a career and devote their entire lives to studying it. Many people derive great pleasure from doing science.
Chapter 3, Lesson 2, Critical Thinking, SE page 159; Process Skill, SE page 59 **Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Process Skill, SE page 95; Lesson 3, Video A, SE page 105; Critical Thinking, SE page 109** **Chapter 6, Lesson 3, Critical Thinking, SE page 131** **Chapter 9, Lesson 3, Video C, SE page 195**

SRA Snapshots Video Science™: Level B
correlation to
National Science Education Standards
Grade 4

SRA Snapshots Video Science™ consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher's Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

KEY:

Reference	**Program Component**
Video	Video lessons on program DVDs
SE	Student Edition
TRB	Teacher's Resource Book
TG	Teacher's Guide

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Ask a question about objects, organisms, and events in the environment.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Plan and conduct a simple investigation.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Employ simple equipment and tools to gather data and extend the senses.
Chapter 1, Lesson 1, Video A, SE page 3 **Chapter 4, Lesson 2, Video C, SE page 77** **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9 KnowZone, SE pages 196-197**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Use data to construct a reasonable explanation.
Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 2, Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 2, Process Skill, SE page 123; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Science
Communicate investigations and explanations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientific investigations involving asking and answering a question and comparing the answer with what scientists already know about the world.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing objects, events, and organisms; classifying them; and doing a fair test (experimenting).
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Simple instruments, such as magnifiers, thermometers, and rulers, provide more information than scientists obtain using only their senses.
Chapter 1, Lesson 1, Video A, SE page 3 **Chapter 4, Lesson 2, Video C, SE page 77** **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9 KnowZone, SE pages 196-197**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists develop explanations using observations (evidence) and what they already know about the world (scientific knowledge. Good explanations are based on evidence from investigations,
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings about Scientific Inquiry
Scientists review and ask questions about the results of other scientists' work.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard B: Physical Science
Properties of Objects and Materials
Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. Those properties can be measured using tools, such as rulers, balances, and thermometers.
Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Process Skill, SE page 139; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147

Content Standard B: Physical Science
Properties of Objects and Materials
Objects are made of one or more materials, such as paper, wood, and metal. Objects can be described by the properties of the materials from which they are made, and those properties can be used to separate or sort a group of objects or materials.
Chapter 4, Lesson 2, Video A, SE page 81 **Chapter 7, Lesson 1, Video B, SE page 136; Lesson 3, Video B, SE page 150; Video C, SE page 151** **Chapter 9, Lesson 1, Video B, SE page 180**

Content Standard B: Physical Science
Properties of Objects and Materials
Materials can exist in different states—solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.
Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 3, Video C, SE page 151

Content Standard B: Physical Science
Position and Motion of Objects
The position of an object can be described by locating it relative to another object or the background.
See Level A: **Chapter 7, Lesson 1, Video A, SE page 135** **See also Level C:** **Chapter 9, Lesson 2, Video A, SE page 187**

Content Standard B: Physical Science
Position and Motion of Objects
An object's motion can be described by tracing and measuring its position over time.
Level B: **Chapter 8, Lesson 3, Video A, SE page 171** **See also Level A:** **Chapter 7, Lesson 1, Video A, SE page 135** **See also Level C:** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Critical Thinking, SE page 191; Process Skill, SE page 191**

Content Standard B: Physical Science
Position and Motion of Objects
The position and motion of objects can be changed by pushing or pulling. The size of the change is related to the strength of the push or pull.
See Level A: **Chapter 7, Lesson 1, Video C, SE page 135; Video B, SE page 136; Video C, SE page 137** **See also Level C:** **Chapter 9, Lesson 1, Video A, SE page 179; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195**

Content Standard B: Physical Science
Position and Motion of Objects
Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of vibration.
Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Writing in Science, SE page 161; Process Skill, SE page 161; LabTime Hands-On Activity 8, TRB Pages 141-143; TG Page 156

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Light travels in a straight line until it strikes an object. Light can be reflected by a mirror, refracted by a lens, or absorbed by the object.
Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another, Heat can move from one object to another by conduction.
See Level A: **Chapter 8, Lesson 3, Video A, , SE page 171; Video B, SE page 172; Video C, SE page 173** **See also Level C:** **Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164**

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Electricity in circuits can produce light, heat, sound, and magnetic effects. Electrical circuits require a complete loop through which an electrical current can pass.
Chapter 9, Lesson 1, Video C, SE page 181

Content Standard B: Physical Science
Light, Heat Electricity, and Magnetism
Magnets attract and repel each other and certain kinds of other materials.
Chapter 9, Lesson 2, Video A, SE page 185

Content Standard C: Life Science
The Characteristics of Organisms
Organisms have basic needs. For example, animals need air, water, and food; plants require, air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.
Chapter 1, Lesson 1, Video A, SE page 3; Lesson 3, Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21 **Chapter 2, Lesson 1, Video A, SE page 25; Lesson 2, Video A, SE page 31; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 2, Video A, SE page 55**

Content Standard C: Life Science
The Characteristics of Organisms
Each plant or animal has different structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing, and talking.
Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19 **Chapter 2, KnowZone, SE pages 36-37** **Chapter 3, Lesson 1, Video B, SE page 48; KnowZone, SE pages 52-53; Lesson 2, Video B, SE page 56**

Content Standard C: Life Science
The Characteristics of Organisms
The behavior of individual organisms is influenced by internal cues (such as hunger) and by external cues (such as a change in the environment). Humans and other organisms have senses that help them detect internal and external cues.
Chapter 1, Lesson 2, Video B, SE page 10 **Chapter 3, Lesson 1, Video B, SE page 48; Video C, SE page 49**

Content Standard C: Life Science
Life Cycles of Organisms
Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms.
Level B: **Chapter 1, Lesson 3, Video C, SE page 19** **See also Level A:** **Chapter 1, Lesson 3, Video B, SE page 18; Process Skill, SE page 21** **See also Level C:** **Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37**

Content Standard C: Life Science
Life Cycles of Organisms
Plants and animals closely resemble their parents.
Chapter 1, Lesson 2, Video B, SE page 10

Content Standard C: Life Science
Life Cycles of Organisms
Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individual's interactions with the environment. Inherited characteristics include the color of flowers and the number of limbs of an animal. Other features, such as the ability to ride a bicycle, are learned through interactions with the environment and cannot be passed on to the next generation.
Chapter 1, Lesson 2, Video C, SE page 11; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Content Standard C: Life Science
Organisms and Environments
All animal depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.
Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Content Standard C: Life Science
Organisms and Environments
An organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce, and other die or more to new locations.
Chapter 1, Lesson 2, Video C, SE page 11; Writing in Science, SE page 13 **Chapter 3, Lesson 1, Video B, SE page 48; Video C, SE page 49; KnowZone, SE pages 52-53**

