SRA Snapshots Video Science™: Level A
correlation to
Nebraska Science 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

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.1 By the end of fourth grade, students will develop an understanding of systems, order, and organization.
• Describe the parts that make up a system.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21; 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; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 56; Video C, SE page 57; Lesson 3, Video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson, 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; Video B, SE page 128; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **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; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; 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; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174** **Energy Transfer, SE page 203** **Planet Earth, SE page 204** **Earth in Space, SE page 205**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.1 By the end of fourth grade, students will develop an understanding of systems, order, and organization.
• Relate how the parts of a system affect the whole system.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21; 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; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 56; Video C, SE page 57; Lesson 3, Video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson, 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; Video B, SE page 128; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **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; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; 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; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174** **Energy Transfer, SE page 203** **Planet Earth, SE page 204** **Earth in Space, SE page 205**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Use evidence gathered from an investigation to develop a scientific 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**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Create a model, graph, or illustration that represents an object, living thing, or an event.
Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84 **Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102** **Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120** **Chapter 7, Lesson 3 Process Skill, SE page 153**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Explain and answer questions about a model and how it represents an object, living thing, or an event.
Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84 **Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102** **Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120** **Chapter 7, Lesson 3 Process Skill, SE page 153**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Explain procedures or ideas in more than one way (e.g., sketches, charts, and graphs).
Chapter 1, Lesson 2, Math in Science, SE page 13; Process Skill, SE page 13 **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 5, Lesson 2, Process Skill, SE page 103; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **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**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.3 By the end of fourth grade, students will develop an understanding of change, constancy, and measurement.
• Describe observable changes (e.g., speed, pattern, shape, position, and size).
Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21; Process Skill, SE page 21 **Chapter 2, Lesson 2, Video A, SE page 31** **Chapter 3, Lesson 3, video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; LabTime Hands-On Activity, TRB Pages 69-71; TG page 84** **Chapter 5, Lesson 1, Video B, SE page 92; Lesson 2, Video B, SE page 100; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **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; LabTime Hands-On Activity, TRB pages 105-107; TG page 120** **Chapter 8, Lesson 2, Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; 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** **Chapter 9, Lesson 1, Video A, SE page 179; Video C, SE page 181; Process Skill, SE page 183; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Process Skill, SE page 191; Lesson 3, Video B, SE page 194**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.3 By the end of fourth grade, students will develop an understanding of change, constancy, and measurement.
• Measure a change using appropriate tools and units of measurement.
Chapter 3, Lesson 3, Process Skill, SE page 65 **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **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**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.4 By the end of fourth grade, students will develop an understanding of form and function.
• Construct a device to perform a simple task and explain how it works.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Ask a question about objects, organisms, and events in their surroundings.
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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• 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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Use simple equipment and tools (e.g., thermometers and scales) 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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Use data to develop reasonable explanations.
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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Communicate procedures, results, and explanations of an 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 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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Classify objects by observable characteristics (shape, size, and color).
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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Compare and contrast characteristics of common materials using tools (e.g., rulers, scales, thermometers, microscopes, and hand lenses).
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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Demonstrate that materials can change from solid to liquid to gas by heating and from gas to liquid to solid by cooling.
Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Process Skills 161

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Use reference points to describe the position of an object.
Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE pages 140-141

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Describe an object's motion by tracing its position over time.
Chapter 7, Lesson 1, Video A, SE page 135

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Demonstrate that the position and motion of objects can be changed by pushing or pulling.
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

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Demonstrate how sound is produced when objects vibrate.
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

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Change the pitch of sound by changing the rate of vibration.
Chapter 9, Lesson 1, Video C, SE page 181; Critical Thinking, SE page 183; Process Skill, SE page 183

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Distinguish between reflection and refraction of light.
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

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Identify ways in which heat can be produced (e.g., burning, rubbing, or mixing one substance with another).
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

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Demonstrate heat can flow from one object to another by conduction.
Chapter 8, Lesson 3, Video B, SE page 172; Video C, SE page 173; Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Use electricity to produce heat, sound, or magnetic effects.
Chapter 9, Lesson 2, Video A, SE page 187; Video C, SE page 189; Critical Thinking, SE page 191; Process Skill, SE page 191

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Demonstrate 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

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Describe the physical properties of magnets.
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

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe the differences between plants and animals.
Chapter 1, Lesson 1, 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 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe the various structures of plants and animals necessary for survival and reproduction.
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**

