SRA Skills Handbook: Using Science
correlation to
Florida Grade Level Expectations for the Sunshine State Standards: Science
Grade 1

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.1.1: The student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size, and shape).
Grade Level Expectations: The student: **1. knows that objects can be grouped according to their physical characteristics (for example, shape, color, texture, form, size).**
Student Edition: Cards 1.1, 1.2, 1.4, 1.5, 1.6, 1.12, 1.14, 1.16 **Teacher's Guide:** pages 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 30, 31, 34, 35, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 50, 51, 62, 63, 66, 70, 71

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.1.2: The student recognizes that the same material can exist in different states.
Grade Level Expectations: The student: **1. knows the effects of heating and cooling on solids, liquids, and gases.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.1.1.3: The student verifies that things can be done to materials to change some of their physical properties (e.g., cutting, heating, and freezing), but not all materials respond the same way (e.g., heating causes water to boil and sugar to melt).
Grade Level Expectations: The student: **1. knows the physical properties of ice, water, and steam.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.2.1.1: The student recognizes that many things are made of smaller pieces, different amounts, and various shapes.
Grade Level Expectations: The student: **1. knows that objects are composed of parts that are too small to be seen without magnification (for example, rocks, cookies, string, paper).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.1: The student knows that the Sun supplies heat and light energy to Earth.
Grade Level Expectations: The student: **1. knows that heat from the Sun has varying effects depending on the surface it strikes.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.1: The student knows that light can pass through some objects and not others.
Grade Level Expectations: The student: **1. predicts which materials will allow light to pass through and which ones will not.**
Student Edition: Cards 1.8, 1.11 **Teacher's Guide:** pages 22, 23, 28, 29, 54, 60

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.3: The student describes a model energy system (e.g., an aquarium or terrarium).
Grade Level Expectations: The student: **1. understands that models (for examples, terrarium or aquarium) can be used to observe processes and changes over time.**
Student Edition: Card 1.1 **Teacher's Guide:** pages 8, 9, 40, 41

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.14: The student knows that heat can be produced in many ways (e.g., by burning and rubbing).
Grade Level Expectations: The student: **1. knows ways that human activities require and release energy.**
Student Edition: Card 1.8 **Teacher's Guide:** pages 22, 23, 54

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.5: The student knows that every human action requires energy that comes from food.
Grade Level Expectations: The student: **1. understands that people need food to survive.**
Student Edition: Card 1.13 **Teacher's Guide:** pages 32, 33, 64, 65

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.5: The student knows that every human action requires energy that comes from food.
Grade Level Expectations: The student: **2. knows nutritional value of various foods (for example, fruit, cereals, dairy, meat).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion can be described, measured, and predicted.
Benchmark SC.C.1.1.1: The student understands that different things move at different speeds.
Grade Level Expectations: The student: **1. knows the relative order of speeds of various objects (for example, snails, turtles, tricycles, bicycles, cars, jets, rockets).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion can be described, measured, and predicted.
Benchmark SC.C.1.1.2: The student knows that there is a relationship between force and motion.
Grade Level Expectations: The student: **1. knows that various things move at different speeds when different forces are applied.**
Student Edition: Card 1.6 **Teacher's Guide:** pages 18, 19, 50

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.1: The student knows that one way to change how something is moving is to give it a push or a pull.
Grade Level Expectations: The student: **1. understands various ways gravity affects the motion of objects (for example, an object on a ramp, an object that is dropped).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.2: The student knows that sound is caused by vibrations (pushing and pulling) to cause waves.
Grade Level Expectations: The student: **1. knows that vibrations caused by sound waves can be felt (for example, on a speaker when music is played, the head of a drum when it is hit, or a tuning fork).**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.1: The student recognizes that the solid materials making up the Earth come in all sizes, from boulders to grains of sand.
Grade Level Expectations: The student: **1. extends and refines knowledge that the surface of the Earth is composed of different types of solid materials.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.2: The student knows that life occurs on or near the surface of the Earth in land, air, and water.
Grade Level Expectations: The student: **1. knows some kinds of organisms that live on or near the surface of the Earth in land, water, and air.**
Student Edition: Cards 1.1, 1.15 **Teacher's Guide:** pages 8, 9, 36, 37, 40, 41, 68, 69

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.3: The student recognizes patterns in weather.
Grade Level Expectations: The student: **1. uses graphic organizers to display weather data and show weather patterns.**
Student Edition: Cards 1.2, 1.9 **Teacher's Guide:** pages 10, 11, 24, 25, 42, 43, 56, 57