Content Standard C: Life Science
Organisms and Environments
All organisms cause changes in the environment where they live. Some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.
Chapter 2, Lesson 1, Video B, SE page 26; Lesson 3, Video C, SE page 41 **Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63**

Content Standard C: Life Science
Organisms and Environments
Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.
Chapter 2, Lesson 1, Video B, SE page 26; Critical Thinking, SE page 29; Lesson 3, Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43 **Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59; Lesson 3, Video C, SE page 62; Video C, SE page 63; Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66**

Content Standard D: Earth and Space Science
Properties of Earth Materials
Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, or growing the plants we use as food. Earth materials provide many of the resources that humans use.
Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 **Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97** **Chapter 9, Lesson 2, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195**

Content Standard D: Earth and Space Science
Properties of Earth Materials
Soils have properties of color and texture, capacity to retain water, and ability to support the growth of many kinds of plants, including those in our food supply.
See Level A: **Chapter 4, Lesson 2, Video C, SE page 77; Process Skill, SE page 79** **See also Level C:** **Chapter 4, Lesson 3, Video C, SE page 85**

Content Standard D: Earth and Space Science
Properties of Earth Materials
Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.
Chapter 1, Lesson 1, Video C, SE page 5; Math in Science, SE page 7; Process Skill, SE page 7 **Chapter 4, Lesson 2, Video B, SE page 76; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84**

Content Standard D: Earth and Space Science
Objects in the Sky
The sun, moon, stars, clouds, birds, and airplanes all have properties, locations, and movements that can be observed and described.
See Level A: **Chapter 6, Lesson 3, Video A, SE page 127**

Content Standard D: Earth and Space Science
Objects in the Sky
The sun provides the light and heat necessary to maintain the temperature of the earth.
Chapter 2, Lesson 2, Video A, SE page 31; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 **Chapter 5, Lesson 1, Video A, SE page 91; KnowZone, SE pages 102-103** **Chapter 6, Lesson 1, Video A, SE page 113** **Chapter 8, Lesson 2, Video A, SE page 163**

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
The surface of the earth changes. Some changes are due to the slow processes, such as erosion and weathering, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.
Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.
Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video B, SE page 98; Video C, SE page 99; Process Skill, SE page 101; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Content Standard D: Earth and Space Science
Changes in the Earth and Sky
Objects in the sky have patterns of movement. The sun, for example, appears to move across the sky in the same way every day, but its path changes slowly over the seasons. The moon moves across the sky on a daily basis muck like the sun. The observable shape of the moon changes from day to day in a cycle that lasts about a month.
Chapter 6, Lesson 1, Video B, SE page 114; Video C, SE page 115; Process Skill, SE page 117

Content Standard E: Science and Technology
Abilities of Technological Design
Identify a Simple Problem: In problem identification, children should develop the ability to explain a problem in their own words and identify a specific task and solution related to the problem.
Chapter 6, Lesson 1 Process Skill, SE page 117 **Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Abilities of Technological Design
Propose a Solution: Students should make proposals to build something or get something to work better; they should be able to describe and communicate their ideas. Students should recognize that designing a solution might have constraints, such as cost, materials, time, space, or safety.
Chapter 6, Lesson 1 Process Skill, SE page 117 **Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Abilities of Technological Design
Implementing a Solution: Children should develop abilities to work individually and collaboratively and to use suitable tools, techniques, and quantitative measurements when appropriate. Students should determine the ability to balance simple constraints in problem solving.
Chapter 6, Lesson 1 Process Skill, SE page 117 **Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Abilities of Technological Design
Evaluate a Product or Design: Students should evaluate their own results or solutions to problems, as well as those of other children by considering how well a product or design met the challenge to solve a problem. When possible, students should use measurements and include constraints and other criteria in their evaluations. They should modify designs based on the results of evaluations.
Chapter 6, Lesson 1 Process Skill, SE page 117 **Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Abilities of Technological Design
Communicate a Problem, Design, and Solution: Student abilities should include oral, written, and pictorial communication of the design process and product. The communication might be show and tell, group discussions, short written reports, or pictures, depending on the students' abilities and the design project.
Chapter 6, Lesson 1 Process Skill, SE page 117 **Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Understanding about Science and Technology
People have always had questions about their world. Science is one way of answering questions and explaining the natural world.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Understanding about Science and Technology
People have always had problems and invented tools and techniques (ways of doing something) to solve problems. Trying to determine the effects of solutions help people avoid some new problems.
Chapter 5, Lesson 2, Video C, SE page 99 **Chapter 6, Lesson 2, Process Skill, SE page 123; KnowZone, SE pages 130-131**

Content Standard E: Science and Technology
Understanding about Science and Technology
Scientists and engineers often work in teams with different individuals doing different things that contribute to the results. This understanding focuses primarily on teams working together and secondarily, on the combination of scientists and engineer teams.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard E: Science and Technology
Understanding about Science and Technology
Women and men of all ages, backgrounds, and groups engage in a variety of scientific and technological work.
Chapter 4, Lesson 2, Video C, SE page 77 **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131** **Chapter 7, Lesson 3, Video A, SE page 149** **Chapter 8 KnowZone, SE pages 168-169** **Chapter 9 KnowZone, SE pages 196-197**

Content Standard E: Science and Technology
Understanding about Science and Technology
Tools help scientists make better observations, measurements, and equipment for investigations. They help scientists see, measure, and do things that they could not otherwise see, measure, and do.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147** **Chapter 8, Lesson 3, Process Skill, SE page 175** **The Metric System, SE pages 200-201**

Content Standard E: Science and Technology
Abilities to Distinguish Between Natural Objects and Objects Made by Humans
Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.
Chapter 1, KnowZone, SE pages 14-15 **Chapter 3, Lesson 1, Video C, SE page 49; Lesson 2, Video C, SE page 57** **Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 130-131** **Chapter 7, Lesson 7, KnowZone, SE pages 140-141** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169; Lesson 3, Video C, SE page 173** **Chapter 9, Lesson 2, Video B, SE page 186; Video C, SE page 187; Lesson 3, Video A, SE page 191; Video B, SE page 192**

