SRA Snapshots Video ScienceTM: Level A

correlation to

Washington State's Essential Academic Learning Requirements for Science Grade 3

SRA Snapshots Video ScienceTM 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

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.2 Motion of Objects

Understand the relative position and motion of objects.

Measure and describe the position of one object relative to another object (or surroundings) using positional language (such as in front of, behind, to the left, to the right, above, and below) and a distance scale (such as centimeters).

Chapter 7, Lesson 1, Video A, SE page 135; KnowZone, SE page 140-141

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.3 Wave Behavior

Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction.

• Explain that when an object vibrates the object may produce sound that people can hear and give an example.

Chapter 9, Lesson 1, Video C, SE page 181; Critical thinking, SE page 183; Process Skill, SE page 183

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.3 Wave Behavior

Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction.

Explain the relationship between the pitch of a sound and the vibrations of the object causing the sound.

Chapter 9, Lesson 1, Video C, SE page 181; Writing in Science, SE page 183

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.3 Wave Behavior

Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction.

• Describe experiences with sound (i.e., vibrations, echoes, and pitch).

Chapter 9, Lesson 1, Video A, SE page 181; Critical Thinking, SE page 183; Process Skill, SE page 183

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.3 Wave Behavior

Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction.

• Experience, measure, and describe the motion of light as light bounces off and/or passes through an object.

Chapter 9, Lesson 1, Video A, SE page 179; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.5 Nature and Properties of Earth Materials

Understand physical properties of Earth materials including rocks, soil, water, and air.

• Describe and sort rocks based on physical properties (e.g., color, shape, size, texture).

Chapter 4, Lesson 2, Video A, SE page 75

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.5 Nature and Properties of Earth Materials

Understand physical properties of Earth materials including rocks, soil, water, and air.

• Describe and sort soils based on physical properties (e.g., color, particle size, ability to retain or drain water, texture, smell, support plant growth, source of mineral nutrients {not food} for plants).

Chapter 4, Lesson 2, Video C, SE page 77; Critical Thinking, SE page 79; Process Skill, SE page 79

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Identify the parts of a system (e.g., a device, natural or living thing) and how the parts go together.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 56; Video C, SE page 57; Lesson 3, Video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson, 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; Video B, SE page 128; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Energy Transfer, SE page 203

Planet Earth, SE page 204

Earth in Space, SE page 205

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Describe the functions of a part of a system (e.g., a device, natural or living thing).

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 56; Video C, SE page 57; Lesson 3, Video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson, 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; Video B, SE page 128; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Energy Transfer, SE page 203

Planet Earth, SE page 204

Earth in Space, SE page 205

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.4 Components and Patterns of Earth Systems

Understand that Earth's system includes a mostly solid interior, landforms, bodies of water, and an atmosphere.

• Identify land masses, bodies of water, and landforms on a globe or a map (e.g., continents, oceans, rivers, mountains).

Chapter 4, Lesson 1, Video A, SE page 69; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 2, Video A, SE page 99

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.6 Structure and Organization of Living Systems

Understand that organisms can be a single cell or many cells that form parts with different functions.

• Observe with a microscope and record that living things are made mostly of cells (i.e., plants, animals, and single-celled organisms).

See Level C:

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Critical Thinking, SE page 7; Lesson 2, Video A, SE page 9; Lesson 3, Video A, SE page 15; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.6 Structure and Organization of Living Systems

Understand that organisms can be a single cell or many cells that form parts with different functions.

• Describe how plant and animal cells are similar and different.

See Level C:

Chapter 1, Lesson 1, Video C, SE page 5; Process Skill, SE page 7; Lesson 2, Video A, SE page 9; Critical Thinking, SE page 13

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.6 Structure and Organization of Living Systems

Understand that organisms can be a single cell or many cells that form parts with different functions.

• Describe the life functions of a part of a living thing (e.g., wings of a bird).

Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video C, SE page 19 Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37; Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.7 Molecular Basis of Heredity

Understand the life cycles of plants and animals and the differences between inherited and acquired characteristics.

• Observe and describe the life cycle of a plant or animal.

Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.7 Molecular Basis of Heredity

Understand the life cycles of plants and animals and the differences between inherited and acquired characteristics.

• Describe that the young of plants and animals grow to resemble their parents as they mature into adults.

Chapter 1, Lesson 3, SE page 19

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.7 Molecular Basis of Heredity

Understand the life cycles of plants and animals and the differences between inherited and acquired characteristics.

• Describe inherited characteristics (e.g., leaf shape, eye color) and learned characteristics (e.g., languages, social customs).

Chapter 2, Lesson 3, Video B, SE page 40; Video C, SE page 41

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Science

GLE 1.3.1 Nature of Force

Understand forces in terms of strength and direction.

• Describe a force that is acting on an object in terms of strength and direction (e.g., electrical force, gravitational force, magnetic force, a push, or a pull).

Chapter 6, Lesson 1, Video A, SE page 113

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147

Chapter 8, Lesson 1, Video A, SE page 157

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Science

GLE 1.3.1 Nature of Force

Understand forces in terms of strength and direction.

• Measure the force acting on an object with a spring scale calibrated in newtons (N).

Level A:

Chapter 8, Lesson 1, Video C, SE page 146

See also Level B:

Chapter 7, Lesson 2, Differentiated Instruction Options, Enrichment, TG page 132; Remediation, TG page 132

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Science

GLE 1.3.2 Forces to Explain Motion

Understand that forces can change the motion of common objects.

• Investigate and report how the position and motion of objects can be changed by a force.

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.6 Hydrosphere and Atmosphere

Understand weather indicators and understand how water cycles through the atmosphere.

• Observe, measure, and describe weather indicators (i.e., temperature, wind direction and speed, precipitation), noting changes and patterns of change from day to day and over the year.

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

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.6 Hydrosphere and Atmosphere

Understand weather indicators and understand how water cycles through the atmosphere.

• Describe the weather patterns of each season.

Chapter 6, Lesson 1, Video B, SE page 114; Critical Thinking, SE page 117

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.8 Life Processes and the Flow of Matter and Energy

Understand that living things need constant energy and matter.

• Identify sources of energy and matter used by plants to grow and sustain life (e.g., air, water, light, food, mineral nutrients).

Chapter 1, Lesson 3, Video A, SE page 3; Video B, SE page 4; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.10 Interdependence of Life

Understand that an organism's ability to survive is influenced by the organism's behavior and the ecosystem in which it lives.