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe how internal stimuli (e.g., hunger) and external stimuli (e.g., changes in the environment) affect behavior of living things.
Chapter 3, Lesson 3, Video A, SE page 39; Video C, SE page 41 **Chapter 3, Lesson 3, Video B, SE page 62**

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Describe the life cycle of an organism.
Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Identify inherited characteristics of living things (e.g., color and number of eyes).
Chapter 2, Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Identify learned characteristics of living things (e.g., language or hunting for food).
Chapter 2, Lesson 3, Video C, SE page 41; Critical Thinking, SE page 43

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Diagram a food chain.
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**

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Explain how environmental changes affect behavior and survival of living things.
Chapter 2, KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video C, SE page 41; Process Skill, SE page 43

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Describe how humans and other living things cause both positive and negative changes in their environment.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Identify characteristics of soils, minerals, rocks, water, and the atmosphere.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• List earth materials that are used by humans (e.g., water, fossils fuels, ores, soils).
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Select the best earth material for a specific human use (e.g., marble-buildings, clay-pottery, coal-heat).
Chapter 4, Lesson 2, Video A, SE page 75; Video C, SE page 77; Critical Thinking, SE page 79; Process Skill, SE page 79; Lesson 3, Video A, SE page 83; Video B, SE page 84 **Chapter 5, Lesson 2, Video A, SE page 99**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Describe an ancient environment based on fossil evidence.
Chapter 4, Lesson 2, Video B, SE page 76; Writing in Science, SE page 79; KnowZone, SE pages 80-81

4.5 EARTH AND SPACE SCIENCE
4.5.2 By the end of fourth grade, students will develop an understanding of objects in the sky.
• Observe and describe how objects move in patterns (e.g., sun, moon, stars, and clouds).
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

4.5 EARTH AND SPACE SCIENCE
4.5.3 By the end of fourth grade, students will develop an understanding of the changes in the earth and sky.
• Describe how slow processes (e.g., erosion) and rapid processes (e.g., earthquakes), change the earth's surface.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.3 By the end of fourth grade, students will develop an understanding of the changes in the earth and sky.
• Describe and measure changes in weather (e.g., temperature, precipitation, and wind direction and speed).
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

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Identify a simple problem.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Propose a solution to a simple problem.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Implement the implementation.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Evaluate the implementation.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Communicate the problem, design, and solution.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

4.6 SCIENCE AND TECHNOLOGY
4.6.2 By the end of fourth grade, students will develop an understanding of science and technology.
• Identify tools or techniques that use scientific knowledge to solve problems.
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**

4.6 SCIENCE AND TECHNOLOGY
4.6.2 By the end of fourth grade, students will develop an understanding of science and technology.
• Identify, investigate, and solve a problem in the home or school.
Chapter 1, Lesson 1, Critical Thinking, SE page 7 **Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65** **Chapter 4, Lesson 2, Process Skill, SE page 79** **Chapter 5, Lesson 3, Critical Thinking, SE page 109**

4.6 SCIENCE AND TECHNOLOGY
4.6.3 By the end of fourth grade, students will develop an understanding of the abilities to distinguish between natural objects and objects made by humans.
• Classify an object as natural or manufactured.
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.1 By the end of fourth grade, students will develop an understanding of personal health.
• Explain how the body uses food and how various foods contribute to health.
Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.1 By the end of fourth grade, students will develop an understanding of personal health.
• Describe how different substances (e.g., tobacco, alcohol, and drugs) can damage the body and alter how it functions.
This concept is not covered at this level.

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources which are basic materials (e.g., air, water, and soil).
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources produced from basic materials (e.g., food, fuel, and building materials).
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources which are intangible materials (e.g., beauty, security, and quiet places).
Chapter 3, Lesson 3, Video C, SE page 63

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• Research and report on the supply of various resources.
Chapter 4, Lesson 2, Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; Process Skill, SE page 87 **Chapter 9, Lesson 3, Video C, SE page 195**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.3 By the end of fourth grade, students will develop an understanding of environmental changes.
• Distinguish between natural environmental changes and human influenced environmental changes.
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 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65** **Chapter 4, Lesson 3, Video B, SE page 84; Video C, SE page 85; Critical Thinking, SE page 87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 2, Video C, SE page 101; Critical Thinking, SE page 103** **Chapter 9, Lesson 3, Video C, SE page 195; Critical Thinking, SE page 197; Process Skill, SE page 197**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.4 By the end of fourth grade, students will develop an understanding of how science and technology helps communities resolve problems.
• Research and explain how science and technology affect the quality of life.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on the contributions to science and technology throughout history by men and women scientists of diverse cultures.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on how science is used in different careers.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on how current scientific discoveries illustrate that science is an ongoing process.
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**