Content Standard E: Science and Technology
Abilities to Distinguish Between Natural Objects and Objects Made by Humans
Objects can be categorized into two groups, natural and designed.
Chapter 1, KnowZone, SE pages 14-15 **Chapter 3, Lesson 1, Video C, SE page 49; Lesson 2, Video C, SE page 57** **Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 130-131** **Chapter 7, Lesson 7, KnowZone, SE pages 140-141** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169; Lesson 3, Video C, SE page 173** **Chapter 9, Lesson 2, Video B, SE page 186; Video C, SE page 187; Lesson 3, Video A, SE page 191; Video B, SE page 192**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Safety and security are basic needs of humans. Safety involves freedom from danger, risk, or injury. Security involves feelings of confidence and lack of anxiety and fear. Student understandings include following safety rules for home and school, preventing abuse and neglect, avoiding injury, knowing whom to ask for help, and when and how to say no.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Individuals have some responsibility for their own health. Students should engage in personal care—dental hygiene, cleanliness, and exercise—that will maintain and improve health. Understandings include how communicable diseases, such as colds, are transmitted and some of the body defense mechanisms that prevent or overcome illness.
See Level A: **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Nutrition is essential to health. Students should understand how the body uses food and how various foods contribute to health. Recommendations fro good nutrition include eating a variety of foods, eating less sugar, and eating less fat.
See Level A: **Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Different substances can damage the body and how it functions. Such substances include tobacco, alcohol, over-the-counter medicines, and illicit drugs, Students should understand that some substances, such as prescription drugs, can be beneficial, but that any substance can be harmful is used inappropriately.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Characteristics and Changes in Populations
Human populations include groups of individual living in a particular location. One important characteristic of a human population is the population density—the number of individuals of a particular population that lives in a given amount of space.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Characteristics and Changes in Populations
The size of a human population can increase or decrease. Populations will increase unless other factors such as disease or famine decrease the population.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
Resources are things that we get from the living and nonliving environment to meet the needs and wants of a population.
Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87 **Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97** **Chapter 9, Lesson 3, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195**

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.
Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87 **Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97** **Chapter 9, Lesson 3, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195**

Content Standard F: Science in Personal and Social Perspectives
Types of Resources
The supply of many resources is limited. If used, resources can be extended through recycling and decreased use.
Chapter 3, Lesson 3, Video C, SE page 63

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.
Chapter 2, Lesson 1, Video B, SE page 26

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Changes in environments can be natural or influenced by humans. Some changes are good, some are bad, and some are neither good nor bad. Pollution is a change in the environment that can influence the health, survival, or activities of organisms, including humans.
Chapter 2, Lesson 1, Video B, SE page 26; Lesson 2, Critical Thinking, SE page 25; Lesson 3, Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43 **Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65; Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66**

Content Standard F: Science in Personal and Social Perspectives
Changes in Environments
Some environmental changes occur slowly, and others occur rapidly. Students should understand the different consequences of changing environments in small increments over long period as compared with changing environments in large increments over short periods.
Chapter 1, Lesson 1, Video C, SE page 5 **Chapter 2, Lesson 1, Video B, SE page 26; Critical Thinking, SE page 29; Lesson 2, Critical Thinking, SE page 35; Lesson 3, Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43** **Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65; Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Local Challenges
People continue inventing new ways of doing things, solving problems, and getting work done. New ideas and inventions often affect other people; sometimes the effects are good and sometimes they are bad. It is helpful to try to determine in advance how ideas and inventions will affect other people.
Chapter 4, Lesson 1, Video B, SE page 70; Lesson 3, Video C, SE page 83 **Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Process Skill, SE page 129** **Chapter 7, KnowZone, SE pages 140-141** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video C, SE page 187; Process Skill, SE page 189; Lesson 3, Video A, SE page 191; Process Skill, SE page 195; KnowZone, SE pages 196-197**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Local Challenges
Science and technology have greatly improved food quality and quantity, transportation, health, sanitation, and communication. These benefits of science and technology are not available to all the people in the world.
Chapter 4, Lesson 3, Video B, SE page 82; Video C, SE page 83 **Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103** **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 27; KnowZone, SE pages 130-131** **Chapter 7, KnowZone, SE pages 140-141** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169; Lesson 3, Video C, SE page 173** **Chapter 9, Lesson 2, Video C, SE page 187; Lesson 3, Video A, SE page 191; Video B, SE page 192; Process Skill, SE page 195; KnowZone, SE pages 196-197**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Science and technology have been practiced by people for a long time.
Chapter 5, Lesson 2, Video C, SE page 99 **Chapter 6, Lesson 2, Process Skill, SE page 123; Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C< SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131** **Chapter 7, KnowZone, SE pages 140-141; Lesson 3, Video A, SE page 149** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, KnowZone, SE pages 196-197**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Men and women have made a variety of contributions throughout the history of science and technology.
Chapter 4, Lesson 2, Video C, SE page 77 **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131** **Chapter 7, Lesson 3, Video A, SE page 149** **Chapter 8 KnowZone, SE pages 168-169** **Chapter 9 KnowZone, SE pages 196-197**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Although men and women using scientific inquiry have learned much about the objects, events, and phenomena in nature, much more remains to be understood. Science will never be finished.
Chapter 1, Lesson 1, Process Skill, SE page 7 **Chapter 2, Lesson 3, Process Skill, SE page 43** **Chapter 3, Lesson 3, Critical Thinking, SE page 65** **Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73** **Chapter 5, KnowZone, SE pages 102-103** **Chapter 6, Lesson 2, Video C, SE page 121; Lesson 3. Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Critical Thinking, SE page 129; Process Skill, SE page 129** **Chapter 7, KnowZone, SE pages 140-141** **Chapter 9, Lesson 3, Video B, SE page 192**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Many people choose science as a career and devote their entire lives to studying it. Many people derive great pleasure from doing science.
Chapter 2, Lesson 1, Process Skill, SE page 29; Lesson 3, Process Skill, SE page 43 **Chapter 5, Lesson 2, Video C, SE page 99** **Chapter 6, Lesson 2, Video C, SE page 121**

SRA Snapshots Video Science™: Level C
correlation to
National Science Education Standards
Grade 5

SRA Snapshots Video Science™ consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (**SE**) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (**TRB**) provides support activities in a blackline master format. The Teacher's Guide (**TG**) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

KEY:

Reference	**Program Component**
Video	Video lessons on program DVDs
SE	Student Edition
TRB	Teacher's Resource Book
TG	Teacher's Guide