• Describe the characteristics of organisms that allow them to survive in an ecosystem.

Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video C, SE page 19 Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37; Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.10 Interdependence of Life

Understand that an organism's ability to survive is influenced by the organism's behavior and the ecosystem in which it lives.

• Describe the role of an organism in a food chain of an ecosystem (i.e., predator, prey, consumer, producer, decomposer, scavenger).

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Energy Transfer, SE page 203

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Identify the question being answered in an investigation.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

Ask questions about objects, organisms, and events based on observations of the natural world.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Make predictions of the results of an investigation.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, 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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Identify and use simple equipment and tools (such as magnifiers, rulers, balances, scales, and thermometers) to gather data and extend the senses.

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105

Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131

Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138

Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

Follow all safety rules during 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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Generate a scientific conclusion including supporting data from an investigation (e.g., grass grows taller with more light; with only 2 hours of light each day, grass grew 2 centimeters in two weeks, but with 6 hours of light, grass grew 8 centimeters).

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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Describe a reason for a given conclusion using evidence from an investigation.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• List similarities and differences between a model and what the model represents (e.g., a hinge and an elbow; a spinning globe and Earth's rotation; steam from a tea kettle and clouds or fog).

Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84

Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102

Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120

Chapter 7, Lesson 3 Process Skill, SE page 153

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Create a simple model to represent common objects, events, systems, or processes (e.g., diagram or map, and/or physical model).

Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84

Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102

Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120

Chapter 7, Lesson 3 Process Skill, SE page 153

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Investigate phenomena using a simple physical or computer model or simulation.

Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84

Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102

Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120

Chapter 7, Lesson 3 Process Skill, SE page 153

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

• Report observations or data of simple investigations without making inferences.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8,

TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

- Summarize an investigation by describing:
 - Reasons for selecting the investigative plan.
 - Materials used in the investigation.
 - Observations, data, results.
 - Explanations and conclusions in written, mathematical, oral, and information technology presentation formats.
 - Safety procedures used.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific observations are recorded accurately and honestly.

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

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific records of observations are not changed even when the records do not match initial expectations.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8,

TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why honest acknowledgement of the contributions of others and information sources are necessary.

Chapter 1, KnowZone, SE pages 14-15

Chapter 2, KnowZone, SE pages 36-37; Lesson 3, Process Skill SE page 43

Chapter 3, KnowZone, SE pages 52-53

Chapter 4, KnowZone, SE pages 80-81

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Process Skill, SE page 109

Chapter 6, KnowZone, SE pages 124-125

Chapter 7, KnowZone, SE pages 140-141

Chapter 8, KnowZone, SE pages 168-169

Chapter 9, KnowZone, SE pages 184-185

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.2 Limitations of Science and Technology

Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists.

• Describe how new scientific facts are established every day (e.g., find examples of new facts in current media).

Chapter 3, Lesson 2, Process Skill, SE page 59

Chapter 4, KnowZone, SE pages 40-41

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Process Skill, SE page 109

Chapter 6, KnowZone, SE pages 124-125

Chapter 8, KnowZone, SE pages 168-169

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.3 Evaluating Inconsistent Results

Understand why similar investigations may not produce similar results.

• Describe reasons why two similar investigations can produce different results (e.g., identify possible sources of error).

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.4 Evaluating Methods of Investigation

Understand how to make the results of scientific investigations reliable.

• Describe how the method of investigation insures reliable results (i.e., reliability means that repeating an investigation gives similar results).

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143. TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

• Describe how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Design an appropriate question that could lead to a possible solution to a problem.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how science and technology could be used to solve a human problem (e.g., using an electric lamp as a source of varied light for plant growth).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe the scientific concept, principle, or process used in a solution o a human problem (e.g., a student using the force of a stretched spring for a push or pull).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how to scientifically gather information to develop a solution (e.g., find an acceptable information source, do an investigation, and collect data).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

- Propose, implement, and document the scientific design process used to solve a problem or challenge:
- Define the problem.
- Scientifically gather information and collect measurable data.
- Explore ideas.
- Make a plan.
- List steps to do the plan.
- Scientifically test solutions.
- Document the scientific design process.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe possible solutions to a problem (e.g., preventing an injury on the playground by creating softer landing at the bottom of a slide).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Identify the criteria for an acceptable solution to a problem or challenge.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge using scientific concepts and principles.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the consequences of the solution to a problem or challenge (e.g., sharpening a crayon results in using up crayons faster).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe how to change a system to solve a problem or improve a solution to a problem.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Test how well a solution works based on criteria, and recommend and justify, with scientific concepts or principles and data, how to make it better (e.g., sharpen a crayon using sandpaper; one grit is better than another).

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

 Describe how individuals of diverse backgrounds have made significant scientific discoveries or technological advances.

Chapter 3, Lesson 2 Process Skill, SE page 59

Chapter 4, KnowZone, SE pages 80-81

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151

Chapter 8, KnowZone, SE pages 168-169

Chapter 9, Lesson 2, Video A, SE page 187; Video B, SE page SE page 188; Video C, SE page 189

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

• Describe how advancements in science and technology have developed over time and with contributions from diverse people.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.2 Relationship of Science and Technology

Understand that people have invented tools for everyday life and for scientific investigations.

• Describe tools (technology) invented to advance scientific investigations (thermometers, rulers, microscopes, telescopes).

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105

Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131

Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138

Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

• Identify science, math, and technology skills used in a career.

Chapter 3, Lesson 2, Critical Thinking, SE page 159; Process Skill, SE page 59

Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Critical Thinking, SE page 87

Chapter 5, Lesson 1, Process Skill, SE page 95; Lesson 3, Video A, SE page 105; Critical Thinking, SE page 109

Chapter 6, Lesson 3, Critical Thinking, SE page 131

Chapter 9, Lesson 3, Video C, SE page 195

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

• Identify occupations using scientific, mathematical, and technological knowledge and skills.

Chapter 3, Lesson 2, Critical Thinking, SE page 159; Process Skill, SE page 59

Chapter 4, Lesson 1, Critical Thinking, SE page 73; Lesson 3, Critical Thinking, SE page 87

Chapter 5, Lesson 1, Process Skill, SE page 95; Lesson 3, Video A, SE page 105; Critical Thinking, SE page 109

Chapter 6, Lesson 3, Critical Thinking, SE page 131

Chapter 9, Lesson 3, Video C, SE page 195

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe how resources can be conserved through reusing, reducing, and recycling.