SRA Snapshots Video Science™: Level B
correlation to
Nebraska Science 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

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.1 By the end of fourth grade, students will develop an understanding of systems, order, and organization.
• Describe the parts that make up a system.
Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Process Skill, SE page 29; 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; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Process Skill, 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** **Chapter 4, Lesson 2, Video C, SE page 77** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video A, SE page 97; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video C, SE page 121; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Video C, SE page 137; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 157; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Video C, SE page 181; Lesson 2, Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.1 By the end of fourth grade, students will develop an understanding of systems, order, and organization.
• Relate how the parts of a system affect the whole system.
Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Process Skill, SE page 29; 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; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Process Skill, 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** **Chapter 4, Lesson 2, Video C, SE page 77** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video A, SE page 97; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video C, SE page 121; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Video C, SE page 137; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 157; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Video C, SE page 181; Lesson 2, Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Use evidence gathered from an investigation to develop a scientific 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**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Create a model, graph, or illustration that represents an object, living thing, or an event.
Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 **Chapter 6, Lesson 1, Process Skill, SE page 117** **Chapter 8, Lesson 3, Process Skill, SE page 175** **Chapter 9, Lesson 2, Process Skill, SE page 189**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Explain and answer questions about a model and how it represents an object, living thing, or an event.
Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 **Chapter 6, Lesson 1, Process Skill, SE page 117** **Chapter 8, Lesson 3, Process Skill, SE page 175** **Chapter 9, Lesson 2, Process Skill, SE page 189**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.2 By the end of fourth grade, students will develop an understanding of evidence, models, and explanation.
• Explain procedures or ideas in more than one way (e.g., sketches, charts, and graphs).
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 1, Process Skill, SE page 73; 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 1, Process Skill, SE page 117; 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 189; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.3 By the end of fourth grade, students will develop an understanding of change, constancy, and measurement.
• Describe observable changes (e.g., speed, pattern, shape, position, and size).
Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 63 **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video B, SE page 114; Video C, SE page 115; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 3, Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 1, Process Skill, SE page 161; Lesson 3, Critical Thinking, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.3 By the end of fourth grade, students will develop an understanding of change, constancy, and measurement.
• Measure a change using appropriate tools and units of measurement.
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**

4.1 UNIFYING CONCEPTS AND PROCESSES
4.1.4 By the end of fourth grade, students will develop an understanding of form and function.
• Construct a device to perform a simple task and explain how it works.
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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Ask a question about objects, organisms, and events in their surroundings.
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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• 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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Use simple equipment and tools (e.g., thermometers and scales) 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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Use data to develop reasonable explanations.
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**

4.2 SCIENCE AS INQUIRY
4.2.1 By the end of fourth grade, students will develop the abilities to do scientific inquiry.
• Communicate procedures, results, and explanations of an 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, 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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Classify objects by observable characteristics (shape, size, and color).
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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Compare and contrast characteristics of common materials using tools (e.g., rulers, scales, thermometers, microscopes, and hand lenses).
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**

4.3 PHYSICAL SCIENCE
4.3.1 By the end of fourth grade, students will develop an understanding of the characteristics of objects and materials.
• Demonstrate that materials can change from solid to liquid to gas by heating and from gas to liquid to solid by 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

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Use reference points to describe the position of an object.
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**

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Describe an object's motion by tracing 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**

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Demonstrate that the position and motion of objects can be changed by pushing o pulling.
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**

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Demonstrate how sound is produced when objects vibrate.
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

4.3 PHYSICAL SCIENCE
4.3.2 By the end of fourth grade, students will develop an understanding of the position and motion of objects.
• Change the pitch of sound by changing the rate of vibration.
Chapter 8, Lesson 1, 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

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Distinguish between reflection and refraction of light.
Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Identify ways in which heat can be produced (e.g., burning, rubbing, or mixing one substance with another).
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**

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Demonstrate heat can flow from one object to another by conduction.
See Level C: **Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Critical Thinking, SE page 167; Process Skill, SE page 167**

