SRA Snapshots Video Science™: Level A
correlation to
New Jersey Core Curriculum Content Standards for Science
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

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
1. Raise questions about the world around them and be willing to seek answers through making careful observations and experimentation.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
2. Keep records that describe observations, carefully distinguish actual observations from ideas and speculates, and are understandable weeks and months later.
Chapter 1, Lesson 1, Process Skill, SE page 7; Lesson 2, Process Skill, SE page 13; Chapter 1 LabTime Hands-On Activity, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 3, Process Skill, SE page 43** **Chapter 3, LabTime Hands-On Activity, TRB Pages 51-53, TG page 66** **Chapter 4, Lesson 2 Process Skill, SE page 79; 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, Lesson 3 Process Skill, SE page 131; LabTime Hands-On Activity, TRB pages 105-107, TG page 120** **Chapter 7 LabTime Hands-On Activity, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3 Process Skill, SE page 175; LabTime Hands-On Activity, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1 Process Skill, SE page 183; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
3. Recognize that when a science investigation is replicated, very similar results are expected.
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 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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
4. Know that when solving a problem it is important to plan and get ideas and help from other people.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
1. Develop strategies and skills for information-gathering and problem-solving, using appropriate tools and technologies.
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 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, 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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
2. Identify the evidence used in an 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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
1. Recognize that conducting scientific activities requires an awareness of potential hazards and the need for safe practices.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
2. Understand and practice safety procedures for conducting science investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: A. Cultural Contributions
1. Describe how people in different cultures have made and continue to make contributions to science and technology.
Chapter 3, Lesson 2 Process Skill, SE page 59 **Chapter 4, KnowZone, SE pages 80-81** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: B. Historical Perspectives
1. Hear, read, write, and talk about scientists and inventors in historical context.
Chapter 3, Lesson 2 Process Skill, SE page 59 **Chapter 4, KnowZone, SE pages 80-81** **Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105** **Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
1. Determine the reasonableness of estimates, measurements, and computations of quantities when doing science.
Chapter 1, Lesson 2, Math in Science, SE page 13 **Chapter 2, Lesson 2, Math in Science, SE page 35** **Chapter 3, Lesson 2, Math in Science, SE page 59; Lesson 3, Process Skill, SE page 65** **Chapter 4, Lesson 1, Math in Science, 73; Process Skill, SE page 73** **Chapter 7, Lesson 2, Math in Science, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Math in Science, SE page 191** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
2. Recognize and comprehend the order or magnitude associated with large and small physical quantities.
Chapter 3, Lesson 2, Math in Science, SE page 59; Lesson 3, Process Skill, SE page 65 **Chapter 4, Lesson 1, Process Skill, SE page 73** **Chapter 5, Lesson 2, Math in Science, SE page 103; Process Skill, SE page 103** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
3. Express quantities using appropriate number formats, such as: • Integers. • Fractions.
Chapter 3, Lesson 2, Math in Science, SE page 59; Lesson 3, Process Skill, SE page 65 **Chapter 4, Lesson 1, Process Skill, SE page 73** **Chapter 5, Lesson 2, Math in Science, SE page 103; Process Skill, SE page 103** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
1. Select appropriate measuring instruments based on the degree of precision required.
Chapter 3, Lesson 3, Process Skill, SE page 65 **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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
2. Use a variety of measuring instruments and record measured quantities using the appropriate units.
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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: C. Patterns and Algebra
1. Identify patterns when observing the natural and constructed world.
Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19 **Chapter 2, Lesson 2, Video C, SE page 33** **Chapter 5, Lesson 2, Video B, SE page 100** **Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video SE page 115; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: D. Data Analysis and Probability
1. Use tables and graphs to represent and interpret data.
Chapter 1, Lesson 2, Math in Science, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 87** **Chapter 5, Lesson 2, Math in Science, SE page 103; 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, 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**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: A. Science and Technology
1. Distinguish between things that occur in nature and those that have been designed to solve human problems.
Chapter 1, Lesson 1, Process Skill, SE page 7 **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: B. Nature of Technology
1. Demonstrate how measuring instruments are used to gather information in order to design things that work properly.
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**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
1. Describe a product or device in terms of the problem it solves or the need it meets.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
2. Choose materials most suitable to make simple mechanical constructions.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
3. Use the design process to identify a problem, look for ideas, and develop and share solutions with others.
Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 **Chapter 9, Lesson 2 Process Skill, SE page 191**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
1. Identify the roles that organisms may serve in a food chain.
Chapter 2, Lesson 2, Video A, SE page 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**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
2. Differentiate between the needs of plants and those of animals.
Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 3, Video A, SE page 39** **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; KnowZone, Se pages 52-53**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
3. Recognize that plants and animals are composed of different parts performing different functions and working together for the well being of the organism.
Chapter 2, KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Process Skill, SE page 43