Chapter 3, Lesson 3, Video A, SE page 61; Video C, SE page 63; Process Skill, SE page 65

Chapter 4, Lesson 2, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85

Chapter 5, Lesson 2, Video C, SE page 101

Chapter 9, Lesson 3, video C, SE page 195

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the effects conservation has on the environment.

Chapter 3, Lesson 3, Video C, SE page 63; Process Skill, SE page 65

Chapter 4, Lesson 3, Video B, SE page 85; Critical Thinking, SE page 87; Process Skill, SE page 87

Chapter 5, Lesson 2, Video C, SE page 101; Critical Thinking, SE page 103

Chapter 9, Lesson 3, Video C, SE page 195

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the effects of humans on the health of an ecosystem.

Chapter 2, Lesson 1, Video C, SE page 27

Chapter 3, Lesson 1, Video A, SE page 47; Video C, SE page 49; Lesson 3, Video A, SE page 61; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 3, Video B, SE page 84; Video C, SE page 85

Chapter 5, Lesson 2, Video C, SE page 101

Chapter 9, Lesson 3, Video C, SE page 195

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe how humans can cause changes in the environment that affect the livability of the environment for humans.

Chapter 2, Lesson 1, Video C, SE page 27

Chapter 3, Lesson 1, Video A, SE page 47; Video C, SE page 49; Lesson 3, Video A, SE page 61; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 3, Video B, SE page 84; Video C, SE page 85

Chapter 5, Lesson 2, Video C, SE page 101

Chapter 9, Lesson 3, Video C, SE page 195

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the limited resources humans depend on and how changes in these resources affect the livability of the environment for humans.

Chapter 3, Lesson 3, Video A, SE page 61; Video C, SE page 63

Chapter 4, Lesson 3, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85; Critical Thinking, SE page 87; Process Skill, SE page 87

Chapter 5, Lesson 2, Video C, SE page 101

Chapter 9, Lesson 3, Video C, SE page 195; Critical Thinking, SE page 197

SRA Snapshots Video ScienceTM: Level B correlation to

Washington State's Essential Academic Learning Requirements for Science Grade 4

SRA Snapshots Video Science TM 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

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.1 Properties of Substances

Understand how to us properties to sort natural and manufactured materials and objects.

• Identify, describe, and sort objects and materials using observed physical properties such as hardness, shape, state of matter, smell, temperature, texture, weight, and magnetic properties.

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Process Skill, SE page 139; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.1 Properties of Substances

Understand how to us properties to sort natural and manufactured materials and objects.

• Sort and classify natural and manufactured materials and objects according to various physical properties (e.g., length, weight, hardness, temperature, color, shape, texture and smell).

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Process Skill, SE page 139; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.1 Properties of Substances

Understand how to us properties to sort natural and manufactured materials and objects.

• Identify and describe the states of water as solid, liquid, or gas in different situations.

Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 3, Video C, SE page 151

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.1 Properties of Substances

Understand how to us properties to sort natural and manufactured materials and objects.

• Identify which states of matter (solid, liquid, or gas) can change shape and which can expand to fill a container.

Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 3, Video C, SE page 151

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.3 Wave Behavior

Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction.

• Experience, measure, and describe the motion of light as light bounces off and/or passes through an object.

Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.4 Forms of Energy

Understand that energy comes in many forms.

• Describe the forms of energy present in a system (i.e., energy of motion [kinetic], heat energy, sound energy, light energy, electrical energy, chemical energy, and food energy).

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Lesson 2, Video A, SE page 163; Lesson 3, Video B, SE page 172; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video A, SE page 179; Lesson 2, Video A, SE page 185; Lesson 3, Video A, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.5 Nature and Properties of Earth Materials

Understand physical properties of Earth materials including rocks, soil, water, and air.

• Describe the states of water on Earth (i.e., clouds, fog, dew, rain, hail, snow) as solid, liquid, or gas.

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93

Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.5 Nature and Properties of Earth Materials

Understand physical properties of Earth materials including rocks, soil, water, and air.

• Describe the common conditions or properties of air (i.e., moving blowing, wind, still, warm, cold, moist, takes up space, has weight).

Chapter 5, Lesson 2, Video A, SE page 97; Critical Thinking, SE page 101; KnowZone, SE pages 102-103; Lesson 3, Video C, SE page 107

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.6 Characteristics of Living Matter

Understand how to distinguish living from nonliving and how to use characteristics to sort common organisms into plant and animal groups.

• Describe the characteristics of organisms.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19 Chapter 2, KnowZone, SE pages 36-37

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.6 Characteristics of Living Matter

Understand how to distinguish living from nonliving and how to use characteristics to sort common organisms into plant and animal groups.

• Describe and sort organisms using multiple characteristics (e.g., anatomy such as fins for swimming or leaves for gathering light, behavior patterns such as burrowing or migration, how plants and animals get food differently.

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

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

Classification, SE page 202

Energy Pyramid, SE page 203

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Earth and Space Systems

GLE 1.1.6 Characteristics of Living Matter

Understand how to distinguish living from nonliving and how to use characteristics to sort common organisms into plant and animal groups.

• Classify and sort common organisms into plant and animal groups.

Chapter 1, Lesson 1, Video B, SE page 4; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 17

Classification, SE page 202

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Describe a simple system that can perform a task and illustrate how the parts depend on each using common classroom materials.

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Process Skill, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video A, SE page 97; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video C, SE page 121; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video C, SE page 137; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 157; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video C, SE page 181; Lesson 2, Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Explain how one part of a system depends upon other parts of the same system.

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Process Skill, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video A, SE page 97; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video C, SE page 121; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video C, SE page 137; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 157; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video C, SE page 181; Lesson 2, Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.2 Energy Transfer and Transformations

Understand that energy can be transferred from one object to another and can be transformed from one form of energy to another.

• Identify where or when a part of a simple system has the greatest or least energy (e.g., a toy car has the greatest energy when released from the top of a ramp).

Chapter 2, Lesson 3, Video A, SE page 39

Chapter 8, Lesson 1, Video C, SE page 159

Chapter 9, Lesson 2, Video A, SE page 185

Energy Pyramid, SE page 203

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.2 Energy Transfer and Transformations

Understand that energy can be transferred from one object to another and can be transformed from one form of energy to another.