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Use electricity to produce heat, sound, or magnetic effects.
Chapter 9, Lesson 1, Video C, SE page 181; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Demonstrate electrical circuits require a complete loop through which an electrical current can pass.
Level B: **Chapter 9, Lesson 1, Video C, SE page 181** **See also Level A:** **Chapter 9, Lesson 2, Video B, SE page 188; Process Skill, SE page 191** **See also Level C:** **Chapter 8, Lesson 3, Video A, SE page 171**

4.3 PHYSICAL SCIENCE
4.3.3 By the end of fourth grade, students will develop an understanding of light, heat, electricity, and magnetism.
• Describe the physical properties of magnets.
Chapter 9, Lesson 2, Video A, SE page 185

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe the differences between plants and animals.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Lesson 2, Video A, SE page 9; Video B, SE page 10; Lesson3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe the various structures of plants and animals necessary for survival and reproduction.
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**

4.4 LIFE SCIENCE
4.4.1 By the end of fourth grade, students will develop an understanding of the characteristics of living things.
• Describe how internal stimuli (e.g., hunger) and external stimuli (e.g., changes in the environment) affect behavior of living things.
Chapter 1, Lesson 2, Video B, SE page 10 **Chapter 3, Lesson 1, Video B, SE page 48; Video C, SE page 49**

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Describe the life cycle of an organism.
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**

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Identify inherited characteristics of living things (e.g., color and number of eyes).
Level B: **Chapter 1, Lesson 1, Video B, SE page 4; Lesson 2, Video C, SE page 11** **See also Level C:** **Chapter 2, Lesson 2, Video C, SE page 33**

4.4 LIFE SCIENCE
4.4.2 By the end of fourth grade, students will develop an understanding of the life cycles of living things.
• Identify learned characteristics of living things (e.g., language or hunting for food).
Level B: **Chapter 1, Lesson 1, Video B, SE page 4; Lesson 2, Video C, SE page 11** **See also Level C:** **Chapter 2, Lesson 2, Video C, SE page 33**

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Diagram a food chain.
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

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Explain how environmental changes affect behavior and survival of living things.
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**

4.4 LIFE SCIENCE
4.4.3 By the end of fourth grade, students will develop an understanding of living things and environments.
• Describe how humans and other living things cause both positive and negative changes in their environment.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Identify characteristics of soils, minerals, rocks, water, and the atmosphere.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• List earth materials that are used by humans (e.g., water, fossils fuels, ores, soils).
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**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Select the best earth material for a specific human use (e.g., marble-buildings, clay-pottery, coal-heat).
Chapter 4, Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; Critical Thinking, SE page 85; Writing in Science, SE page 85; Process Skill, SE page 85; KnowZone, SE page 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 191l Video B, SE page 192; Process Skill, SE page 195**

4.5 EARTH AND SPACE SCIENCE
4.5.1 By the end of fourth grade, students will develop an understanding of the characteristics of earth materials.
• Describe an ancient environment based on fossil evidence.
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**

4.5 EARTH AND SPACE SCIENCE
4.5.2 By the end of fourth grade, students will develop an understanding of objects in the sky.
• Observe and describe how objects move in patterns (e.g., sun, moon, stars, and clouds).
Chapter 6, Lesson 1, Video B, SE page 114; Video C, SE page 115; Process Skill, SE page 117

4.5 EARTH AND SPACE SCIENCE
4.5.3 By the end of fourth grade, students will develop an understanding of the changes in the earth and sky.
• Describe how slow processes (e.g., erosion) and rapid processes (e.g., earthquakes), change the earth's surface.
Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75

4.5 EARTH AND SPACE SCIENCE
4.5.3 By the end of fourth grade, students will develop an understanding of the changes in the earth and sky.
• Describe and measure changes in weather (e.g., temperature, precipitation, and wind direction and speed).
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

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Identify a simple 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**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Propose a solution to a simple 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**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Implement the implementation.
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**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Evaluate the implementation.
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**

4.6 SCIENCE AND TECHNOLOGY
4.6.1 By the end of fourth grade, students will develop an understanding of technological design.
• Communicate the problem, design, and solution.
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**

4.6 SCIENCE AND TECHNOLOGY
4.6.2 By the end of fourth grade, students will develop an understanding of science and technology.
• Identify tools or techniques that use scientific knowledge to solve problems.
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**