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.1.1: The student understands that people influence the quality of life of those around them.
Grade Level Expectations: The student: **1. extends and refines knowledge of ways to care for the Earth at home and in school.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.1.1: The student knows that the light reflected by the Moon looks a little different every day but looks the same again about every 28 days.
Grade Level Expectations: The student: **1. knows that the amount of light reflected by the Moon is a little different every day but the Moon appears the same again about every 28 days.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.1.2: The student knows that the appearance of sunrise and sunset is due to the rotation of Earth every 24 hours.
Grade Level Expectations: The student: **1. knows that night and day are caused by the rotation of the Earth.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 2: The student recognizes the vastness of the universe and the Earth's place in it.
Benchmark SC.E.2.1.1: The student knows that there are many objects in the sky that are only visible at night.
Grade Level Expectations: The student: **1. knows and differentiates objects seen in the day and night sky (for example, clouds, Sun, stars, Moon, planets).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.1: The student knows the basic needs of all living things.
Grade Level Expectations: The student: **1. understands that living things need food, water, space, and shelter to survive.**
Student Edition: Cards 1.10, 1.13, 1.15 **Teacher's Guide:** pages 26, 27, 32, 33, 36, 37, 58, 59, 64, 65, 68, 69

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.2: The student knows how to apply knowledge about life processes to distinguish between living and nonliving things.
Grade Level Expectations: The student: **1. knows how to classify things as living and nonliving.**
Student Edition: Cards 1.1, 1.5, 1.16 **Teacher's Guide:** pages 8, 9, 16, 17, 38, 39, 40, 41, 48, 49, 70, 71

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.3: The student describes how organisms change as they grow and mature.
Grade Level Expectations: The student: **1. knows ways organisms change as they grow and mature (for example, as people grow up their size changes).**
Student Edition: Cards 1.7, 1.10 **Teacher's Guide:** pages 20, 21, 26, 27, 52, 58, 59

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.3: The student describes how organisms change as they grow and mature.
Grade Level Expectations: The student: **2. knows that living things grow and change in different ways and in different lengths of time (for example, butterfly, frog, daisy, pine tree).**
Student Edition: Cards 1.7, 1.10 **Teacher's Guide:** pages 20, 21, 26, 27, 52, 58, 59

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.4: The student understands that structures of living things are adapted to their function in specific environments.
Grade Level Expectations: The student: **1. knows that plants and animals have adaptations that help them survive in their environment (camouflage, teeth, spines).**
Student Edition: Cards 1.1, 1.16 **Teacher's Guide:** pages 8, 9, 38, 39, 40, 41, 70, 71

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.5: The student compares and describes the structural characteristics of plants and animals.
Grade Level Expectations: The student: **1. understands different ways in which living things can be grouped (for example, plant/animal, edible plants/non-edible plants).**
Student Edition: Cards 1.1, 1.5, 1.7, 1.13, 1.16 **Teacher's Guide:** pages 8, 9, 16, 17, 20, 21, 32, 33, 38, 39, 40, 41, 48, 49, 50, 64, 65, 70, 71

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.1: The student knows that living things have offspring that resemble their parents.
Grade Level Expectations: The student: **1. knows that plants and animals are similar but not identical to their parents.**
Student Edition: Cards 1.10, 1.14 **Teacher's Guide:** pages 26, 27, 34, 35, 58, 59, 66

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.2: The student knows that there are many different kinds of living things that live in a variety of environments.
Grade Level Expectations: The student: **1. knows plants and animals that live in a particular habitat (for example, black bears in the forest, whales in the ocean, camels in the desert, ducks in the wetlands).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.2: The student knows that there are many different kinds of living things that live in a variety of environments.
Grade Level Expectations: The student: **2. knows the characteristics of the climate in different habitats (for example, sunlight, moisture, temperature).**
Student Edition: Card 1.9 **Teacher's Guide:** pages 24, 25, 56, 57

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.2: The student knows that there are many different kinds of living things that live in a variety of environments.
Grade Level Expectations: The student: **3. knows some ways in which animals and plants are adapted to living in different environments.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.1: The student knows that environments have living and nonliving parts.
Grade Level Expectations: The student: **1. knows that environments have living and nonliving parts.**
Student Edition: Card 1.3 **Teacher's Guide:** pages 12, 13, 44