• Describe transfers of energy (e.g., heat energy is transferred from hot water to a cup).

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE p[age 32; Video C, SE page 33; Lesson 3, Video A, SE page 39' Video B, SE page 40; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video V, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video A, SE page 179; Lesson 2, Video A, SE page 185; Lesson 3, Video A, SE page 191

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.2 Energy Transfer and Transformations

Understand that energy can be transferred from one object to another and can be transformed from one form of energy to another.

• Identify sources of energy in systems (e.g., battery for a flashlight, spring for a toy).

Chapter 8, Lesson 1, Video A, SE page 157; Lesson 2, Video A, SE page 163; Lesson 3, Video A, SE page 171; Video B, SE page 172; Critical Thinking, SE page 175

Chapter 9, Lesson 1, Video A, SE page 179; Lesson 2, Video A, SE page 185; Lesson 3, Video A, SE page 191; Video B, SE page 192

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.2 Energy Transfer and Transformations

Understand that energy can be transferred from one object to another and can be transformed from one form of energy to another.

• Describe transformations of energy (e.g., energy of motion of hands clapping changes into sound energy).

Chapter 8, Lesson 1, Video A, SE page 157; Video C, SE page 159; Lesson 2, Video A, SE page 163; Lesson 3, Video A, SE page 171; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video B, SE page 180; Lesson 2, Video B, SE page 186; Video C, SE page 187; Lesson 3, Video A, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.3 Structure of Matter

Know that substances are made of small particles.

• Identify small parts of a substance as still being that substance (e.g., a drop of water is still water; a speck of sugar is still sugar).

Chapter 7, Lesson 3, Video A, SE page 149

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.3 Structure of Matter

Know that substances are made of small particles.

• Observe and describe that some particles can only be seen with magnification.

Chapter 1, Lesson 1, Video A, SE page 3

Chapter 7, Lesson 3, Video A, SE page 149

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Physical Systems

GLE 1.2.3 Structure of Matter

Know that substances are made of small particles.

• Describe objects that are made of only one kind of material and objects made of several kinds of material.

Chapter KnowZone, SE pages 140-141; Lesson 3, Video A, SE page 149; Video B, SE page 150; Critical Thinking, SE page 153

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.5 Components of the Solar System and Beyond (Universe)

Know that the Sun, Moon, and stars appear from Earth.

• Describe the daily motion of the Sun, Moon, and stars as seem from Earth's surface (e.g., the Sun, the Moon, and the stars all rise in the east and set in the west).

Chapter 6, Lesson 1, Video B, SE page 114; Critical Thinking, SE page 117; Process Skill, SE page 117

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.5 Components of the Solar System and Beyond (Universe)

Know that the Sun, Moon, and stars appear from Earth.

• Describe how the Moon looks a little different every day as seen from Earth (e.g., the lighted portion of the Moon changes shape every day).

Chapter 6, Lesson 1, Video C, SE page 115

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.5 Components of the Solar System and Beyond (Universe)

Know that the Sun, Moon, and stars appear from Earth.

• Describe how the patterns of stars in the sky stay the same as seen from Earth (e.g., constellations such as the "Big Dipper" always have the same pattern).

See Level A:

Chapter 6, Lesson 3, Video A, SE page 127; Critical Thinking, SE page 131

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.8 Human Biology

Understand the organization and function of human body structures and organs and how these structures and organs interconnect.

• Recognize, explain, and give examples of human systems that are composed of organs (e.g., ear for hearing, mouth for speech)

See Level C:

Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, SE page 16; Video C, SE page 17

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.8 Human Biology

Understand the organization and function of human body structures and organs and how these structures and organs interconnect.

• Describe the functions of major organs (e.g., the skin protects the human body from harmful substances, unhealthy organisms, and from drying out; the brain get signals from the parts of the human body, controls the life functions, and sends signals out to the body parts).

See Level C:

Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, SE page 16; Video C, SE page 17

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.8 Human Biology

Understand the organization and function of human body structures and organs and how these structures and organs interconnect.

• Describe the interdependence of organ systems in the human body (e.g., what would happen if one part o the human body was missing).

See Level C:

Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, SE page 16; Video C, SE page 17

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.8 Human Biology

Understand the organization and function of human body structures and organs and how these structures and organs interconnect.

• Describe how the systems allow the human body to take in and use mineral nutrients (air, food, water) for living, growth, and repair (e.g., breathing in air supplies the oxygen necessary to live).

See Level C:

Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, SE page 16; Video C, SE page 17

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Living Systems

GLE 1.2.8 Human Biology

Understand the organization and function of human body structures and organs and how these structures and organs interconnect.

• Identify and describe how human body systems compare to the systems of other living organisms (e.g., the human ear compared to tan elephant's for hearing sound).

See Level C:

Chapter 1, Lesson 2, Video C, SE page 11; Lesson 3, Video B, SE page 16; Video C, SE page 17

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Science

GLE 1.3.3 Conservation of Matter and Energy

Understand that a substance remains the same substance when changing state. Understand that two or more substances can react to become new substances.

• Observe and describe water changing state from ice to liquid water to water vapor and back (i.e., with freezing, melting, evaporation, and condensation water remains water).

Chapter 5, Lesson 1, Video A, SE page 91

Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.7 Interactions in the Solar System and Beyond (Universe)

Know how the appearance of the Sun, Moon, and stars change as seen from Earth.

• Describe how the Sun rises and sets at different places and times every day in a yearly pattern.

Chapter 6, Lesson 1, Video B, SE page 114; Critical thinking, SE page 117; Process Skill, SE page 117

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.7 Interactions in the Solar System and Beyond (Universe)

Know how the appearance of the Sun, Moon, and stars change as seen from Earth.

• Describe how the appearance of the Moon changes in a predictable pattern (e.g., new Moon to full Moon every 28 days).

Chapter 6, Lesson 1, Video C, SE page 115

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.7 Interactions in the Solar System and Beyond (Universe)

Know how the appearance of the Sun, Moon, and stars change as seen from Earth.

• Describe how star patterns are different at different times of the year as seen from Earth (e.g., constellations such as Orion cannot always be seen during the course of a year).

See Level A:

Chapter 6, Lesson 3, Video A, SE page 127; Critical Thinking, SE page 131

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.8 Life Processes and the Flow of Matter and Energy

Understand that living things need constant energy and matter.