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Identify Questions That Can Be Answered through Scientific Investigations. Students should develop the ability to refine and refocus broad and ill-defined questions. An important aspect of this ability consists of students' ability to clarify questions and inquires and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations. Students should develop the ability to identify their questions with scientific ideas, concepts, and quantitative relationships that guide investigation.
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Design and Conduct a Scientific Investigation. Students should develop general abilities, such as systematic observation, making accurate measurements, and identifying and controlling variables. They should also develop the ability to clarify their ideas that are influencing and guiding the inquiry, and to understand how those ideas compare with current scientific knowledge. Students can learn to formulate questions, design investigations, execute investigations, interpret data, use evidence to generate explanations, propose alternative explanations, and critique explanations and procedures.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Use Appropriate Tools and Techniques to Gather, Analyze, and Interpret Data. The use of tools and techniques, including mathematics, will be guided by the question asked and the investigations students design. The use of computers for the collection, summary, and display of evidence is part of this standard. Students should be able to access, gather, store, retrieve, and organize data, using hardware and software designed for these purposes.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Develop Descriptions, Explanations, Predictions, and Models Using Evidence. Students should base their explanations on what they observed, and as they develop cognitive skills, they should be able to differentiate explanation from description—providing causes for effects and establishing relationships based on evidence and logical argument. This standard requires a subject matter knowledge base so the students can effectively conduct investigations, because developing explanations establishes connections between the content of science and the contexts within which students develop new knowledge.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Think Critically and Logically to Make the Relationships Between Evidence and Explanations. Thinking critically about evidence includes deciding what evidence should be used and accounting for anomalous data. Specifically, students should be able to review the data from a simple experiment, summarize the data, and form a logical argument about the cause-and-effect relationship in the experiment. Students should begin to state some explanations in terns of the relationships between two or more variables.
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Recognize and Analyze Alternative Explanations and Predictions. Students should develop the ability to listen to and respect the explanations proposed by other students. They should remain open to and acknowledge different ideas and explanations, be able to accept the skepticism of others, and consider alternative explanations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 3, Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Communicate Scientific Procedures and Explanations. With practice, students should become competent at communicating experimental methods, following instructions, describing observations, summarizing the results of other groups, and telling other students about investigations and explanations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Abilities Necessary to Do Scientific Inquiry
Use Mathematics in all Aspects of Scientific Inquiry. Mathematics is essential to asking and answering questions about the natural world. Mathematics can be used to ask questions; to gather, organize, and present data; and to structure convincing explanations.
Chapter 1, Lesson 1 Math in Science, SE page 7 **Chapter 2, Lesson 2 Math in Science, SE page 35** **Chapter 4, Lesson 1 Math in Science, SE page 73** **Chapter 5, Lesson 2 Math in Science, SE page 101** **Chapter 7, Lesson 2 Math in Science, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3 Math in Science, SE page 175; Process Skill, SE page 175** **The Metric System, SE pages 200-201**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Different kinds of questions suggest different kinds of scientific investigations, Some investigations involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve seeking more informational some involve discovery of new objects and phenomena; and some involve making models.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Current scientific knowledge and understanding guide scientific investigations. Different scientific domains employ different methods, core theories, and standards to advance scientific knowledge and understanding.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Mathematics is important to all aspects of scientific inquiry.
Chapter 1, Lesson 1 Math in Science, SE page 7 **Chapter 2, Lesson 2 Math in Science, SE page 35** **Chapter 4, Lesson 1 Math in Science, SE page 73** **Chapter 5, Lesson 2 Math in Science, SE page 101** **Chapter 7, Lesson 2 Math in Science, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3 Math in Science, SE page 175; Process Skill, SE page 175** **The Metric System, SE pages 200-201**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Technology used to gather data enhances accuracy and allows scientists to analyze and quantify results of investigations.
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, SE page 81** **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174** **The Metric System, SE pages 200-201**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Scientific explanations emphasize evidence, have logically consistent arguments, and use scientific principles, models, and theories. The scientific community accepts and uses such explanations until displaced by better scientific ones. When such displacement occurs, science advances.
Chapter 1, Lesson 1, Process Skill, SE page 7; Lesson 3, Process Skill, SE page 19; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; Lesson 2, Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Science advances through legitimate skepticism. Asking questions and querying other scientists' explanations is part of scientific inquiry. Scientists evaluate the explanations proposed by other scientists by examining evidence, comparing evidence, identifying faulty reasoning, pointing out statements that go beyond the evidence, and suggesting alternative explanations for the same observations.
Chapter 1, Lesson 3, Critical Thinking, SE page 19 **Chapter 2, Lesson 2, Critical Thinking, SE page 35** **Chapter 3, Lesson 1, Critical Thinking, SE page51; Lesson 3, Critical Thinking, SE page 65** **Chapter 4, Lesson 3, Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Critical Thinking, SE page 95** **Chapter 7, Lesson 2, Critical Thinking, SE page 147** **Chapter 8, Lesson 2, Critical Thinking, SE page 167; Lesson 3, Critical Thinking, SE page 175** **Chapter 9, Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195; , Critical Thinking, SE page 197**

Content Standard A: Science as Inquiry
Understandings About Scientific Inquiry
Scientific investigations sometimes result in new ideas and phenomena for study, generate new methods or procedures for an investigation, or develop new technologies to improve the collection of data. All of these results can lead to new investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard B: Physical Science
Properties and Changes of Properties in Matter
A substance has characteristic properties, such as density, a boiling point, and solubility, all of which are independent of the amount of the sample. A mixture of substances often can be separated into the original substances using one or more of the characteristic properties.
Chapter 7, Lesson 1, Video A, SE page 135; Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 2, Video A, SE page 143; Video B, SE page 144; Process Skill, SE page 147

Content Standard B: Physical Science
Properties and Changes of Properties in Matter
Substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties. In chemical reactions, the total mass is conserved. Substances often are placed in categories or groups if they react in similar ways; metals is an example of such a group.
Chapter 7, Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Content Standard B: Physical Science
Properties and Changes of Properties in Matter
Chemical elements do not break down during normal laboratory reactions involving such treatments as heating, exposure to electric current, or reaction with acids. There are more than 100 known elements that combine in a multitude of ways to produce compounds, which account for the living and nonliving substances that we encounter.
Chapter 7, Lesson 1, Video A, SE page 135; Critical Thinking, SE page 139; KnowZone, SE pages 140-141; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 **The Periodic Table, SE pages 206-207**

Content Standard B: Physical Science
Motion and Forces
The motion of an object can be described by its position, direction of motion, and speed. That motion can be measured and represented on a graph.
Chapter 9, Lesson 1, Video A, SE page 179; KnowZone, SE pages 184-185; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Critical Thinking, SE page 191; Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard B: Physical Science
Motion and Forces
An object that is not being subjected to a force will continue to move at a constant speed and in a straight line.
Chapter 9, Lesson 3, Video A, SE page 193

Content Standard B: Physical Science
Motion and Forces
If more than one force acts on an object along a straight line, then the forces will reinforce or cancel one another, depending on their direction and magnitude. Unbalanced forces will cause changes in the speed or direction of an object's motion.
Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Critical Thinking, SE page 183; Process Skill, SE page 183; Lesson 3, video A, SE page 193; Video B, SE page 194; Video C, SE page 195; Critical Thinking, SE page 197; Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard B: Physical Science
Transfer of Energy
Energy is a property of many substances and is associated with heat, light, electricity, mechanical motion, sound, nuclei, and the nature of a chemical. Energy is transferred in many ways.
Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; Critical Thinking, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Content Standard B: Physical Science
Transfer of Energy
Heat moves in predictable ways, flowing from warmer objects to cooler one, until both reach the same temperature.
Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Process Skill, SE page 167

Content Standard B: Physical Science
Transfer of Energy
Light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection). To see an object, light from the object—emitted by or scattered from it—must enter the eye.
See Level A: **Chapter 9, Lesson 1, Video A, SE page 179; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174** **See also Level B:** **Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165**