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.2: The student knows that plants and animals are dependent upon each other for survival.
Grade Level Expectations: The student: **1. knows that plants produce oxygen and food for animals.**
Student Edition: Cards 1.13, 1.15 **Teacher's Guide:** pages 32, 33, 36, 37, 64, 65, 68, 69

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.2: The student knows that plants and animals are dependent upon each other for survival.
Grade Level Expectations: The student: **2. understands that animals can be grouped according to what they eat.**
Student Edition: Card 1.15 **Teacher's Guide:** pages 36, 37, 68, 69

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.2: The student knows that plants and animals are dependent upon each other for survival.
Grade Level Expectations: The student: **3. understands that living things are part of a food chain.**
Student Edition: Cards 1.13, 1.15 **Teacher's Guide:** pages 32, 33, 36, 37, 64, 65, 68, 69

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.3: The student knows that there are many different plants and animals living in many different kinds of environments (e.g., hot, cold, wet, dry, sunny, and dark).
Grade Level Expectations: The student: **1. knows some characteristics of different environments and some plants and animals found there.**
Student Edition: Cards 1.5, 1.15 **Teacher's Guide:** pages 16, 17, 36, 37, 48, 49, 68, 69

Strand G: How Living Things Interact with Their Environments
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.1.1: The student knows that if living things do not get food, water, shelter, and space, they will die.
Grade Level Expectations: The student: **1. understands why living things must have food, water, shelter, and space to survive.**
Student Edition: Cards 1.10, 1.15 **Teacher's Guide:** pages 26, 27, 36, 37, 58, 59, 68, 69

Strand G: How Living Things Interact with Their Environments
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.1.2: The student knows that the activities of humans affect plants and animals in many ways.
Grade Level Expectations: The student: **1. understands that there are limited resources available for all living things to use.**
This concept is not covered at this level.

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.1: The student knows that in order to learn, it is important to observe the same things often and compare them.
Grade Level Expectations: The student: **1. knows that scientific investigations generally work the same way in different places.**
Student Edition: Card 1.4 **Teacher's Guide:** pages 14, 15, 46, 47

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.2: The student knows that when tests are repeated under the same condition, similar results are usually obtained.
Grade Level Expectations: The student: **1. understands the importance of accuracy and repetition in conducting scientific inquires.**
Student Edition: Card 1.4 **Teacher's Guide:** pages 14, 15, 46, 47

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.3: The student knows that in doing science, it is often helpful to work with a team and to share findings with others.
Grade Level Expectations: The student: **1. works with others to complete an experiment or to solve a problem.**
Student Edition: Card 1.4 **Teacher's Guide:** pages 14, 15, 46, 47

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.3: The student knows that in doing science, it is often helpful to work with a team and to share findings with others.
Grade Level Expectations: The student: **2. listens, records, and compares the ideas and observations of others.**
Student Edition: Cards 1.4, 1.13, 1.14 **Teacher's Guide:** pages 14, 15, 32, 33, 34, 35, 46, 47, 64, 65, 66

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.4: The student knows that people use scientific processes including hypothesis, making inferences, and recording and communicating data when exploring the natural world.
Grade Level Expectations: The student: **1. uses simple graphs, pictures, written statements, and numbers to observe, describe, record, and compare data.**
Student Edition: Cards 1.2, 1.3, 1.4, 1.10, 1.13, 1.14, 1.15, 1.16 **Teacher's Guide:** pages 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 26, 27, 32, 33, 34, 35, 36, 37, 38, 39, 42, 43, 44, 45, 46, 47, 58, 59, 64, 65, 66, 67, 68, 69, 70, 71

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.5: The student uses the senses, tools, and instruments to obtain information from his or her surroundings.
Grade Level Expectations: The student: **1. uses a variety of tools (for example, thermometers, magnifiers, rulers, scales, computers) to identify characteristics of objects.**
Student Edition: Cards 1.2, 1.3, 1.4, 1.8 **Teacher's Guide:** pages 10, 11, 12, 13, 14, 15, 22, 23, 42, 43, 44, 45, 46, 47, 54, 55

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.5: The student uses the senses, tools, and instruments to obtain information from his or her surroundings.
Grade Level Expectations: The student: **2. uses standard (for example, centimeters) and nonstandard (for example, paper clips, hands, pencils) to measure organisms and objects and parts of organisms and objects.**
Student Edition: Cards 1.2, 1.3 **Teacher's Guide:** pages 10, 11, 12, 13, 17, 42, 43, 44, 45