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
4. Describe the basic functions of the major systems of the human body including, but not limited to: • Digestive system • Circulatory system • Respiratory system • Nervous system • Skeletal system • Muscular system • Reproductive system.
Chapter 3. Lesson 1, Video C, SE page 49

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
1. Develop a simple classification scheme for grouping organisms.
Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11 **Classification, SE page 202**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
2. Recognize that individuals vary within each species, including humans.
Chapter 1, Lesson 3, SE page 19

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: C. Reproduction and Heredity
1. Identify different stages in the lives of various organisms.
Chapter 1, KnowZone, SE pages 14-15; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
1. Sort materials based on physical characteristics that can be seen by using magnification.
Chapter 8, Lesson 1, Video B, SE page 158; Process Skill, SE page 161

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
2. Observe that water can be a liquid or a solid and can change from one form to the other and the mass remains the same.
Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Process Skill, SE page 167

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
3. Recognize that water, as an example of matter, can exist as a solid, liquid, or gas and can be transformed from one state to another by heating or cooling.
Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Process Skill, SE page 167

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
4. Show that not all materials respond in the same way when exposed to similar conditions.
Chapter 8, Lesson 2, Video B, SE page 164; Video C, SE page 165; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: B. Chemical Reactions
1. Combine two or more materials and show that the new material may have properties that are different from the original material.
Chapter 8, Lesson 2, Video C, SE page 165

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
1. Recognize that changes in the speed or direction of a moving object are caused by force and that the greater the force, the greater the change in motion will be.
Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE pages 140-141

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
2. Recognize that some forces can act at a distance. • Gravity • Magnetism • Static electricity.
Chapter 7, Lesson 1, Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
1. Identify sources of heat and demonstrate that heat can be transferred from one object to 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

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
2. Identify sources of light and demonstrate that light can be reflected from some surfaces and pass through others.
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

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
3. Use devices that show electricity producing heat, light, sound, and magnetic effects.
Chapter 7, Lesson 2, Video C, SE page 147 **Chapter 9, Lesson 1, Video A, SE page 179; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189**

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
4. Show that differences in sound (loud or soft, high or low) can be produced by varying the way objects vibrate.
Chapter 9, Lesson 1, Video C, SE page 181; Process Skill, SE page 183

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
1. Observe that most rocks and soils are made of several substances or minerals.
Chapter 4, Lesson 2, Video A, SE page 75; Video C, SE page 77

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
2. Observe that the properties of soil vary from place to place and will affect the soil's ability to support life.
Chapter 4, Lesson 2, Video C, SE page 77; Process Skill, SE page 79

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
3. Recognize that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.
Chapter 4, Lesson 2, Video B, SE page 76; KnowZone, SE pages 80-81

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
1. Recognize that air is a substance that surrounds us, takes up space, and moves around us as wind.
Chapter 4, Lesson 3, Video A, SE page 83 **Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
2. Recognize that most of Earth's surface is covered by water and be able to identify the characteristics of those sources of water. • Oceans • Rivers • Lakes • Underground sources • Glaciers.
Chapter 5, Lesson 2, Video A, SE page 99

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
3. Observe weather changes and patterns by measurable quantities such as temperature, wind directions and speed, and amounts of precipitation.
Chapter 5, KnowZone, SE pages 96-97; Lesson 2, Process Skill, SE page 103; Lesson 3, Video A, SE page 105; Video B, SE page 106; Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
4. Observe that when liquid water disappears, it turns into a gas (vapor) in the air and can reappear as a liquid when cooled, or as a solid if cooled below its freezing point.
Chapter 5, Lesson 2, Video B, SE page 100 **The Planet Earth, SE page 204**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
5. Observe that rain, snow, and other forms of precipitation come from clouds, but that not all clouds produce precipitation.
Chapter 5, Lesson 2, Video B, SE page 100