Content Standard B: Physical Science
Transfer of Energy
Electrical circuits provide a means of transferring electrical energy when heat, light, sound, and chemical changes are produced.
Level C: **Chapter 9, Lesson 1, Video A, SE page 171; Video B, SE page 172** **See also Level B:** **Chapter 9, Lesson 1, Video C, SE page 181; Critical Thinking, SE page 183**

Content Standard B: Physical Science
Transfer of Energy
In most chemical and nuclear reactions, energy is transferred into or out of a system. Heat, light, mechanical motion, or electricity might all be involved in such transfers.
Chapter 7, Lesson 3, video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 **Chapter 8, Lesson 1, Video A, SE page 157**

Content Standard B: Physical Science
Transfer of Energy
The sun is a major source of energy for changes on the earth's surface. The sun loses energy by emitting light. A tiny fraction of that light reaches earth, transferring energy from the sun to earth. The sun's energy arrives as light with a range of wavelengths, consisting of visible light, infrared, and ultraviolet radiation.
Chapter 4, Lesson 3, Video C, SE page 85 **Chapter 5, Lesson 1, Video A, SE page 91** **Chapter 8, Lesson 1, Video A, SE page 157** **Electromagnetic Energy, SE pages 206-207**

Content Standard C: Life Science
Structure and Function in Living Systems
Living system at all levels of organization demonstrate the complementary nature of structure and function. Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Critical Thinking, SE page 7; Process Skill, SE page 7; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Process Skill, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17; Critical Thinking, SE page 19; Process Skill, SE page 19; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Critical Thinking, SE page 29; Process Skill, SE page 29; Lesson 2, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Lesson 3, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51

Content Standard C: Life Science
Structure and Function in Living Systems
All organisms are composed of cells—the fundamental unit of life. Most organisms are single cells; other organisms, including humans, are multicellular.
Chapter 1, Lesson 1, Video A, SE page 3; Lesson 3, Video A, SE page 15; Video B, SE page 16; Critical Thinking, SE page 19

Content Standard C: Life Science
Structure and Function in Living Systems
Cells carry on the many functions needed to sustain life. They grow and divide, thereby producing more cells. This requires that they take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.
Chapter 1, Lesson 1, Video B, SE page 4; Video C, SE page 5; Critical Thinking, SE page 7; Lesson 2, Video A, SE page 9; Lesson 3, Video A, SE page 15; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Content Standard C: Life Science
Structure and Function in Living Systems
Specialized cells perform specialized functions in multicellular organisms. Groups of specialized cells cooperate to form a tissue, such as a muscle. Different tissues are in turn grouped together to form larger functional units, called organs, Each type of cell, tissue, and organ has a distinct structure and set of functions that serve the organism as a whole.
Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Process Skill, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17

Content Standard C: Life Science
Structure and Function in Living Systems
The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection from disease. These systems interact with one another.
Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17

Content Standard C: Life Science
Structure and Function in Living Systems
Disease is a breakdown in structures or functions of an organism. Some diseases are the result of intrinsic failures of the system. Others are the result of damage by infection by other organisms.
Chapter 1, Lesson 3, Video A, SE page 15; Critical Thinking, SE page 19; KnowZone, SE page 20-21

Content Standard C: Life Science
Reproduction and Heredity
Reproduce is a characteristic of all living systems; because no individual organism lives forever, reproduction is essential to the continuation of every species. Some organisms reproduce asexually. Other organisms reproduce sexually.
Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Critical Thinking, SE page 35; Process Skill, SE page 35

Content Standard C: Life Science
Reproduction and Heredity
In many species, including humans, females produce eggs and males produce sperm. Plants also reproduce sexually—the egg and sperm are produced in the flowers of flowering plants. An egg and sperm unite to begin development of a new individual. That new individual receives genetic information from its mother (via the egg) and its father (via the sperm). Sexually produced offspring never are identical to either of their parents.
Chapter 2, Lesson 2, Video B, SE page 32

Content Standard C: Life Science
Reproduction and Heredity
Every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another.
Chapter 2, Lesson 2, Video B, SE page 32

Content Standard C: Life Science
Reproduction and Heredity
Hereditary information is contained in genes, located in the chromosomes of each cell. Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait. A human cell contains many thousands of different genes.
This concept is not covered at this level.

Content Standard C: Life Science
Reproduction and Heredity
The characteristics of an organism can be described in terms of a combination of traits. Some traits are inherited and others result from the interactions with the environment.
Chapter 2, Lesson 2, Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; KnowZone, SE pages 36-37

Content Standard C: Life Science
Regulation and Behavior
All organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.
Chapter 2, Lesson 1, Video C, SE page 27; Lesson 3, video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43

Content Standard C: Life Science
Regulation and Behavior
Regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required to survive.
Chapter 2, Lesson 2, Video C, SE page 33; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Content Standard C: Life Science
Regulation and Behavior
Behavior is one kind of response an organism can make to an internal or environmental stimulus. A behavioral response requires coordination and communication at many levels, including cells, organ systems, and whole organisms. Behavioral response is a set of actions determined in part by heredity and in part from experience.
Chapter 2, Lesson 2, Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; KnowZone, SE pages 36-37; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Content Standard C: Life Science
Regulation and Behavior
An organism's behavior evolves through adaptation to its environment. How a species moves, obtains food, reproduces, and responds to danger are based in the species; evolutionary history.
Chapter 2, Lesson 2, Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; KnowZone, SE pages 36-37; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Content Standard C: Life Science
Populations and Ecosystems
A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.
Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Content Standard C: Life Science
Populations and Ecosystems
Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some micro-organisms are producers—they make their own food. All animals, including humans, are consumers, which obtain food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships among producers, consumers, and decomposers in an ecosystem.
Level C: **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Process Skill, SE page 51** **Food Web, SE page 203** **Energy Pyramid, SE page 203** **See also Level B:** **Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Process Skill, SE page 13; Lesson 3, Video A, SE page 17; Process Skill, SE page 21** **Food Web, SE page 203** **Energy Pyramid, SE page 203**

Content Standard C: Life Science
Populations and Ecosystems
For ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism to organism in food webs.
Level C: **Chapter 3, Lesson 1, Video C, SE page 49** **Food Web, SE page 203** **Energy Pyramid, SE page 203** **See also Level B:** **Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Food Web, SE page 203** **Energy Pyramid, SE page 203**

Content Standard C: Life Science
Populations and Ecosystems
The number of organisms an ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition. Given adequate biotic and abiotic resources and no disease or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.
Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 3, Video B, SE page 62; Critical Thinking, SE page 65

Content Standard C: Life Science
Diversity and Adaptations of Organisms
Millions of species of animals, plants, and microorganisms are alive today. Although different species might look dissimilar, the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry.
Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Critical Thinking, SE page 29; Process Skill, SE page 29