• Identify sources of energy and matter used by animals to grow and sustain life (e.g., air, water, light, food, mineral nutrients).

Chapter 1, Lesson 3, Video B, SE page 18

Chapter 2, Lesson 1, Video A, SE page 25; Lesson 2, Video A, SE page 31; Video C, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Identify the question being answered in an investigation.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, 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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Ask questions about objects, organisms, and events based on observations of the natural world.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, 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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Make predictions of the results of an investigation.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Identify and use simple equipment and tools (such as magnifiers, rulers, balances, scales, and thermometers) to gather data and extend the senses.

Chapter 1, Lesson 1, Video A, SE page 3

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-

107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-197

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Follow all safety rules during 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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Generate a scientific conclusion including supporting data from an investigation (e.g., grass grows taller with more light; with only 2 hours of light each day, grass grew 2 centimeters in two weeks, but with 6 hours of light, grass grew 8 centimeters).

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Describe a reason for a given conclusion using evidence from an investigation.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Generate a scientific explanation of observed phenomena using given data.

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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• List similarities and differences between a model and what the model represents (e.g., a hinge and an elbow; a spinning globe and Earth's rotation; steam from a tea kettle and clouds or fog).

Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 6, Lesson 1, Process Skill, SE page 117

Chapter 8, Lesson 3, Process Skill, SE page 175

Chapter 9, Lesson 2, Process Skill, SE page 189

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Create a simple model to represent common objects, events, systems, or processes (e.g., diagram or map, and/or physical model).

Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 6, Lesson 1, Process Skill, SE page 117

Chapter 8, Lesson 3, Process Skill, SE page 175

Chapter 9, Lesson 2, Process Skill, SE page 189

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Investigate phenomena using a simple physical or computer model or simulation.

Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 6, Lesson 1, Process Skill, SE page 117

Chapter 8, Lesson 3, Process Skill, SE page 175

Chapter 9, Lesson 2, Process Skill, SE page 189

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

• Report observations or data of simple investigations without making inferences.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

- Summarize an investigation by describing:
 - Reasons for selecting the investigative plan.
 - Materials used in the investigation.
 - Observations, data, results.
 - Explanations and conclusions in written, mathematical, oral, and information technology presentation formats.
 - Safety procedures used.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific observations are recorded accurately and honestly.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific records of observations are not changed even when the records do not match initial expectations.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why honest acknowledgement of the contributions of others and information sources are necessary.

Chapter 1 KnowZone, SE pages 14-15; Lesson 3 Process Skill, SE page 21

Chapter 2 KnowZone, SE pages 36-37; Lesson 3 Process Skill, SE page 43

Chapter 3 KnowZone, SE pages 52-53; Lesson 2 Process Skill, SE page 59

Chapter 4, Lesson 2 Process Skill, SE page 79; KnowZone, SE pages 86-87

Chapter 5 KnowZone, SE pages 102-103

Chapter 6, Lesson 3 Math in Science, SE page 129; KnowZone, SE page 130-131

Chapter 7 KnowZone, SE pages 140-141

Chapter 8 KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-198

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.2 Limitations of Science and Technology

Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists.

• Describe whether measurements and/or observations of phenomena are scientific facts.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.2 Limitations of Science and Technology

Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists.

• Describe whether a report of an observation is a scientific fact or an interpretation (e.g., seeing a light in the night sky versus seeing a star).

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

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.3 Evaluating Inconsistent Results

Understand why similar investigations may not produce similar results.

• Describe reasons why two similar investigations can produce different results (e.g., identify possible sources of error).

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.3 Evaluating Inconsistent Results

Understand why similar investigations may not produce similar results.

• Explain whether sufficient information has been obtained to make a conclusion.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.4 Evaluating Methods of Investigation

Understand how to make the results of scientific investigations reliable.

• Describe how the method of investigation insures reliable results (i.e., reliability means that repeating an investigation gives similar results).

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.4 Evaluating Methods of Investigation

Understand how to make the results of scientific investigations reliable.

• Identify and describe ways to increase the reliability of the results of an investigation (e.g., multiple trials of an investigation increase the reliability of the results).

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, Process Skill, SE page 29

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

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

• Describe how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, 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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

 Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Design an appropriate question that could lead to a possible solution to a problem.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how science and technology could be used to solve a human problem (e.g., using an electric lamp as a source of varied light for plant growth).

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe the scientific concept, principle, or process used in a solution o a human problem (e.g., a student using the force of a stretched spring for a push or pull).

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how to scientifically gather information to develop a solution (e.g., find an acceptable information source, do an investigation, and collect data).

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

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

- Propose, implement, and document the scientific design process used to solve a problem or challenge:
- Define the problem.
- Scientifically gather information and collect measurable data.
- Explore ideas.
- Make a plan.
- List steps to do the plan.
- Scientifically test solutions.
- Document the scientific design process.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe possible solutions to a problem (e.g., preventing an injury on the playground by creating softer landing at the bottom of a slide).

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Identify the criteria for an acceptable solution to a problem or challenge.

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

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge using scientific concepts and principles.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the consequences of the solution to a problem or challenge (e.g., sharpening a crayon results in using up crayons faster).

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe how to change a system to solve a problem or improve a solution to a problem.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Test how well a solution works based on criteria, and recommend and justify, with scientific concepts or principles and data, how to make it better (e.g., sharpen a crayon using sandpaper; one grit is better than another).

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

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

 Describe how individuals of diverse backgrounds have made significant scientific discoveries or technological advances.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

• Describe how advancements in science and technology have developed over time and with contributions from diverse people.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.2 Relationship of Science and Technology

Understand that people have invented tools for everyday life and for scientific investigations.

• Describe how scientific tools help people design solutions to human problems (e.g., hand lens to see the detailed structure of leaves).

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

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

• Identify science, math, and technology skills used in a career.

Chapter 2, Lesson 1, Process Skill, SE page 29; Lesson 3, Process Skill, SE page 43

Chapter 5, Lesson 2, Video C, SE page 99

Chapter 6, Lesson 2, Video C, SE page 121

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

Identify occupations using scientific, mathematical, and technological knowledge and skills.

Chapter 2, Lesson 1, Process Skill, SE page 29; Lesson 3, Process Skill, SE page 43

Chapter 5, Lesson 2, Video C, SE page 99

Chapter 6, Lesson 2, Video C, SE page 121

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe how resources can be conserved through reusing, reducing, and recycling.