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
6. Recognize that clouds and fog are made of tiny droplets of water and possibly tiny particles of ice.
Chapter 5, Lesson 2, Video B, SE page 100

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: C. Process that Shape the Earth
1. Recognize that some changes of the Earth's surface are due to slow processes such as erosion and weathering, and some changes are due to rapid changes such as landslides, volcanic eruptions, and earthquakes.
Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: C. Process that Shape the Earth
2. Recognize that moving water, wind, and ice continually shape the Earth's surface by eroding rock and soil in some areas and depositing them in other areas.
Chapter 4, Lesson 1, Video B, SE page 70; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: D. How We Study the Earth
1. Use maps to locate and identify physical features of the Earth.
Chapter 4, Lesson 1, Video A, SE page 69

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
1. Observe patterns that result from the Earth's position relative to the sun and rotation of the Earth on its axis.
Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 **Earth in Space, SE page 205**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
2. Recognize and describe the phases of the moon.
Chapter 6, Lesson 1, Video C, SE page 115; Lesson 3, Process Skill, SE page 131

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: B. Solar System
1. Describe Earth as one of several planets that orbit the sun and the moon as a satellite of the Earth.
Chapter 6, Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Writing in Science, SE page 123

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: C. Stars
1. Observe that stars are not all the same in brightness, size, and color.
Chapter 6, Lesson 3, Video A, SE page 127Chapter 2,

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
1. Recognize that images of celestial objects can be magnified and seen in greater detail when observed using binoculars and light telescopes.
Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video B, SE page 128; Process Skill, SE page 131

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
2. Observe and record short-term changes in the night sky.
Chapter 6, Lesson 1, Video C, SE page 115; Lesson 3, Process Skill, SE page 131 **Earth in Space, SE page 205**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: A. Natural Systems and Interactions
1. Differentiate between natural resources that are renewable and those that are not.
Chapter 3, Lesson 3, Process Skill, SE page 65 **Chapter 4, 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; Process Skill, SE page 197**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: B. Human Interactions and Impact
1. Explain how human requirements affect the environment.
Chapter 3, Lesson 3, Video A, SE page 61; Video C, SE page 63; Process Skill, SE page 65 **Chapter 4, Lesson 3, Video B, SE page 84; Video C, SE page 85; Process Skill, SE page 87**

SRA Snapshots Video Science™: Level B
correlation to
New Jersey Core Curriculum Content Standards for Science
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