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible consistent patterns.
Benchmark SC.H.2.1.1: The student knows that most natural events occur in patterns.
Grade Level Expectations: The student: **1. uses information gathered to identify patterns in nature to make predictions (for example, shapes of leaves, petals on flowers, rings on seashells).**
Student Edition: Cards 1.1, 1.5, 1.7, 1.10 **Teacher's Guide:** pages 8, 9, 16, 17, 20, 21, 26, 27, 40, 41, 48, 49, 52, 53, 58, 59

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.1.1: The student knows that scientists and technologists use a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier.
Grade Level Expectations: The student: **1. knows that scientists and technologists use a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier.**
Student Edition: Cards 1.2, 1.3, 1.4, 1.8 **Teacher's Guide:** pages 10, 11, 12, 13, 14, 15, 17, 22, 23, 42, 43, 44, 45, 46, 47, 54, 55

SRA Skills Handbook: Using Science
correlation to
Florida Grade Level Expectations for the Sunshine State Standards: Science
Grade 2

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.1.1: The student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size, and shape).
Grade Level Expectations: The student: **1. knows ways objects can be grouped according to similarities or differences of their physical characteristics.**
Student Edition: Cards 2.5, 2.6, 2.7, 2.9, 2.16 **Teacher's Guide:** pages 16, 17, 18, 19, 20, 21, 24, 25, 38, 39, 48, 49, 50, 51, 52, 53, 56, 57, 70, 71

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.1.2: The student recognizes that the same material can exist in different states.
Grade Level Expectations: The student: **1. knows examples of solids, liquids, and gases.**
Student Edition: Card 2.13 **Teacher's Guide:** pages 32, 33, 64, 65

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.1.2: The student recognizes that the same material can exist in different states.
Grade Level Expectations: The student: **2. knows the observable properties of solids, liquids, and gases.**
Student Edition: Card 2.13 **Teacher's Guide:** pages 32, 33, 64, 65

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.1.1.3: The student verifies that things can be done to materials to change some of their physical properties (e.g., cutting, heating, and freezing), but not all materials respond the same way (e.g., heating causes water to boil and sugar to melt).
Grade Level Expectations: The student: **1. knows that not all objects or materials respond to change in the same way (for example, a plastic object in the freezer compared with water in the freezer).**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.2.1.1: The student recognizes that many things are made of smaller pieces, different amounts, and various shapes.
Grade Level Expectations: The student: **1. knows that common objects are composed of parts that are too small to be seen without magnification (for example, hair, cloth, paper).**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.2.1.1: The student recognizes that many things are made of smaller pieces, different amounts, and various shapes.
Grade Level Expectations: The student: **2. knows that a variety of tools can be used to examine objects at differing levels of magnification (for example, a hand lens, layered hand lenses, a microscope).**
Student Edition: Card 2.3 **Teacher's Guide:** pages 12, 13, 44, 45

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.1: The student knows that the Sun supplies heat and light energy to Earth.
Grade Level Expectations: The student: **1. knows that a thermometer measures the amount of heat absorbed by an object.**
Student Edition: Card 2.2 **Teacher's Guide:** pages 10, 11, 42, 43

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.1: The student knows that light can pass through some objects and not others.
Grade Level Expectations: The student: **1. understands that some materials will allow light to pass and others will not.**
Student Edition: Card 2.3 **Teacher's Guide:** pages 12, 13, 44, 45

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.3: The student describes a model energy system (e.g., an aquarium or terrarium).
Grade Level Expectations: The student: **1. understands that models (for example, terrarium or aquarium) can be used to illustrate how energy flows through a system.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.3: The student describes a model energy system (e.g., an aquarium or terrarium).
Grade Level Expectations: The student: **2. knows how model energy systems change throughout the year (for example, collecting data and recording changes in a terrarium or aquarium that models an energy system).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.14: The student knows that heat can be produced in many ways (e.g., by burning and rubbing).
Grade Level Expectations: The student: **1. knows different heat sources (for example, friction, solar, nuclear, electric).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.5: The student knows that every human action requires energy that comes from food.
Grade Level Expectations: The student: **1. uses graphic organizers to classify food groups.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy can be changed in form with varying efficiency.
Benchmark SC.B.1.1.5: The student knows that every human action requires energy that comes from food.
Grade Level Expectations: The student: **2. understands the relationship of food to the need for energy for daily activities.**
This concept is not covered at this level.