Content Standard C: Life Science
Diversity and Adaptations of Organisms
Biological evolution accounts for the diversity of species developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.
Chapter 2, Lesson 1, Video C, SE page 27; Lesson 2, Video B, SE page 32; Video C, SE page 33 **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66**

Content Standard C: Life Science
Diversity and Adaptations of Organisms
Extinction of a species occurs when the environmental changes and the adaptive characteristics of a species are insufficient to allow its survival. Fossils indicate that many organisms that lived long ago are extinct. Extinction of species is common; most of the species that have lived on the earth no longer exist.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 4, Lesson 3, Video A, SE page 83**

Content Standard D: Earth and Space Science
Structure of the Earth System
The solid earth is layered with a lithosphere; hot, convecting mantle; and dense, metallic core.
Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70 **Earth's Layers, SE page 204**

Content Standard D: Earth and Space Science
Structure of the Earth System
Lithosphere plates on the scales of continents and oceans constantly move at rates of centimeters per year in response to movements in the mantle. Major geological events, such as earthquakes, volcanic eruptions, and mountain building, result from these plate motions.
Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; KnowZone, SE pages 74-75

Content Standard D: Earth and Space Science
Structure of the Earth System
Land forms are the result of a combination of constructive and destructive forces. Constructive forces include crustal deformation, volcanic eruption, and the deposition of sediment, while destructive forces include weathering and erosion.
Chapter 4, Lesson 1, Video C, SE page 71; Critical Thinking, SE page 73; KnowZone, SE pages 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Lesson 3, Writing in Science, SE page 87; Process Skill, SE page 87

Content Standard D: Earth and Space Science
Structure of the Earth System
Some changes in the solid earth can be described as the "rock cycle." Old rocks at the earth's surface weather, forming sediments that are buried, then compacted, heated, and often recrystallized into new rock. Eventually, those new rocks may be brought to the surface by the forces that drive plate motions, and the rock cycle continues.
Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84; Critical Thinking, SE page 87; Writing in Science, SE page 87; Process Skill, SE page 87

Content Standard D: Earth and Space Science
Structure of the Earth System
Soil consists of weathered rocks and decomposed organic material from dead plants, animals, and bacteria. Soils are often found in layers, with each having a different chemical composition and texture.
Level C: **Chapter 4, Lesson 3, Video C, SE page 85** **See also Level A:** **Chapter 4, Lesson 2, Video C, SE page 77; Critical Thinking, SE page 79; Process Skill, SE page 79**

Content Standard D: Earth and Space Science
Structure of the Earth System
Water, which covers the majority of the earth's surface, circulates through the crust, oceans, and atmosphere in what is known as the "water cycle." Water evaporates from the earth surface, rises and cools as it moves to higher elevations, condenses as rain or snow, and falls to the surface where it collects in lakes, oceans, soil, and in rocks underground.
Chapter 4, Lesson 1, Video A, SE page 69 **Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Critical Thinking, SE page 101; Process Skill, SE page 101** **The Water Cycle, SE page 204**

Content Standard D: Earth and Space Science
Structure of the Earth System
Water is a solvent. As it passes through the water cycle it dissolves minerals and gases and carries them to the oceans.
Chapter 4, Lesson 2, Video A, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 **Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video C, SE page 99**

Content Standard D: Earth and Space Science
Structure of the Earth System
The atmosphere is a mixture of nitrogen, oxygen, and trace gases that include water vapor. The atmosphere has different properties at different elevations.
Chapter 5, Lesson 1, Video A, SE page 91; Video C, SE page 93; Critical Thinking, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Content Standard D: Earth and Space Science
Structure of the Earth System
Clouds, formed by the condensation of water vapor, affect weather and climate.
Chapter 5, Lesson 2, Video B, SE page 98; Lesson 3, Video B, SE page 104

Content Standard D: Earth and Space Science
Structure of the Earth System
Global patterns of atmospheric movement influence local weather. Oceans have a major effect on climate, because water in the oceans holds a large amount of heat.
Chapter 5, Lesson 1, Video B, SE page 92; Process Skill, SE page 95

Content Standard D: Earth and Space Science
Structure of the Earth System
Living organisms have played many roles in the earth system, including affecting the composition of the atmosphere, producing some types of rocks, and contributing to the weathering of rocks.
Chapter 3, Lesson 1, Video C, E page 49; KnowZone, SE pages 58-59; Lesson 3, Video B, SE page 62 **Chapter 4, Lesson 2, Video A, SE page 77; Process Skill, SE page 81; Lesson 3, Video A, SE page 83** **Chapter 5, Lesson 1, Video C, SE page 93**

Content Standard D: Earth and Space Science
Earth's History
The earth processes we see today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those that occurred in the past. Earth history is also influenced by occasional catastrophes, such as the impact of an asteroid or comet.
Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical thinking, SE page 73; KnowZone, SE pages 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; Process Skill, SE page 87

Content Standard D: Earth and Space Science
Earth's History
Fossils provide important evidence of how life and environmental conditions have changed.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 4, Lesson 3, Video A, SE page 83**

Content Standard D: Earth and Space Science
Earth in the Solar System
The earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their moons, and smaller objects, such as asteroids and comets. The sun, an average star, is the central and largest body in the solar system.
Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Critical Thinking, SE page 117; Process Skill, SE page 117; KnowZone, SE pages 118-119

Content Standard D: Earth and Space Science
Earth in the Solar System
Most objects in the solar system are in regular and predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, and eclipses.
Chapter 6, Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123; Critical Thinking, SE page 125; Process Skill, SE page 125 **Earth in Space, SE page 205**

Content Standard D: Earth and Space Science
Earth in the Solar System
Gravity is the force that keeps planets in orbit around the sun and governs the rest of the motion in the solar system. Gravity alone holds us to the earth's surface and explains the phenomena of the tides.
Chapter 6, Lesson 1, Video B, SE page 114; Lesson 2, Video B, SE page 122 **Chapter 9, Lesson 1, Video B, SE page 180**

Content Standard D: Earth and Space Science
Earth in the Solar System
The sun is the major source of energy for phenomena on the earth's surface, such as growth of plants, winds, ocean currents, and the water cycle. Seasons result from variations in the amount of the sun's energy hitting the surface, due to the tilt of the earth's rotation on its axis and the length of the day.
Chapter 3, Lesson 1, Video C, SE page 49 **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video B, SE page 98; Lesson 3, Video C, SE page 105** **Chapter 6, Lesson 1, Video A, SE page 113; Lesson 2, Video A, SE page 121** **Chapter 8, Lesson 1, Video A, SE page 157** **The Water Cycle, SE page 204**