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
1. Raise questions about the world around them and be willing to seek answers through making careful observations and experimentation.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
2. Keep records that describe observations, carefully distinguish actual observations from ideas and speculates, and are understandable weeks and months later.
Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
3. Recognize that when a science investigation is replicated, very similar results are expected.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
4. Know that when solving a problem it is important to plan and get ideas and help from other people.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
1. Develop strategies and skills for information-gathering and problem-solving, using appropriate tools and technologies.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
2. Identify the evidence used in an explanation.
Chapter 1, Lesson 1, Process Skill, SE page 7; Lesson 2, Process Skill, SE page 11; 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, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 3, Process Skill, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 3, Process Skill, SE page 153l 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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
1. Recognize that conducting scientific activities requires an awareness of potential hazards and the need for safe practices.
Chapter 3, Lesson 3 Process Skill, SE page 65 **Chapter 4, Lesson 3 Process Skill, SE page 85** **Chapter 6 LabTime Hands-On Activity, TRB pages 105-107, TG page 120** **Chapter 7 LabTime Hands-On Activity, TRB pages 123-125, TG page 138** **Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity, TRB pages 159-161, TG page 174**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
2. Understand and practice safety procedures for conducting science investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: A. Cultural Contributions
1. Describe how people in different cultures have made and continue to make contributions to science and technology.
Chapter 4, Lesson 2, Video C, SE page 77 **Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131** **Chapter 7, Lesson 3, Video A, SE page 149** **Chapter 8 KnowZone, SE pages 168-169** **Chapter 9 KnowZone, SE pages 196-197**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: B. Historical Perspectives
1. Hear, read, write, and talk about scientists and inventors in historical context.
Chapter 5, Lesson 2, Video C, SE page 99 **Chapter 6, Lesson 2, Process Skill, SE page 123; Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C< SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131** **Chapter 7, KnowZone, SE pages 140-141; Lesson 3, Video A, SE page 149** **Chapter 8, KnowZone, SE pages 168-169** **Chapter 9, KnowZone, SE pages 196-197**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
1. Determine the reasonableness of estimates, measurements, and computations of quantities when doing science.
Chapter 1, Lesson 1. Math in Science, SE page 7; LabTime Hands-On Activity, TRB pages 15-17, TG page 30 **Chapter 3, Lesson 3 Math in Science, SE page 65; LabTime Hands-On Activity, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1 Math in Science, SE page 73; 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 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Math in Science, SE page 147; Process Skill, SE page 147; LabTime Hands-On Activity, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 3 Math in Science, SE page 175** **Chapter 9, Lesson 3 Math in Science, SE page 195** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
2. Recognize and comprehend the orders of magnitude associated with large and small physical quantities.
Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, Lesson 3, Math in Science, SE page 65** **Chapter 4, Lesson 1, Math in Science, SE page 73** **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, math in Science, SE page 147** **Chapter 9, Lesson 3, Process Skill, SE page 195** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
3. Express quantities using appropriate number formats, such as: • Integers. • Fractions.
Chapter 6 LabTime Hands-On Activity, TRB pages 105-107, TG page 120 **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
1. Select appropriate measuring instruments based on the degree of precision required.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 5, Lesson 2, Video C, SE page 99; 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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
2. Use a variety of measuring instruments and record measured quantities using the appropriate units.
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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: C. Patterns and Algebra
1. Identify patterns when observing the natural and constructed world.
Chapter 1, Lesson 3, Video C, SE page 13 **Chapter 3, Lesson 2, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41** **Chapter 6, Lesson 1, Video B, SE page 114; Video C, SE page 115** **The Water Cycle, SE page 204** **Earth in Space, SE page 205**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: D. Data Analysis and Probability
1. Use tables and graphs to represent and interpret data.
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, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; 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; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: A. Science and Technology
1. Distinguish between things that occur in nature and those that have been designed to solve human problems.
Chapter 1, Lesson 1, Video A, SE page 3 **Chapter 3, Lesson 3, Video C, SE page 63** **Chapter 4, Lesson 2, Video C, SE page 77** **Chapter 5, Lesson 1, Video A, SE page 91** **Chapter 7, Lesson 3, Video B, SE page 150** **Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169; Lesson 3, Video C, SE page 173** **Chapter 9, Lesson 1, Video B, SE page 186; Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: B. Nature of Technology
1. Demonstrate how measuring instruments are used to gather information in order to design things that work properly.
This concept is not covered at this level.

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
1. Describe a product or device in terms of the problem it solves or the need it meets.
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**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
2. Choose materials most suitable to make simple mechanical constructions.
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**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
3. Use the design process to identify a problem, look for ideas, and develop and share solutions with others.
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**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
1. Identify the roles that organisms may serve in 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

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
2. Differentiate between the needs of plants and those of animals.
Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
3. Recognize that plants and animals are composed of different parts performing different functions and working together for the well being of the organism.
Chapter 1, Lesson 1, Video A, SE page 3; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
4. Describe the basic functions of the major systems of the human body including, but not limited to: • Digestive system • Circulatory system • Respiratory system • Nervous system • Skeletal system • Muscular system • Reproductive system.
Chapter 1, Lesson 1, Video A, SE page 3

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
1. Develop a simple classification scheme for grouping organisms.
Chapter 1, Lesson 1, Video B, SE page 4; 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 **Classification, SE page 202**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
2. Recognize that individuals vary within each species, including humans.
This concept is not covered at this level.

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: C. Reproduction and Heredity
1. Identify different stages in the lives of various organisms.
Chapter 1, Lesson 1, Video C, SE page 19 **See also Level A;** **Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21**

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
1. Sort materials based on physical characteristics that can be seen by using magnification.
Chapter 7, Lesson 1, Video B, SE page 136; Lesson 3, Video B, SE page150

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
2. Observe that water can be a liquid or a solid and can change from one form to the other and the mass remains the same.
Chapter 7, Lesson 1, Video C, SE page 137; Process Skill, SE page 139

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
3. Recognize that water, as an example of matter, can exist as a solid, liquid, or gas and can be transformed from one state to another by heating or cooling.
Chapter 7, Lesson 1, Video C, SE page 137; Process Skill, SE page 139

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
4. Show that not all materials respond in the same way when exposed to similar conditions.
Chapter 7, Lesson 3, Video B, SE page 150; Video C, SE page 151