Strand B: Energy
Standard 2: The student understands the interaction of matter and energy.
Benchmark SC.B.2.1.1: The student recognizes systems of matter and energy.
Grade Level Expectations: The student: **1. understands ways energy and matter interact (for example, sunlight to affect plant growth, heat to boil water).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion can be described, measured, and predicted.
Benchmark SC.C.1.1.1: The student understands that different things move at different speeds.
Grade Level Expectations: The student: **1. knows that objects exhibit different kinds of motion (for example, straight, circular, back and forth).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion can be described, measured, and predicted.
Benchmark SC.C.1.1.2: The student knows that there is a relationship between force and motion.
Grade Level Expectations: The student: **1. knows that the amount and direction of the force exerted on an object (for example, push, pull, friction, gravity) determines how much the object will move.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.1: The student knows that one way to change how something is moving is to give it a push or a pull.
Grade Level Expectations: The student: **1. knows that objects may be moved by being pushed or pulled with magnets.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.1: The student knows that one way to change how something is moving is to give it a push or a pull.
Grade Level Expectations: The student: **2. compares the amount of pushing and pulling required to move objects of various seizes across the floor.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.2: The student knows that sound is caused by vibrations (pushing and pulling) to cause waves.
Grade Level Expectations: The student: **1. demonstrates that some vibrations may be heard.**
Student Edition: Card 2.15 **Teacher's Guide:** pages 36, 37, 68, 69

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.2: The student knows that sound is caused by vibrations (pushing and pulling) to cause waves.
Grade Level Expectations: The student: **2. understands that sound travels differently through different media (for example, word, water, air).**
Student Edition: Card 2.15 **Teacher's Guide:** pages 36, 37, 68, 69

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.1.2: The student knows that sound is caused by vibrations (pushing and pulling) to cause waves.
Grade Level Expectations: The student: **3. knows that properties of sound such as pitch and loudness can be altered by changing the properties of the sound source.**
Student Edition: Card 2.15 **Teacher's Guide:** pages 36, 37, 68, 69

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.1: The student recognizes that the solid materials making up the Earth come in all sizes, from boulders to grains of sand.
Grade Level Expectations: The student: **1. extends and refines knowledge that the surface of the Earth is composed of different types of solid materials that come in all sizes.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.2: The student knows that life occurs on or near the surface of the Earth in land, air, and water.
Grade Level Expectations: The student: **1. compares the characteristics of things that live on land, in the water, and in the air.**
Student Edition: Cards 2.9, 2.14 **Teacher's Guide:** pages 24, 25, 34, 35, 56, 57, 66, 67

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.2: The student knows that life occurs on or near the surface of the Earth in land, air, and water.
Grade Level Expectations: The student: **2. knows that some organisms have adaptations that enable them to move from one medium to another (for example, dragonflies begin life in water, move to land, and then fly in the air).**
Student Edition: Cards 2.5, 2.9 **Teacher's Guide:** pages 16, 17, 24, 25, 48, 49, 56, 57

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.1.3: The student recognizes patterns in weather.
Grade Level Expectations: The student: **1. knows that weather conditions occur in patterns over time.**
Student Edition: Cards 2.8, 2.10 **Teacher's Guide:** pages 22, 23, 26, 27, 54, 55, 58, 59

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.1.1: The student understands that people influence the quality of life of those around them.
Grade Level Expectations: The student: **1.knows ways that human activity affects the environment (for example, landfills for disposal of wastes, land development for homes and industry, dams to control rivers or generate electricity).**
Student Edition: Cards 2.6, 2.6 **Teacher's Guide:** pages 14, 15, 18, 19, 46, 47, 50, 51