Chapter 1, Lesson 1, Video C, SE page 5

Chapter 2, Lesson 2, Critical Thinking, SE page 29; Lesson 3, Video C, SE page 41; Process Skill, SE page 43

Chapter 3, Lesson 2, Critical Thinking, SE page 59; Lesson 3, Video C, SE page 63; Critical thinking, SE page 65;

Process Skill, SE page 65

Chapter 5, Lesson 1, Video C, SE page 93

Chapter 9, Lesson 3, video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195

SRA Snapshots Video ScienceTM: Level C

correlation to

Washington State's Essential Academic Learning Requirements for Science Grade 5

SRA Snapshots Video Science TM 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

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

Physical Systems

GLE 1.1.2 Motion of Objects

Understand the relative position and motion of objects.

• Describe the motion of an object in terms of distance, time, and direction as the object travels in a straight line.

Chapter 9, Lesson 1, Video A, SE page 179; KnowZone, SE pages 184-185; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Critical Thinking, SE page 191; Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

Predict and explain how a system would work if one of its parts was missing or broken.

Chapter 2, Lesson 1, Video C, SE page 27; Lesson 3, Critical Thinking, SE page 43

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Critical Thinking, SE page 57; Lesson 3, Video B, SE page 62

Chapter 5, Lesson 2, Video C, SE page 99

Chapter 6, Lesson 2, Process Skill, SE page 125

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Describe what goes into (input) and out of (output) a system (e.g., what keeps a system running).

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 2, Lesson 1, Video B, SE page 26; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35

Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62

Chapter 4, Lesson 2, Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video B, SE page 100; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, video C, SE page 137; Lesson 2, Video A, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151

Chapter 8, Lesson 3, Video B, SE page 172; Video C, SE page 173

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Systems Structure

GLE 1.2.1 Structure of Physical Earth/Space and Living Systems

Analyze how the parts of a system go together and how these parts depend on each other.

• Describe the effect on a system when an input in the system is changed.

Chapter 2, Lesson 1, Video C, SE page 27; Lesson 3, Critical Thinking, SE page 43

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Critical Thinking, SE page 57; Lesson 3, Video B, SE page 62

Chapter 5, Lesson 2, Video C, SE page 99

Chapter 6, Lesson 2, Process Skill, SE page 125

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.4 Components and Patterns of Earth Systems

Understand that Earth's system includes a mostly solid interior, landforms, bodies of water, and an atmosphere.

• Describe how one part of Earth's system depends on or connects to another part of Earth's system (e.g., Puget Sound water affects the air over Seattle).

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 2, Lesson 1, Video B, SE page 26; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35

Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62

Chapter 4, Lesson 2, Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video B, SE page 100; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, video C, SE page 137; Lesson 2, Video A, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151

Chapter 8, Lesson 3, Video B, SE page 172; Video C, SE page 173

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.4 Components and Patterns of Earth Systems

Understand that Earth's system includes a mostly solid interior, landforms, bodies of water, and an atmosphere.

• Identify and describe various landmasses, bodies of water, and landforms (e.g., illustrate continents, oceans, seas, rivers, mountains, plains from a globe and a map).

Chapter 4, Lesson 1, Video C, SE page 71; Critical Thinking, SE page 73; KnowZone, SE pages 74-75; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Lesson 3, Writing in Science, SE page 87; Process Skill, SE page 87

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

Earth and Space Systems

GLE 1.2.4 Components and Patterns of Earth Systems

Understand that Earth's system includes a mostly solid interior, landforms, bodies of water, and an atmosphere.

• Construct a model that demonstrates understanding of Earth's structure as a system make of parts (e.g., solid surface, water, atmosphere).

Chapter 4, Lesson 1, Video A, SE page 69; Video B, SE page 70; Lesson 3, Video A, SE page 83; Video C, SE page 85 Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 97; Video B, SE page 98 The Planet Earth, SE page 204

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Systems

GLE 1.3.1 Nature of Force

Understand forces in terms of strength and direction.

• Compare the strength of one force to the strength of another force (e.g., measure that a 5-newton (N) pull from a spring scale is like the weight of a 1-pound object).

See Level A:

Chapter 8, Lesson 1, Video C, SE page 146

See also Level B:

Chapter 7, Lesson 2, Differentiated Instruction Options, Enrichment, TG page 132; Remediation, TG page 132

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Systems

GLE 1.3.2 Forces to Explain Motion

Understand that forces can change the motion of common objects.

• Investigate and report how a larger force acting on an object causes a greater change in motion of that object, 2nd Law of Motion (e.g., a 2-newton (N) pull causes a toy car to speed up more than a 2-newton (N) force).

Chapter 9, Lesson 3, Video B, SE page 194; Critical Thinking, SE page 197

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Systems

GLE 1.3.3 Conservation of Matter and Energy

Understand that a substance remains the same substance when changing state. Understand that two or more substances can react to become new substances.

• Observe and describe how a substance is the same substance before and after heating or cooling (e.g., solid candle wax can be heated to become liquid wax then cooled back to the same solid candle wax).

Chapter 7, Lesson 1, Video B, SE page 136; Lesson 2, Video A, SE page 143; Critical Thinking, SE page 147

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Physical Systems

GLE 1.3.3 Conservation of Matter and Energy

Understand that a substance remains the same substance when changing state. Understand that two or more substances can react to become new substances.

• Describe how two different substances can form a simple chemical reaction to produce new substances (e.g., baking soda and vinegar react to form a gas).

Chapter 7, Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.4 Processes and Interactions in the Earth System

Know processes that change the surface of Earth.

• Describe how weathering and erosion change the surface of the Earth.

Chapter 4, Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Process Skill, SE page 81; Lesson 3, Process Skill, SE page 87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.4 Processes and Interactions in the Earth System

Know processes that change the surface of Earth.

• Describe how earthquakes, landslides, and volcanic eruptions change Earth's surface.

Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; KnowZone, SE pages 74-75

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.5 History and Evolution of the Earth

Understand that fossils provide evidence of plants, animals, and environments that existed long ago.

• Observe and describe a fossil in a rock.

Chapter 2, Lesson 1, Video C, SE page 27

Chapter 4, Lesson 3, Video A, SE page 83

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy,

Earth and Space Systems

GLE 1.3.5 History and Evolution of the Earth

Understand that fossils provide evidence of plants, animals, and environments that existed long ago.