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: B. Chemical Reactions
1. Combine two or more materials and show that the new material may have properties that are different from the original material.
Chapter 7, Lesson 3, Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
1. Recognize that changes in the speed or direction of a moving object are caused by force and that the greater the force, the greater the change in motion will be.
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**

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
2. Recognize that some forces can act at a distance. • Gravity • Magnetism • Static electricity.
Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Process Skill, SE page 183; Lesson 2, Video A, SE page 185; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
1. Identify sources of heat and demonstrate that heat can be transferred from one object to 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**

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
2. Identify sources of light and demonstrate that light can be reflected from some surfaces and pass through others.
Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
3. Use devices that show electricity producing heat, light, sound, and magnetic effects.
Chapter 9, Lesson 1, Video C, SE page 181; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
4. Show that differences in sound (loud or soft, high or low) can be produced by varying the way 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

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
1. Observe that most rocks and soils are made of several substances or minerals.
Chapter 4, Lesson 2, Video B, SE page 76; Video C, SE page 77; Process Skills, SE page 79; Lesson 3, Video A, SE page 81

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
2. Observe that the properties of soil vary from place to place and will affect the soil's ability to support life.
See Level A: **Chapter 4, Lesson 2, Video C, SE page 77; Critical thinking, SE page 79; Process Skill, SE page 79**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
3. Recognize that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.
Chapter 1, Lesson 1, Video C, SE page 5; Math in Science, SE page 7; Process Skill, SE page 7 **Chapter 4, Lesson 2, Video B, SE page 76; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
1. Recognize that air is a substance that surrounds us, takes up space, and moves around us as wind.
Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
2. Recognize that most of Earth's surface is covered by water and be able to identify the characteristics of those sources of water. • Oceans • Rivers • Lakes • Underground sources • Glaciers.
Chapter 3, Lesson 2, Video A, SE page 55 **Chapter 4, Lesson 1, Video A, SE page 69**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
3. Observe weather changes and patterns by measurable quantities such as temperature, wind directions and speed, and amounts of precipitation.
Chapter 5, Lesson 2, Video C, SE page 99; Process Skill, SE page 101; Lesson 3, Video B, SE page 106; Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89; TG page 102

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
4. Observe that when liquid water disappears, it turns into a gas (vapor) in the air and can reappear as a liquid when cooled, or as a solid if cooled below its freezing point.
Chapter 5, Lesson 1, Video A, SE page 91 **The Water Cycle, SE page 204**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
5. Observe that rain, snow, and other forms of precipitation come from clouds, but that not all clouds produce precipitation.
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 **The Planet Earth, SE page 204**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
6. Recognize that clouds and fog are made of tiny droplets of water and possibly tiny particles of ice.
Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Process Skill, SE page 95; Lesson 3, Video C, SE page 107

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: C. Process that Shape the Earth
1. Recognize that some changes of the Earth's surface are due to slow processes such as erosion and weathering, and some changes are due to rapid changes such as landslides, volcanic eruptions, and earthquakes.
Chapter 4, Lesson 1, Video B, SE page 70; Lesson 2, Video A, SE page 75

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: C. Process that Shape the Earth
2. Recognize that moving water, wind, and ice continually shape the Earth's surface by eroding rock and soil in some areas and depositing them in other areas.
Chapter 4, Lesson 2, Video A, SE page 75

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: D. How We Study the Earth
1. Use maps to locate and identify physical features of the Earth.
Chapter 4, Lesson 1, Video A, SE page 69

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
1. Observe patterns that result from the Earth's position relative to the sun and rotation of the Earth on its axis.
Chapter 6, Lesson 1, Video B, SE page 114; Process Skill, SE page 117

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
2. Recognize and describe the phases of the moon.
Chapter 6, Lesson 1, Video C, SE page 115; Process Skill, SE page 117

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: B. Solar System
1. Describe Earth as one of several planets that orbit the sun and the moon as a satellite of the Earth.
Chapter 6, Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: C. Stars
1. Observe that stars are not all the same in brightness, size, and color.
Chapter 6, Lesson 1, Video A, SE page 113

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
1. Recognize that images of celestial objects can be magnified and seen in greater detail when observed using binoculars and light telescopes.
Chapter 6, Lesson 3, Video A, SE page 125; Video B, 126; **Video C, SE page 127: KnowZone, SE pages 130-131**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
2. Observe and record short-term changes in the night sky.
Chapter 6, Lesson 1, Video A, SE page 113; Video C, SE page 115; Process Skill, SE page 117