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.1.1: The student knows that the light reflected by the Moon looks a little different every day but looks the same again about every 28 days.
Grade Level Expectations: The student: **1. knows that the Moon moves around the Earth, the Earth moves around the Sun, and the Moon is visible when it reflects the light from the Sun.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.1.2: The student knows that the appearance of sunrise and sunset is due to the rotation of Earth every 24 hours.
Grade Level Expectations: The student: **1. knows that each time the Earth completes one rotation, one day has passed and that this takes 24 hours.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 2: The student recognizes the vastness of the universe and the Earth's place in it.
Benchmark SC.E.2.1.1: The student knows that there are many objects in the sky that are only visible at night.
Grade Level Expectations: The student: **1. knows that stars and planets are always in the sky.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.1: The student knows the basic needs of all living things.
Grade Level Expectations: The student: **1. understands that the amount of food, water, space, and shelter needed is dependent on the size and kind of living things.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.2: The student knows how to apply knowledge about life processes to distinguish between living and nonliving things.
Grade Level Expectations: The student: **1. knows that living things can reproduce, and nonliving things cannot reproduce.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.3: The student describes how organisms change as they grow and mature.
Grade Level Expectations: The student: **1. knows some factors that influence the growth of living things (for example, amount of water, amount of light, amount and type of food, type of soil).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.4: The student understands that structures of living things are adapted to their function in specific environments.
Grade Level Expectations: The student: **1. understands that structures of living things are adapted to their function in specific environments.**
Student Edition: Cards 2.5, 2.9, 2.14 **Teacher's Guide:** pages 16, 17, 24, 25, 34, 35, 48, 49, 56, 57, 66, 67

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.5: The student compares and describes the structural characteristics of plants and animals.
Grade Level Expectations: The student: **1. knows some characteristics of the vertebrate groups (mammals, reptiles, birds, amphibians, fish).**
Student Edition: Cards 2.5, 2.9 **Teacher's Guide:** pages 16, 17, 24, 25, 48, 49, 56, 57

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.5: The student compares and describes the structural characteristics of plants and animals.
Grade Level Expectations: The student: **2. knows the main parts of plants (stems, leaves, roots, flowers).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.1.5: The student compares and describes the structural characteristics of plants and animals.
Grade Level Expectations: The student: **3. knows that the structural characteristics of plants and animals are used to group them.**
Student Edition: Cards 2.9, 2.16 **Teacher's Guide:** pages 24, 25, 38, 39, 56, 57, 70, 71

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.1: The student knows that living things have offspring that resemble their parents.
Grade Level Expectations: The student: **1. understands that plants and animals produce offspring with similar characteristics, but individual differences (for example, kittens in a litter may be colored differently).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.1.2: The student knows that there are many different kinds of living things that live in a variety of environments.
Grade Level Expectations: The student: **1. knows that plants and animals are adapted to different ranges of temperatures and moisture.**
Student Edition: Card 2.14 **Teacher's Guide:** pages 34, 35, 66, 67

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.2: The student knows that plants and animals are dependent upon each other for survival.
Grade Level Expectations: The student: **1. knows that there is an interdependency of plants and animals that can be shown in a food web.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.3: The student knows that there are many different plants and animals living in many different kinds of environments (e.g., hot, cold, wet, dry, sunny, and dark).
Grade Level Expectations: The student: **1. understands that living organisms need to be adapted to their environments to survive.**
Student Edition: Cards 2.5, 2.7, 2.9, 2.14 **Teacher's Guide:** pages 16, 17, 20, 21, 24, 25, 34, 35, 48, 49, 52, 53, 56, 57, 66, 67

Strand G: How Living Things Interact with Their Environments
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.1.4: The student knows that animals and plants can be associated with their environment by an examination of their structural characteristics.
Grade Level Expectations: The student: **1. knows that plants and animals can be associated with their environment by an examination of their structural characteristics (for example, physical structures are adaptations that allow plants and animals to survive, such as gills in fish, lungs in mammals).**
Student Edition: Card 2.14 **Teacher's Guide:** pages 34, 35, 66, 67

Strand G: How Living Things Interact with Their Environments
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.1.1: The student knows that if living things do not get food, water, shelter, and space, they will die.
Grade Level Expectations: The student: **1. knows selected resources used by people for water, food, and shelter are limited and necessary for their survival.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environments
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.1.2: The student knows that the activities of humans affect plants and animals in many ways.
Grade Level Expectations: The student: **1. knows that human beings cause changes in their environment, and these changes can be positive (for example, creating refuges, replanting deforested regions, creating laws to restrict burning) or negative (for example, introducing exotic organisms, deforestation, littering, contaminating water and air).**
Student Edition: Cards 2.4, 2.6 **Teacher's Guide:** pages 14, 15, 18, 19, 46, 47, 50, 51

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.1: The student knows that in order to learn, it is important to observe the same things often and compare them.
Grade Level Expectations: The student: **1. knows the difference between verified observation and personal interpretation.**
Student Edition: Card 2.9 **Teacher's Guide:** pages 24, 25, 56, 57

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.2: The student knows that when tests are repeated under the same condition, similar results are usually obtained.
Grade Level Expectations: The student: **1. knows that when tests are repeated under the same condition, similar results are usually obtained.**
This concept is not covered at this level.