• Know that fossils provide evidence about plants and animals that lived long ago and the nature of the environment at that time.

Chapter 2, Lesson 1, Video C, SE page 27

Chapter 4, Lesson 3, Video A, SE page 83

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Earth and Space Systems

GLE 1.3.6 Hydrosphere and Atmosphere

Understand weather indicators and understand how water cycles through the atmosphere.

• Describe the effects of water cycling through the land, oceans, and atmosphere (e.g., clouds, rain, snow, hail, rivers).

Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Critical Thinking, SE page 101; Process Skill, SE page 101

The Water Cycle, SE page 204

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.8 Life Processes and the Flow of Matter and Energy

Understand that living things need constant energy and matter.

• Explain how plants and animals obtain food (e.g., plants make food from air, water, sunlight, mineral nutrients; animals obtain food from other living things).

Level C:

Chapter 2, Lesson 3, video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43

See also Level B:

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Energy Transfer, SE page 203

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.9 Biological Evolution

Understand that plant and animal species change over time.

• Recognize and tell how some kinds of plants and animals survive well, some survive less well, and some cannot survive at all in particular environment, and provide examples.

Chapter 2, Lesson 2, Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35

Chapter 3, Lesson 1, Video B, SE page 48; Lesson 2, Critical Thinking, SE page 57; Lesson 3, Video A, SE page 61;

Video B, SE page 62; Critical Thinking, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.9 Biological Evolution

Understand that plant and animal species change over time.

• Recognize and describe how individual plants and animals of the same kind differ in their characteristics and sometimes the differences give individuals an advantage in surviving and reproducing.

Chapter 2, Lesson 2, Video B, SE page 32

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.9 Biological Evolution

Understand that plant and animal species change over time.

• Demonstrate or describe that fossils can be compared to one another and to living organisms according to their similarities and differences (e.g., some organisms that lived long ago are similar to existing organisms, but some are quite different).

Chapter 2, Lesson 1, Video C, SE page 27

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.10 Interdependence of Life

Understand that an organism's ability to survive is influenced by the organism's behavior and the ecosystem in which it lives.

• Describe how an organism's ability to survive is affected by a change in an ecosystem (e.g., the loss of one organism in a food chain affects all other organisms in that food chain).

Chapter 2, Lesson 1, Video C, SE page 27; Lesson 3, Critical Thinking, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Video B, SE page 48; Process Skill, SE page 51; Lesson 2, Critical Thinking, SE page 57; Lesson 3, Video A, SE page 61; Video B, SE page 62

EALR 1—SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.

Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.

Living Systems

GLE 1.3.10 Interdependence of Life

Understand that an organism's ability to survive is influenced by the organism's behavior and the ecosystem in which it lives.

• Describe the path of substances (i.e., air, water, mineral nutrients) through a food chain.

Level C:

Chapter 2, Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43

See also Level B:

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Energy Transfer, SE page 203

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Identify the question being answered in an investigation.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Ask questions about objects, organisms, and events based on observations of the natural world.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.1 Questioning

Understand how to ask a question about objects, organisms, and events in the environment.

• Develop a new question that can be investigated with the same materials and/or data as a given investigation.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, 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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Make predictions of the results of an investigation.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, 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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

- Generate a logical plan for, and conduct, a simple controlled investigation with the following attributes:
 - o Prediction.
 - o Appropriate materials, tools, and available computer technology.
 - o Variables kept the same (controlled).
 - One changed variable (manipulated).
 - Measured (responding variable.
 - o Gather, record, and organize data using appropriate units, charts, and/or graphs.
 - o Multiple trials.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

- Generate a logical plan for a simple field investigation with the following attributes:
 - o Identify multiple variables.
 - o Select observable or measurable variables related to the investigative question.

Chapter 1, Lesson 3, Process Skill, SE page 19

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 8, Lesson 2, Process Skill, SE page 167; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Identify and use simple equipment and tools (such as magnifiers, rulers, balances, scales, and thermometers) to gather data and extend the senses.

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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.2 Planning and Conducting Safe Investigations

Understand how to plan and conduct simple investigations following all safety rules.

• Follow all safety rules during investigations.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Generate a scientific conclusion including supporting data from an investigation (e.g., grass grows taller with more light; with only 2 hours of light each day, grass grew 2 centimeters in two weeks, but with 6 hours of light, grass grew 8 centimeters).

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Describe a reason for a given conclusion using evidence from an investigation.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Generate a scientific explanation of observed phenomena using given 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, 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 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

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.3 Explaining

Understand how to construct a reasonable explanation using evidence.

• Predict what logically might occur if an investigation lasted longer or was changed.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• List similarities and differences between a model and what the model represents (e.g., a hinge and an elbow; a spinning globe and Earth's rotation; steam from a tea kettle and clouds or fog).

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 4, Lesson 3, Process Skill, SE page 87

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 9, Lesson1, Process Skill, SE page 183

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Create a simple model to represent common objects, events, systems, or processes (e.g., diagram or map, and/or physical model).

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 4, Lesson 3, Process Skill, SE page 87

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 9, Lesson1, Process Skill, SE page 183

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

• Investigate phenomena using a simple physical or computer model or simulation.

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 4, Lesson 3, Process Skill, SE page 87

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 9, Lesson1, Process Skill, SE page 183

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Modeling

Understand how to use simple models to represent objects, events, systems, and processes.

 Describe reasons for using a model to investigate phenomena (e.g., processes that happen very slowly or quickly; things that are too small or too large for direct observation; phenomena that cannot be controlled or are potentially dangerous).

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 4, Lesson 3, Process Skill, SE page 87

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 9, Lesson1, Process Skill, SE page 183

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

• Report observations or data of simple investigations without making inferences.

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

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.

Investigating Systems

GLE 2.1.4 Communicating

Understand how to report investigations and explanations of objects, events, systems, and processes.

- Summarize an investigation by describing:
 - Reasons for selecting the investigative plan.
 - Materials used in the investigation.
 - Observations, data, results.
 - Explanations and conclusions in written, mathematical, oral, and information technology presentation formats.
 - Safety procedures used.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific observations are recorded accurately and honestly.

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

 $Chapter\ 3, Lab Time\ Hands-On\ Activity\ 3, TRB\ pages\ 51-53, TG\ page\ 66$

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why scientific records of observations are not changed even when the records do not match initial expectations.