Content Standard E: Science and Technology
Abilities of Technological Design
Identify Appropriate Problems for Technological Design. Students should develop their abilities by identifying a specified need, considering its various aspects, and talking to different potential users or beneficiaries. They should appreciate that for some needs, the cultural backgrounds and beliefs of different groups can affect the criteria for a suitable product.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard E: Science and Technology
Abilities of Technological Design
Design a Solution or Product. Students should make and compare different proposals in the light of the criteria they have selected. They must consider constraints—such as cost, time, trade-offs, and materials needed—and communicate ideas with drawings and simple models.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard E: Science and Technology
Abilities of Technological Design
Implement a Proposed Design. Students should organize materials and other resources, plan their work, make good use of group collaboration where appropriate, choose suitable tools and techniques, and work with appropriate measurement methods to ensure adequate accuracy.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard E: Science and Technology
Abilities of Technological Design
Evaluate Completed Technological Designs or Products. Students should use criteria relevant to the original purpose or need, consider a variety of factors that might affect acceptability and suitability for intended users or beneficiaries, and develop measures of quality with respect to such criteria and factors; they should also suggest improvements and, for their own products, try proposed modifications.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard E: Science and Technology
Abilities of Technological Design
Communicate the Process of Technological Design. Students should review and describe any completed piece of work and identify the stages of problem identification. Solution design, implementation, and evaluation.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Content Standard E: Science and Technology
Understandings about Science and Technology
Scientific inquiry and technological design have similarities and differences. Scientists propose explanations for questions about the natural world, and engineers propose solution relating to human problems, needs, and aspirations. Technological solutions are temporary; technologies exist within nature and so they cannot contravene physical or biological principles. Technological solutions have side effects; and technologies cost, carry risks, and provide benefits.
Chapter 4, Lesson 3, video C, SE page 85; Critical Thinking, SE page 87 **Chapter 5, Lesson 1, Process Skill, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173; Critical Thinking, SE page 175**

Content Standard E: Science and Technology
Understandings about Science and Technology
Many different people in different cultures have made and continue to make contributions to science and technology.
Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129 **Chapter 7, KnowZone, SE pages 140-141**

Content Standard E: Science and Technology
Understandings about Science and Technology
Science and technology are reciprocal. Science helps drive technology, as it addresses questions that demand more sophisticated instruments and provides principles for better instrumentation and technique. Technology is essential to science, because it provides otherwise unobservable clues to factors such as quantity, distance, location, size, and speed.
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, SE page 81** **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174** **The Metric System, SE pages 200-201**

Content Standard E: Science and Technology
Understandings about Science and Technology
Perfectly designed solutions do not exist. All technological solutions have trade-offs, such as safety, cost, efficiency, and appearance. Engineers often build in back-up systems to provide safety. Risk is part of living in a highly technological world. Reducing risk often results in new technology.
Chapter 1, Lesson 3, Critical Thinking, SE page 19 **Chapter 4, Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87** **Chapter 5, Lesson 2, Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 3, Video C, SE page 173; Critical Thinking, SE page 175**

Content Standard E: Science and Technology
Understandings about Science and Technology
Technological designs have constraints. Some constraints are unavoidable, for example, properties of materials, or effects of weather and friction; other constraints limit choices in the design, for example, environmental protection, human safety, and aesthetics.
Chapter 4, Lesson 2, Critical Thinking, SE page 81; Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87 **Chapter 5, Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131; Writing in Science, SE page 131** **Chapter 8, Lesson 3, Video C, SE page 173** **Chapter 9, Lesson 1, Video C, SE page 181; Process Skill, SE page 183**

Content Standard E: Science and Technology
Understandings about Science and Technology
Technological solutions have intended benefits and unintended consequences. Some consequences can be predicted, others cannot.
Chapter 3, Lesson 3, Video C, SE page 63 **Chapter 5, Lesson 2, Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131; Writing in Science, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Critical Thinking, SE page 175; Process Skill, SE page 175**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Regular exercise is important to the maintenance and improvement of health. The benefits of physical fitness include maintaining healthy weight, having energy and strength for routine activities, good muscle tone, bone strength, strong heart/lung systems, and improved mental health. Personal exercise, especially developing cardiovascular endurance, is the foundation of physical fitness.
See Level A: **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
The potential for accidents and the existence of hazards imposes the need for injury prevention. Safe living involves the development and use of safety precautions and the recognition of risk in personal decisions. Injury prevention has personal and social dimensions.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Personal Health
The use of tobacco increases the risk of illness. Students should understand the influence of short-term social and psychological factors that lead to tobacco use, and the possible long-term detrimental effects of smoking and chewing tobacco.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Alcohol and other drugs are often abused substances. Such drugs change how the body functions and can lead to addiction.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Food provides energy and nutrients for growth and development. Nutrition requirements vary with body weight, age, sex, activity, and body functioning.
See Level A; **Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51**

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Sex drive is a natural human function that requires understanding. Sex is also a prominent means of transmitting diseases. The diseases can be prevented through a variety of precautions.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Personal Health
Natural environments may contain substances (for example, radon and lead) that are harmful to human beings. Maintaining environmental health involves establishing or monitoring quality standards related to use of soil, water, and air.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Populations, Resources, and Environments
When an area becomes overpopulated, the environment will become degraded due to the increased use of resources.
Chapter 3, Lesson 1, Video B, SE page 48; Process Skill, SE page 51

Content Standard F: Science in Personal and Social Perspectives
Populations, Resources, and Environments
Causes of environmental degradation and resource depletion vary from region to region and from country to country.
Chapter 3, Lesson 3, Video B, SE page 62 **Chapter 4, Lesson 3, Video C, SE page 85** **Chapter 5, Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Natural hazards
Internal and external processes of the earth system cause natural hazards, events that change or destroy human and wildlife habitats, damage property, and harm or kill humans, Natural hazards include earthquakes, landslides, wildfires, volcanic eruptions, floods, storms, and even possible impacts of asteroids.
Chapter 4, Lesson 1, Video C, SE page 71; Process Skill, SE page 73l KnowZone, SE pages 74-75 **Chapter 5, Lesson 3, Video B, SE page 104; Critical Thinking, SE pages 107; KnowZone, SE pages 108-109**

Content Standard F: Science in Personal and Social Perspectives
Natural hazards
Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.
Chapter 3, Lesson 3, Video B, SE page 62 **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99**

Content Standard F: Science in Personal and Social Perspectives
Natural hazards
Natural hazards can present personal and societal challenges because misidentifying the change or incorrectly estimating the rate and scale of change may result in either too little attention and significant human costs or too much cost for unneeded preventive measures.
Chapter 1, KnowZone, SE pages 20-21 **Chapter 4, Lesson 1, Video C, SE page 71; Process Skill, SE page 73** **Chapter 5, Lesson 3, Video B, SE page 104; Critical Thinking, SE page 107; KnowZone, SE pages 108-109**

Content Standard F: Science in Personal and Social Perspectives
Risks and Benefits
Risk analysis considers the type of hazard and estimates the number of people that might be exposed and the number likely to suffer consequences. The results are used to determine the options for reducing or eliminating risks.
This concept is not covered at this level.