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: A. Natural Systems and Interactions
1. Differentiate between natural resources that are renewable and those that are not.
Chapter 4, Lesson 3, Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87 **Chapter 5, Lesson 1, Video C, SE page 93** **Chapter 9, Lesson 3, Video A, SE page 191; Video B, SE page 192**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: B. Human Interactions and Impact
1. Explain how human requirements affect the environment.
Chapter 2, Lesson 3, Process Skill, SE page 43 **Chapter 3, Lesson 1, Video C, SE page 49; Lesson 2, Video C, SE page 57; Lesson 3, Video B, SE page 62; Video C, SE page 63; Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 9, Lesson 3, Process Skill, SE page 195**

SRA Snapshots Video Science™: Level C
correlation to
New Jersey Core Curriculum Content Standards for Science
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

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
1. Raise questions about the world around them and be willing to seek answers through making careful observations and 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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
2. Keep records that describe observations, carefully distinguish actual observations from ideas and speculates, and are understandable weeks and months later.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
3. Recognize that when a science investigation is replicated, very similar results are expected.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: A. Habits of Mind
4. Know that when solving a problem it is important to plan and get ideas and help from other people.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
1. Develop strategies and skills for information-gathering and problem-solving, using appropriate tools and technologies.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: B. Inquiry and Problem Solving
2. Identify the evidence used in an explanation.
Chapter 1, Lesson 1, Process Skill, SE page 7; Lesson 3, Process Skill, SE page 19; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 3, Process Skill, SE page 87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120** **Chapter 7, Lesson 2, Process Skill, SE page 147; Lesson 2, Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
1. Recognize that conducting scientific activities requires an awareness of potential hazards and the need for safe practices.
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**

Standard 5.1 (SCIENTIFC PROCESSES) All students will develop problem-solving, decision-making, and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results. By the end of Grade 4, students will:
Strand: C. Safety
2. Understand and practice safety procedures for conducting science investigations.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 2, Process Skill, SE page 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84** **Chapter 5, Lesson 3, Video B, SE page 109; Know Zone, SE pages 104-105; 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**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: A. Cultural Contributions
1. Describe how people in different cultures have made and continue to make contributions to science and technology.
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**

Standard 5.2 (SCIENCE AND SOCIETY) All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
Strand: B. Historical Perspectives
1. Hear, read, write, and talk about scientists and inventors in historical context.
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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
1. Determine the reasonableness of estimates, measurements, and computations of quantities when doing science.
Chapter 1, Lesson 1 Math in Science, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 2, Lesson 2 Math in Science, SE page 35** **Chapter 3 LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 4, Lesson 1 Math in Science, SE page 73** **Chapter 5, Lesson 2 Math in Science, SE page 101; Lesson 3 Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **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; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2 Process Skill, SE page 191**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
2. Recognize and comprehend the orders of magnitude associated with large and small physical quantities.
Chapter 1, Lesson 1 Math in Science, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 3, Lesson 2 Math in Science, SE page 57; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66** **Chapter 5, Lesson 3 Process Skill, SE page 107** **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**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: A. Numerical Operations
3. Express quantities using appropriate number formats, such as: • Integers. • Fractions.
Chapter 4, Lesson 1 Math in Science, SE page 73 **Chapter 8, Lesson 3 Process Skill, SE page 175** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
1. Select appropriate measuring instruments based on the degree of precision required.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, process Skill, Se page 165; KnowZone, SE pages 168-169; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: B. Geometry and Measurement
2. Use a variety of measuring instruments and record measured quantities using the appropriate units.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 **Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102** **Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138** **Chapter 8, Lesson 2, process Skill, Se page 165; KnowZone, SE pages 168-169; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156** **Chapter 9, Lesson 2, Process Skill, SE page 191** **The Metric System, SE pages 200-201**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: C. Patterns and Algebra
1. Identify patterns when observing the natural and constructed world.
Chapter 2, Lesson 2, Video A, SE page 31 **Chapter 3, Lesson 1, Video C, SE page 49; Writing in Science, SE page 51** **Chapter 4, Lesson 3, Video A, SE page 83** **Chapter 5, Lesson 2, Video B, SE page 98; Process Skill, SE page 101** **Chapter 6, Lesson 2, Video A< SE page 121; Video B, SE page 122; Video C, SE page 123** **Food Web, SE page 203** **The Water Cycle, SE page 204** **Earth in Space, SE page 205**