4.6 SCIENCE AND TECHNOLOGY
4.6.2 By the end of fourth grade, students will develop an understanding of science and technology.
• Identify, investigate, and solve a problem in the home or school.
Chapter 1, Lesson 3, Critical Thinking, SE page 21 **Chapter 2, Lesson 1, Process Skill, SE page 29; Lesson 3, Critical Thinking, SE page 43; Process Skill, SE page 43** **Chapter 3, Lesson 2,m Critical Thinking, SE page 59; Lesson 3, Critical Thinking, SE page 65; Process Skill, SE page 65** **Chapter 4, Lesson 3, Process Skill, SE pages 85**

4.6 SCIENCE AND TECHNOLOGY
4.6.3 By the end of fourth grade, students will develop an understanding of the abilities to distinguish between natural objects and objects made by humans.
• Classify an object as natural or manufactured.
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.1 By the end of fourth grade, students will develop an understanding of personal health.
• Explain how the body uses food and how various foods contribute to health.
See Level A: **Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.1 By the end of fourth grade, students will develop an understanding of personal health.
• Describe how different substances (e.g., tobacco, alcohol, and drugs) can damage the body and alter how it functions.
This concept is not covered at this level.

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources which are basic materials (e.g., air, water, and soil).
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources produced from basic materials (e.g., food, fuel, and building materials).
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• List examples of resources which are intangible materials (e.g., beauty, security, and quiet places).
Chapter 2, Lesson 1, Critical Thinking, SE page 29 **Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.2 By the end of fourth grade, students will develop an understanding of the types of resources.
• Research and report on the supply of various resources.
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.3 By the end of fourth grade, students will develop an understanding of environmental changes.
• Distinguish between natural environmental changes and human influenced environmental changes.
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**

4.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
4.7.4 By the end of fourth grade, students will develop an understanding of how science and technology helps communities resolve problems.
• Research and explain how science and technology affect the quality of life.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on the contributions to science and technology throughout history by men and women scientists of diverse cultures.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on how science is used in different careers.
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**

4.8 HISTORY AND NATURE OF SCIENCE
4.8.1 By the end of fourth grade, students will develop an understanding of science as a human endeavor.
• Research and report on how current scientific discoveries illustrate that science is an ongoing process.
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**

SRA Snapshots Video Science™: Level C
correlation to
Nebraska Science 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