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

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.1 Intellectual Honesty

Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations.

• Explain why honest acknowledgement of the contributions of others and information sources are necessary.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, SE page 29; 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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.2 Limitations of Science and Technology

Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists.

• Describe whether measurements and/or observations of phenomena are scientific facts.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.2 Limitations of Science and Technology

Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists.

• Describe whether a report of an observation is a scientific fact or an interpretation (e.g., seeing a light in the night sky versus seeing a star).

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

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.3 Evaluating Inconsistent Results

Understand why similar investigations may not produce similar results.

• Describe reasons why two similar investigations can produce different results (e.g., identify possible sources of error).

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.3 Evaluating Inconsistent Results

Understand why similar investigations may not produce similar results.

• Explain whether sufficient information has been obtained to make a conclusion.

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.4 Evaluating Methods of Investigation

Understand how to make the results of scientific investigations reliable.

• Describe how the method of investigation insures reliable results (i.e., reliability means that repeating an investigation gives similar results).

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

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.4 Evaluating Methods of Investigation

Understand how to make the results of scientific investigations reliable.

• Identify and describe ways to increase the reliability of the results of an investigation (e.g., multiple trials of an investigation increase the reliability of the results).

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

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

• Describe how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR2—INQUIRY: The student knows and applies the skills, processes, and nature of scientific inquiry.

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

• Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.

Chapter 1, Lesson 1, Critical Thinking, SE page 7; KnowZone, SE pages 20-21

Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71

Chapter 6, KnowZone, SE pages 118-119; Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131

Chapter 7, KnowZone, SE page 140-141

Component 2.2 Nature of Science: Understand the nature of scientific inquiry.

Nature of Science

GLE 2.2.5 Evolution of Scientific Ideas

Understand that scientific comprehension of systems increases through inquiry.

• Explain how ideas about the natural world and/or constructed world have changed because of scientific inquiry.

Chapter 1, Lesson 3, Critical Thinking, SE page 19; KnowZone, SE page 20-21

Chapter 2, Lesson 1, Critical Thinking, SE page 29

Chapter 3, Lesson 2, Critical Thinking, SE page 57

Chapter 5, Lesson 1, Video C, SE page 93

Chapter 6, KnowZone, SE pages 118-119

Chapter 7, KnowZone, SE pages 140-141; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151

Chapter 8, Lesson 1, Video C, SE page 159; Lesson 2, Video B, SE page 164; Lesson 3, Video C, SE page 173

Chapter 9, KnowZone, SE pages 184-185

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe an appropriate question that could lead to a possible solution to a problem.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how science and technology could be used to solve a human problem (e.g., using an electric lamp as a source of varied light for plant growth).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe the scientific concept, principle, or process used in a solution to a human problem (e.g., a student using the force of a stretched spring for a push or pull).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.1 Identifying Problems

Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions.

• Describe how to scientifically gather information to develop a solution (e.g., find an acceptable information source, do an investigation, and collect data).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and Testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

- Propose, implement, and document the scientific design process used to solve a problem or challenge:
- Define the problem.
- Scientifically gather information and collect measurable data.
- Explore ideas.
- Make a plan.
- List steps to do the plan.
- Scientifically test solutions.
- Document the scientific design process.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and Testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe possible solutions to a problem (e.g., preventing an injury on the playground by creating softer landing at the bottom of a slide).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.2 Designing and Testing Solutions

Understand how the scientific design process is used to develop and implement solutions to human problems.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Identify the criteria for an acceptable solution to a problem or challenge.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the reason(s) for the effectiveness of a solution to a problem or challenge using scientific concepts and principles.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe the consequences of the solution to a problem or challenge (e.g., sharpening a crayon results in using up crayons faster).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Describe how to change a system to solve a problem or improve a solution to a problem.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems.

Designing Solutions

GLE 3.1.3 Evaluating Potential Solutions

Apply how well a design or a product solves a problem.

• Test how well a solution works based on criteria, and recommend and justify, with scientific concepts or principles and data, how to make it better (e.g., sharpen a crayon using sandpaper; one grit is better than another).

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

 Describe how individuals of diverse backgrounds have made significant scientific discoveries or technological advances.

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, KnowZone, SE pages 140-141

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.1 All Peoples Contribute to Science and Technology

Understand that science and technology have been practiced by all peoples throughout history.

• Describe how advancements in science and technology have developed over time and with contributions from diverse people.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.2 Relationship of Science and Technology

Understand that people have invented tools for everyday life and for scientific investigations.

• Describe how common tools help people design ways to adapt to different environments (e.g., sewing needle to make clothes).

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

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.2 Relationship of Science and Technology

Understand that people have invented tools for everyday life and for scientific investigations.

• Describe how scientific ideas and discoveries are used to design solutions to human problems, extend human ability, or help humans adapt to different environments (e.g., prosthetics used to replace lost limbs).

Chapter 4, Lesson 2, Critical Thinking, SE page 81; Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87

Chapter 5, Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131; Writing in Science, SE page 131

Chapter 8, Lesson 3, Video C, SE page 173

Chapter 9, Lesson 1, Video C, SE page 181; Process Skill, SE page 183

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

• Identify science, math, and technology skills used in a career.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.3 Careers and Occupations Using Science, Mathematics, and Technology

Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.

• Identify occupations using scientific, mathematical, and technological knowledge and skills.

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

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe how resources can be conserved through reusing, reducing, and recycling.

Chapter 3, Lesson 3, Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 3, Video C, SE page 85

Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the effects conservation has on the environment.

Chapter 3, Lesson 3, Video C, E page 63; Process Skill, SE page 65

Chapter 4, Lesson 3, Video C, SE page 85

Chapter 8, Lesson 1, Video C, SE page 159

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the effects of humans on the health of an ecosystem.

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

EALR3—APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts.

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe how humans can cause changes in the environment that affect the livability of the environment for humans.

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

Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

Science, Technology, and Society

GLE 3.2.4 Environmental and Resource Issues

Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.

• Describe the limited resources humans depend on and how changes in these resources affect the livability of the environment for humans.

Chapter 3, Lesson 3, Video C, SE page 63; Process Skill, SE page 65

Chapter 4, Lesson 3, Video C, SE page 85

Chapter 8, Lesson 1, Video C, SE page 159