Content Standard F: Science in Personal and Social Perspectives
Risks and Benefits
Students should understand the risks associated with natural hazards (fires, floods, tornadoes, hurricanes, earthquakes, and volcanic eruptions), with chemical hazards pollutants in air, water, coil, and food), with biological hazards (pollen, viruses, bacterial, and parasites), social hazards (occupational safety and transportation), with personal hazards (smoking, dieting, and drinking).
Chapter 1, KnowZone, SE pages 20-21 **Chapter 2, Lesson 3, Video C, SE page 41** **Chapter 3, Lesson 3, Video B, SE page 62** **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Lesson 3, Video B, SE page 104; Critical Thinking, SE page 107; KnowZone, SE pages 108-109**

Content Standard F: Science in Personal and Social Perspectives
Risks and Benefits
Individuals can use a systematic approach to thinking critically about risks and benefits. Examples include applying probability estimates to risks and comparing them to estimated personal and social benefits.
Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, video C, SE page 85; Critical Thinking, SE page 87 **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99** **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Risks and Benefits
Important personal and social decisions are made based on perceptions of benefits and risks.
Chapter 3, Lesson 3, Video B, SE page 62 **Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Video A, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Science influences society through its knowledge and world view. Scientific knowledge and the procedures used by scientists influence the way many individuals in society think about themselves, others, and the environment. The effects of science on society is neither entirely beneficial nor entirely detrimental.
Chapter 1, Lesson 3, Critical Thinking, SE page 19 **Chapter 2, Lesson 2, Critical Thinking, SE page 57** **Chapter 3, Lesson 3, Video C, SE page 62; Video C, SE page 63** **Chapter 4, Lesson 3, Vide C, SE page 85; Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Societal challenges often inspire questions or scientific research, and social priorities often influence research priorities through the availability of funding for research.
Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87 **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Technology influences society through its products and processes. Technology influences the quality of life and the ways people act and interact. Technological changes are often accompanied by social, political, and economic changes that can be beneficial or detrimental to individuals and to society. Social needs, attitudes, and values influence the direction of technological development.
Chapter 1, Lesson 3, Critical Thinking, SE page 19 **Chapter 3, Lesson 3, Video C, SE page 62; Video C, SE page 63** **Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Vide C, SE page 85; Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101** **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131** **Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Science and technology have advanced through contributions of many different people, in different cultures, at different times in history. Science and technology have contributed enormously to economic growth and productivity among societies and groups within societies.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Scientists and engineers work in many different setting, including colleges and universities, businesses and industries, specific research institutes, and government agencies.
Chapter 3, Lesson 2, Critical Thinking, SE page 57; KnowZone, SE pages 58-59; Lesson 3, Video B, SE page 62 **Chapter 5, Lesson 1, Video C, SE page 93; Lesson 3, Video A, SE page 103**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Scientists and engineers have ethical codes requiring that human subjects involved with research be fully informed about risks and benefits associated with the research before the individual choose to participate. This ethic extends to potential risks to communities and property. In short, prior knowledge and consent are required for research involving human subjects or potential damage to property.
Chapter 2, Lesson 1, Process Skill, SE page 29 **See also Level C:** **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48**

Content Standard F: Science in Personal and Social Perspectives
Science and Technology in Society
Science cannot answer all questions and technology cannot solve all human problems or meet all human needs. Students should understand the difference between scientific and other questions. They should appreciate what science and technology can reasonably contribute to society and what they cannot do. For example, new technologies often will decrease some risks and increase others.
Chapter 5, Lesson 2, Process Skill, SE page 95

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Women and men of various social and ethnic backgrounds—and with diverse interests, talents, qualities, and motivations—engage in the activities of science, engineering, and related fields such as the health professions. Some scientists work in teams, and some work alone, but all communicate extensively with others.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard G: History and Nature of Science
Science as a Human Endeavor
Science requires different abilities, depending on such factors as the field of study and type of inquiry. Science is very much a human endeavor, and the work of science relies on basic human qualities, such as reasoning, insight, energy, skill, and creativity—as well as on scientific habits of mind, such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas,
Chapter 1, Lesson 3, Critical Thinking, SE page 19 **Chapter 2, Lesson 2, Critical Thinking, SE page 35** **Chapter 3, Lesson 1, Critical Thinking, SE page51; Lesson 3, Critical Thinking, SE page 65** **Chapter 4, Lesson 3, Critical Thinking, SE page 87** **Chapter 5, Lesson 1, Critical Thinking, SE page 95** **Chapter 7, Lesson 2, Critical Thinking, SE page 147** **Chapter 8, Lesson 2, Critical Thinking, SE page 167; Lesson 3, Critical Thinking, SE page 175** **Chapter 9, Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195; , Critical Thinking, SE page 197**

Content Standard G: History and Nature of Science
Nature of Science
Scientists formulate and test their explanations of nature using observations, experiments, and theoretical and mathematical models. Although all scientific ideas are tentative and subject to change and improvement in principle, for most major ideas in science, there is much experimental and observational confirmation. Those ideas are not likely to change greatly in experimental evidence that does not match their existing explanations.
Chapter 2, Lesson 1, Critical Thinking, SE page 29 **Chapter 6, KnowZone, SE pages 118-119; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129**

Content Standard G: History and Nature of Science
Nature of Science
In areas where active research is being pursued and in which there is not a great deal of experimental or observational evidence and understanding, it is normal for scientists to differ with one another about the interpretation of the evidence or theory being considered. Different scientists might publish conflicting experimental results or might draw different conclusions from the same data. Ideally, scientists acknowledge such conflict and work towards finding evidence that will resolve their disagreement.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard G: History and Nature of Science
Nature of Science
It is part of scientific inquiry to evaluate the results of scientific investigations, experiments, observations, theoretical models, and the explanations proposed by other scientists. Evaluation includes reviewing the experimental procedures, examining the evidence, identifying faulty reasoning, pointing out statements that go beyond the evidence, and suggesting alternative explanations for the same observations. Although scientists may disagree about explanations of phenomena, about interpretations of data, or about the value of rival theories, they do agree that questioning, response to criticism, and open communication are eventually resolved through such interactions between scientists.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, Process Skill, SE page 167; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Content Standard G: History and Nature of Science
History of Science
Many individuals have contributed to the traditions of science. Studying some of these individuals provides further understanding of scientific inquiry, science as a human endeavor, the nature of science, and the relationships between science and society.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard G: History and Nature of Science
History of Science
In historical perspective, science had been practiced by different individuals in different cultures. In looking at the history of many peoples, one finds that scientists and engineers of high achievement are considered to be among the most valued contributors to their culture.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Content Standard G: History and Nature of Science
History of Science
Tracing the history of science can show how difficult it was for scientific innovators to break through the accepted ideas of their time to reach the conclusion that we currently take for granted.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16 **Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169** **Chapter 9, Lesson 2 Process Skill, SE page 191**