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.
• Recognize and describe key parts and functions of any system.
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; Video C, SE page 17; KnowZone, SE pages 20-21; 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; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 53; Video B, SE page 54; Video C, SE page 55; KnowZone, SE pages 58-59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Video C, SE page 71; KnowZone, SE page 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Lesson 3, Video A, SE page 103; Video B, SE page 104; Video C, SE page 105; KnowZone, SE pages 108-109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; KnowZone, SE page 118-119; Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **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 B, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **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; KnowZone, SE pages 168-169; 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** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; KnowZone, SE pages 184-185; 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; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.
• Analyze and predict the interactions within a system and between systems.
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; Video C, SE page 17; KnowZone, SE pages 20-21; 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; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 53; Video B, SE page 54; Video C, SE page 55; KnowZone, SE pages 58-59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Video C, SE page 71; KnowZone, SE page 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Lesson 3, Video A, SE page 103; Video B, SE page 104; Video C, SE page 105; KnowZone, SE pages 108-109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; KnowZone, SE page 118-119; Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **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 B, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **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; KnowZone, SE pages 168-169; 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** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; KnowZone, SE pages 184-185; 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; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.
• Create and use classification schemes.
Chapter 1, KnowZone, SE pages 20-21 **Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Critical Thinking, SE page 29; Writing in Science, SE page 29; Process Skill, SE page 29** **Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84** **Chapter 6, Lesson 1, Process Skill, SE page 117** **Chapter 8, Lesson 1, Process Skill, SE page 161** **Classification, SE page 202**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.1 By the end of eighth grade, students will develop an understanding of systems, order, and organization.
• Interpret cause and effect relationships within and between systems.
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; Video C, SE page 17; KnowZone, SE pages 20-21; 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; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 53; Video B, SE page 54; Video C, SE page 55; KnowZone, SE pages 58-59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Video C, SE page 71; KnowZone, SE page 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Lesson 3, Video A, SE page 103; Video B, SE page 104; Video C, SE page 105; KnowZone, SE pages 108-109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; KnowZone, SE page 118-119; Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **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 B, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **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; KnowZone, SE pages 168-169; 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** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; KnowZone, SE pages 184-185; 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; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.
• Collect, manipulate, and analyze data from an experiment.
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**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.
• Observe and develop models (e.g., physical, mathematical, mental, and computer simulations).
Chapter 1, Lesson 1, Process Skill, SE page 7 **Chapter 4, Lesson 3, Process Skill, SE page 87** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 9, Lesson1, Process Skill, SE page 183**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.
• Interpret and explain results of experimentation.
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**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.2 By the end of eighth grade, students will develop an understanding of evidence, models, and explanation.
• Analyze whether or not investigative procedures and conclusions are reasonable.
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**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.
• Select and use appropriate measurement units.
Chapter 1, LabTime Hands-On Activity 1, TRB page 15, TG page 30 **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB page 87, TG page 102** **Chapter 7, Lesson 2, Video C, SE page 165; LabTime Hands-On Activity 7, TRB page 123, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB page 141, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191** **The Metric System, SE page 200-201**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.
• Quantify changes in systems (e.g., magnitude, direction, and rate).
Chapter 1, Lesson 1, Process Skill, SE page 7 **Chapter 2, Lesson 1, Video B, SE page 26; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35** **Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62** **Chapter 4, Lesson 2, Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video B, SE page 100; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, video C, SE page 137; Lesson 2, Video A, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, Lesson 3, Video B, SE page 172; Video C, SE page 173** **Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; 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**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.
• Apply English and metric systems of measurements.
Chapter 1, LabTime Hands-On Activity 1, TRB page 15, TG page 30 **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB page 87, TG page 102** **Chapter 7, Lesson 2, Video C, SE page 165; LabTime Hands-On Activity 7, TRB page 123, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB page 141, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191** **The Metric System, SE page 200-201**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.3 By the end of eighth grade, students will develop an understanding of change, constancy, and measurement.
• Investigate and describe changes in terms of scale, rate, and pattern.
Chapter 1, Lesson 1, Process Skill, SE page 7 **Chapter 6, KnowZone, SE pages 118-119; Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Process Skill, SE page 191**

8.1 UNIFYING CONCEPTS AND PROCESSES
8.1.4 By the end of eighth grade, students will develop an understanding of form and function.
• Demonstrate how the design of an object makes it possible for that object to perform a specialized task (e.g., a bicycle or an artificial heart.
Chapter 1, Lesson 2, Video A, SE page 9; Lesson 3, Video A, SE page 15

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Identify questions and form hypotheses that can be examined through scientific 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, 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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Design and conduct a scientific 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, 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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Use appropriate tools and techniques to gather, analyze, and interpret data.
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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Given evidence, develop descriptions, explanations, predictions, and 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, 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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Show the relationship between evidence and explanations.
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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Recognize and analyze alternative explanations and predictions.
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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Communicate scientific procedures 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**

8.2 SCIENCE AS INQUIRY
8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.
• Use mathematics in 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**

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• Investigate and demonstrate that characteristic properties of a substance (e.g., density, boiling point, and solubility) do not depend on the amount of the substance.
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

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• Observe, describe, and measure physical and chemical properties of matter.
Chapter 7, Lesson 1, Video B, SE page 136; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147 **Chapter 8, Lesson 2, Video A, SE page 163**

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• Explain that all matter is composed of elements which may combine in a variety of ways to form compounds.
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**

8.3 PHYSICAL SCIENCE
8.3.1 By the end of eighth grade, students will develop an understanding of properties and changes of properties in matter.
• Investigate and explain that in chemical reactions new properties are created and total mass is conserved.
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

8.3 PHYSICAL SCIENCE
8.3.2 By the end of eighth grade, students will develop an understanding of motion and forces.
• Investigate and describe the motion of an object by its position, direction of motion, and speed.
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

8.3 PHYSICAL SCIENCE
8.3.2 By the end of eighth grade, students will develop an understanding of motion and forces.
• Investigate and demonstrate that the speed and/or direction of an object changes when a force is applied to that object.
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

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• Investigate and describe the transfer of light energy.
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

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• Investigate and demonstrate how energy is transferred using simple machines.
See Level A: **Chapter 8, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Writing in Science, SE page 153; Process Skill, SE page 153** **See also Level B:** **Chapter 8, Lesson 3, Video C, SE page 173; Math in Science, SE page 175; Process Skill, SE page 175**