Standard 5.3 (MATHEMATICAL APPLICATIONS) All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
Strand: D. Data Analysis and Probability
1. Use tables and graphs to represent and interpret data.
Chapter 1, LabTime Hands-On Activity 1, TRB page 15, TG page 30 **Chapter 2, LabTime Hands-On Activity 2, TRB page 33, TG page 48** **Chapter 3, LabTime Hands-On Activity 3, TRB page 51, TG page 66** **Chapter 5, LabTime Hands-On Activity 5, TRB page 87, TG page 102** **Chapter 6, LabTime Hands-On Activity 6, TRB page 105, TG page 120** **Chapter 7, LabTime Hands-On Activity 7, TRB page 123, TG page 138** **Chapter 8, LabTime Hands-On Activity 8, TRB page 141, TG page 156**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: A. Science and Technology
1. Distinguish between things that occur in nature and those that have been designed to solve human problems.
Chapter 1, Lesson 3, Video A, SE page 15 **Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129** **Chapter 8, Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: B. Nature of Technology
1. Demonstrate how measuring instruments are used to gather information in order to design things that work properly.
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**

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
1. Select a technological problem and describe the criteria and constraints that are addressed in solving the problem.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Standard 5.4 (NATURE AND PROCESS OF TECHNOLOGY All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
Strand: C. Technological Design
2. Identify the basic components of a technological system: • Input • Process • Output • Feedback.
Chapter 1, Lesson 1, Video A< SE page 3 **Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129** **Chapter 7, Lesson 3, Video A, SE page 171; Video B, SE page 172**

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
1. Explain how systems of the human body are interrelated and regulate the body's internal environment.
Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, , SE page 16; Video C, SE page 17

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: A. Matter, Energy, and Organizations in Living Systems
2. Identify and describe the structure and function of cells and cell parts.
Chapter 1, , Lesson 1, Video A, SE page 3; Video B, SE page4; Video C, SE page 5; Process Skill, SE page 7; Lesson 2, Video A, SE page 9; Video B, SE page 10; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
1. Describe and give examples of the major categories of organisms and of the characteristics shared by organisms.
Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Process Skill, SE page 29

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: B. Diversity and Biological Evolution
2. Compare and contrast acquired and inherited characteristics in human and other species.
Chapter 2, Lesson 2, Video C, SE page 33

Standard 5.5 (CHARACTERISTICS OF LIFE) All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
Strand: C. Reproduction and Heredity
1. Describe life cycles of humans and other organisms.
Level C: **Chapter 2, Lesson 2, Video A, SE page 31** **See also Level A:** **Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21** **See also Level B:** **Chapter 1, Lesson 3, Video C, SE page 19**

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
1. Recognize that about 100 different elements have been identified and most materials on Earth are made of a few of them.
Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE pages 140-141 **Periodic Table of the Elements, SE pages 206-207**

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
2. Show that equal volumes of different substances usually have different masses.
Chapter 7, Lesson 2, Video B, SE page 144

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
3. Describe the properties of mixtures and solutions, including concentration and saturation.
Chapter 7, Lesson 1, Video C, SE page 137; Process Skill, SE page 139

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: A. Structure and Properties of Matter
4. Describe characteristics physical properties such as boiling point, melting point, and solubility, and recognize that the property is independent of the amount of sample.
Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144 **Chapter 8, Lesson 2, Video C, SE page 165**

Standard 5.6 (Chemistry) All students will gain an understanding of the structure and behavior of matter.
Strand: B. Chemical Reactions
1. Recognize evidence of a chemical change.
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

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
1. Recognize that an object at rest will remain at rest and an object moving in a straight line at a steady speed will continue to move in a straight line at a steady speed unless a net (unbalanced) forces acts on it.
Chapter 9, Lesson 1, Video A, SE page 179; Lesson 3, Video A, SE page 193

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
2. Recognize that motion can be retarded by forces such as friction and air resistance.
Chapter 9, Lesson 1, Video C, SE page 181

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: A. Motion and Forces
3. Recognize that everything on or near the earth is pulled toward the earth's center by gravitational force.
Chapter 9, Lesson 3, Video B, SE page 194

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
1. Recognize that heat flows through materials or across space from warmer objects to cooler ones.
Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Process Skill, SE page 167