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• Investigate and describe how heat is transferred from a warmer object to a cooler object 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

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• Investigate and describe the properties and transfer of sound energy.
See Level B: **Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Process Skill, SE page 161; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156**

8.3 PHYSICAL SCIENCE
8.3.3 By the end of eighth grade, students will develop an understanding of the forms of energy and how energy is transferred.
• Investigate and describe the transfer of energy from electrical and magnetic sources to different energy forms (e.g., heat, light, sound and chemical).
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**

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and describe the levels of organizations: Cells, tissues, organs, 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

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and demonstrate that all living things are composed of cells.
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

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and explain how cells sustain life through functions (e.g., growth and nutrition).
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

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and describe the specialized function performed by specialized cells (e.g., muscular and skeletal) in multicellular organisms.
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

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and describe the human body systems and how they interact.
Chapter 1, Lesson 3, Video B, SE page 16; Video C, SE page 17

84.4 LIFE SCIENCE
8.4.1 By the end of eighth grade, students will develop an understanding of the structure and function in living systems.
• Investigate and explain how disease affects the structure and/or function of an organism.
Chapter 1, Lesson 3, Video A, SE page 15; Critical Thinking, SE page 19; KnowZone, SE page 20-21

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• Investigate and describe how all organisms reproduce through sexual or asexual reproduction.
Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Critical Thinking, SE page 35; Process Skill, SE page 35

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• Investigate and describe that in many species, offspring receive hereditary information from the female (eggs) and male (sperm).
Chapter 2, Lesson 2, Video B, SE page 32

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• Investigate and explain that chromosomes contain genes which influence heredity.
This concept is not covered at this level.

8.4 LIFE SCIENCE
8.4.2 By the end of eighth grade, students will develop an understanding of reproduction and heredity.
• Investigate and describe the effects of inherited traits and environmental influences on an organism's characteristics.
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

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• Investigate and explain how organisms' behaviors enhance their abilities to obtain and use resources, grow, and reproduce.
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

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• Investigate and examine how an organism senses a change in its internal or external environment and responds to keep conditions within a required range.
Chapter 2, Lesson 2, Video C, SE page 33; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• Investigate and explain how behavior is a response to internal and external stimuli determined by heredity and 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

8.4 LIFE SCIENCE
8.4.3 By the end of eighth grade, students will develop an understanding of regulation and behavior.
• Investigate and explain how an organism's behavior evolves through environmental adaptation.
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

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• Investigate and describe that a population consists of all individuals of a species at a given place and time.
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

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• Investigate and analyze the living and nonliving factors that determine the number of organisms an ecosystem can support.
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

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• Describe an organism by the function it serves in an ecosystem (e.g., producer, consumer, and decomposer).
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**

8.4 LIFE SCIENCE
8.4.4 By the end of eighth grade, students will develop an understanding of populations and ecosystems.
• Investigate and explain how energy entering ecosystems as sunlight in transferred by producers into chemical energy through photosynthesis, and that energy then passes from organisms 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**

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• Explain how internal structures, similarities of chemical processes (e.g., photosynthesis and respiration) and evidence of common ancestry demonstrate unity among organisms.
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

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• Investigate and explain how organisms adapt to living and nonliving factors in a biome.
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**

8.5 LIFE SCIENCE
8.4.5 By the end of eighth grade, students will develop an understanding of diversity and adaptations of organisms.
• Investigate and explain how environmental changes created by nature and by humans may cause species extinction.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 4, Lesson 3, Video A, SE page 83**

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the crust, mantle, and core of the earth.
Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70 **Earth's Layers, SE page 204**

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe how a combination of constructive and destructive forces create land forms.
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

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the composition of soils.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the water cycle.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the composition of the atmosphere at different altitudes.
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

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the influence of topography, location, and oceans on climate.
Chapter 5, Lesson 1, Video B, SE page 92; Process Skill, SE page 95

8.5 EARTH AND SPACE SCIENCE
8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.
• Investigate and describe the effect of living organisms on weathering and the atmosphere.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.2 By the end of eighth grade, students will develop an understanding of the earth's history.
• Investigate and describe how earth processes that occur today (e.g., volcanism, weather, and erosion) are similar to those that occurred in the past.
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

8.5 EARTH AND SPACE SCIENCE
8.5.2 By the end of eighth grade, students will develop an understanding of the earth's history.
• Investigate and use the fossil record to provide evidence and explain how environmental conditions have changed.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 4, Lesson 3, Video A, SE page 83**

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• Investigate and list the components of 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

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• Investigate and describe the motion of objects in the solar system that support concepts of day, year, eclipses, and phases of the moon.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• Investigate and describe the influence of gravity on objects in the solar system.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• Investigate and describe the sun as the major source of energy that influences the atmosphere and the earth's surface.
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**

8.5 EARTH AND SPACE SCIENCE
8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.
• Investigate and describe the effect of the tilt of the earth's axis on seasons.
Chapter 6, Lesson 2, Video A, SE page 121

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• Identify problems for technological design.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• Design a solution or product.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• Implement a proposed design.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• Evaluate completed technological designs or product.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

8.6 SCIENCE AND TECHNOLOGY
8.6.1 By the end of eighth grade, students will develop an understanding of technological design.
• Communicate the process of technological design.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

8.6 SCIENCE AND TECHNOLOGY
8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.
• Distinguish between scientific inquiry (asking questions about the natural world) and technological design (using science to solve practical problems).
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**

8.6 SCIENCE AND TECHNOLOGY
8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.
• Describe how science and technology are reciprocal.
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**

8.6 SCIENCE AND TECHNOLOGY
8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.
• Assess the avoidable and unavoidable limits of a technological design.
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**

8.6 SCIENCE AND TECHNOLOGY
8.6.2 By the end of eighth grade, students will develop an understanding of science and technology.
• Recognize that solutions are intended and unintended consequences.
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**

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.1 By the end of eighth grade, students will develop an understanding of personal health.
• Identify and research substances harmful to human beings in the natural environment (e.g., radon, lead, and nitrates).
This concept is not covered at this level.

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.1 By the end of eighth grade, students will develop an understanding of personal health.
• Investigate and explain how personal choices can directly affect a person's health (e.g., exercise, nutrition, and use of drugs).
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**

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.2 By the end of eighth grade, students will develop an understanding of relationships among populations, resources, and environments.
• Investigate and describe how population levels affect resources and the environment.
Chapter 3, Lesson 1, Video B, SE page 48; Process Skill, SE page 51

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.2 By the end of eighth grade, students will develop an understanding of relationships among populations, resources, and environments.
• Investigate and understand that the causes of environmental degradation and resource depletion vary locally and globally.
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**

84.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.3 By the end of eighth grade, students will develop an understanding of natural hazards.
• Investigate and describe the effect of natural hazards on the environment (e.g., earthquakes, landslides, wildfires, floods and storms).
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**

84.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.3 By the end of eighth grade, students will develop an understanding of natural hazards.
• Investigate and describe human activities (e.g., urban growth, land use, and waste disposal) which 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**

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.4 By the end of eighth grade, students will develop an understanding of risks and benefits.
• Analyze a type of hazard (e.g., natural, chemical, or biological) to evaluate the options for reducing or eliminating human risk.
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**

8.7 SCIENCE IN PERSOANL AND SOCIAL PERSPECTIVES
8.7.4 By the end of eighth grade, students will develop an understanding of risks and benefits.
• Describe how perceptions of risks and benefits influence personal and social decisions (e.g., seat belt usage and waste disposal procedures).
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.
• Investigate and understand that women and men of various social and ethnic backgrounds, working alone or in teams, engage in the activities of science, engineering, and related fields.
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.
• Investigate and understand that science requires different abilities based on the type of inquiry and relies upon basic human qualities and scientific habits of mind.
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.1 By the end of eighth grade, students will develop an understanding of science as a human endeavor.
• Explain the need for ethical codes followed by scientists (e.g., humane treatment of animals and truth in reporting).
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• Formulate and test a hypothesis using observations, experiments, and 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, 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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• Use questioning, response to criticism, and open communication when defending a conclusion.
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• Evaluate the results of scientific investigations, experiments, observations, theoretical models, and the explanations proposed by other 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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.2 By the end of eighth grade, students will develop an understanding of the nature of science.
• Understand that scientific theories are based on observations, governed by rules of reasoning, and used to predict events.
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**

8.8 HISTORY AND NATURE OF SCIENCE
8.8.3 By the end of eighth grade, students will develop an understanding of the history of science.
• Research and describe the difficulties experienced by scientific innovators who had to overcome commonly held beliefs of their times to reach conclusions that we now 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**