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
2. Show that vibrations in materials can generate waves that can transfer energy from one place to another.
Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Process Skill, SE page 167

Standard 5.7 (PHYSICS) All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
Strand: B. Energy Transformations
3. Design an electric circuit to investigate the behavior of a system.
Level C: **Chapter 8, Lesson 3, Video A, SE page 171** **See also Level B:** **Chapter 9, Lesson 1, Video C, SE page 181**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
1. Observe that most rocks and soils are made of several substances or minerals.
Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
2. Observe that the properties of soil vary from place to place and will affect the soil's ability to support life.
Chapter4, 4, Lesson 3, Video C, SE page 85

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: A. Earth's Properties and Materials
3. Recognize that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.
Chapter 4, Lesson 3, Video A, SE page 83

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
1. Describe the composition, circulation, and distribution of the world's oceans, estuaries, and marine environments.
Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Process Skill, SE page 101

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: B. Atmosphere and Water
2. Describe and illustrate the water cycle.
Chapter 5, Lesson 2, Video B, SE page 98; Process Skill, SE page 101 **The Planet Earth, SE page 204**

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: C. Process that Shape the Earth
1. Summarize the process involved in the rock cycle and describe the characteristics of the rocks involved.
Chapter 4, Lesson 3, video A, SE page 83

Standard 5.8 (EARTH SCIENCE) All students will gain an understanding of the structure, dynamics, and geographical systems of the Earth.
Strand: D. How We Study the Earth
1. Utilize various tools such as map projections and topographical maps to interpret features of Earth's surface.
Chapter 4, Lesson 1, Video B, SE page 70

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
1. Explain how the motions of the Earth, sun, and moon, define units of time including: • Days • Months • Years.
Chapter 6, Lesson 2, Video A, SE page 121; Video C, SE page 123

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: A. Earth, Moon, Sun System
2. Recognize that changes in the Earth's position relative to the sun produces differing amounts of daylight seasonally.
Chapter 6, Lesson 2, Video A, SE page 121; Process Skill, SE page 125 **Earth in Space, SE page 205**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: B. Solar System
1. Using models, demonstrate an understanding of the scale of the solar system that shows distance and size relationships among the sun and planets.
Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: B. Solar System
2. Recognize that the sun's gravitational pull holds the planets in their orbits and that the planets' gravitational pull holds their moons in their orbits.
Chapter 6, Lesson 1, Video B, SE page 114

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: C. Stars
1. Observe and record short-term and long-term changes in the positions of the constellations in the night sky.
See Level A: **Chapter 6, Lesson 3, Video A, SE page 127; Process Skill, SE page 131**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: C. Stars
2. Observe that the planets appear to change their position against the background of stars.
Level C: **Chapter 6, Lesson 1, Video A, SE page 113** **See also Level B:** **Chapter 6, Lesson 1, Video B, SE page 114**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
1. Recognize that images of celestial objects can be magnified and seen in greater detail when observed using binoculars and light telescopes.
Chapter 6, Lesson 2, Video B, SE page 128 **See also Level B:** **Chapter 6, Lesson 3, video A, SE page 125**

Standard 5.9 (ASTRONOMY AND SPACE SCIENCE) All students will gain an understanding of the origin, evolution, and structure of the universe.
Strand: D. Galaxies and Universe
2. Observe and record short-term changes in the night sky.
Chapter 6, Lesson 2, Video B, SE page 122; Video C, Se page 123 **Earth in Space, SE page 205**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: A. Natural Systems and Interactions
1. Explain how organisms interact with other components of an ecosystem.
Chapter 2, Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41 **Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Process Skill, SE page 51**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: A. Natural Systems and Interactions
2. Describe the natural processes that occur over time in places where direct human impact is minimal.
Chapter 3, Lesson 3, Video A, SE page 61

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: B. Human Interactions and Impact
1. Describe the effect of human activities on various ecosystems.
Chapter 2, Lesson 1, Video C, SE page 27 **Chapter 3, Lesson 1, Video C, SE page 49; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63** **Chapter 5, Lesson 2, Video C, SE page 49; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102**

Standard 5.10 (ENVIRONMENTAL STUDIES) ALL students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
Strand: B. Human Interactions and Impact
2. Evaluate the impact of personal activities on the local environment.
Chapter 3, Lesson 3, Video B, SE page 62; Video C, SE page 63