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.3: The student knows that in doing science, it is often helpful to work with a team and to share findings with others.
Grade Level Expectations: The student: **1. participates in groups to conduct experiments and solve problems.**
Student Edition: Card 2.4 **Teacher's Guide:** pages 14, 15, 46, 47

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.3: The student knows that in doing science, it is often helpful to work with a team and to share findings with others.
Grade Level Expectations: The student: **2. understands that one can gain confidence in scientific methods by comparing and verifying scientific results with others.**
Student Edition: Cards 2.4, 2.9 **Teacher's Guide:** pages 14, 15, 24, 25, 46, 47, 56, 57

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.4: The student knows that people use scientific processes including hypothesis, making inferences, and recording and communicating data when exploring the natural world.
Grade Level Expectations: The student: **1. understands that, through the use of science processes, people can solve problems and make decisions.**
Student Edition: Card 2.4 **Teacher's Guide:** pages 14, 15, 46, 47

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.4: The student knows that people use scientific processes including hypothesis, making inferences, and recording and communicating data when exploring the natural world.
Grade Level Expectations: The student: **2. analyzes information to make predictions, make sketches and diagrams to explain ideas, draws conclusions using information and prior knowledge.**
Student Edition: Cards 2.1, 2.4, 2.8, 2.9, 2.13, 2.14, 2.15, 2.16 **Teacher's Guide:** pages 8, 9, 14, 15, 22, 23, 24, 25, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 54, 55, 56, 57, 64, 65, 66, 67, 68, 69, 70, 71

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.4: The student knows that people use scientific processes including hypothesis, making inferences, and recording and communicating data when exploring the natural world.
Grade Level Expectations: The student: **3. keep science records.**
Student Edition: Cards 2.4, 2.13, 2.14, 2.15, 2.16 **Teacher's Guide:** pages 14, 15, 32, 33, 34, 35, 36, 37, 38, 39, 46, 47, 64, 65, 66, 67, 68, 69, 70, 71

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.5: The student uses the senses, tools, and instruments to obtain information from his or her surroundings.
Grade Level Expectations: The student: **1. uses a variety of tools to observe, measure, analyze, and predict changes in size, mass, temperature, color, position, quantity, sound, and movement.**
Student Edition: Cards 2.2, 2.3 **Teacher's Guide:** pages 10, 11, 12, 13, 42, 43, 44, 45

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.1.5: The student uses the senses, tools, and instruments to obtain information from his or her surroundings.
Grade Level Expectations: The student: **2. uses metric and standard English units to measure distance, volume, mass, and temperature.**
Student Edition: Card 2.2 **Teacher's Guide:** pages 10, 11, 42, 43

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible consistent patterns.
Benchmark SC.H.2.1.1: The student knows that most natural events occur in patterns.
Grade Level Expectations: The student: **1. knows how to sort organisms, objects, and events based on patterns.**
Student Edition: Cards 2.5, 2.6, 2.7, 2.16 **Teacher's Guide:** pages 16, 17, 18, 19, 20, 21, 38, 39, 48, 49, 50, 51, 52, 53, 70, 71

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.1.1: The student knows that scientists and technologists use a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier.
Grade Level Expectations: The student: **1. knows ways in which tools are used by scientists (for example, to gather information, to analyze, to calculate).**
Student Edition: Cards 2.2, 2.3, 2.11 **Teacher's Guide:** pages 10, 11, 12, 13, 28, 29, 42, 43, 44, 45, 60, 61

SRA Skills Handbook: Using Science
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Grade 3

Strand A: The Nature of Science
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.1: The student determine that the properties of materials (e.g., density and volume) can be compared and measured (e.g., using rulers, balances, and thermometers).
Grade Level Expectations: The student: **1. determines the physical properties of matter using metric measurements that incorporate tools such as rulers, thermometers, balances.**
Student Edition: pages 8, 9, 10, 11, 12, 13 **Teacher's Guide:** pages 4, 5 **Skills Workbook:** pages 3, 4

Strand A: The Nature of Science
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.2: The student knows that common materials (e.g., water) can be changed from one state to another by heating and cooling.
Grade Level Expectations: The student: **1. understands that physical changes in the states of matter can be produced by heating and cooling.**
Student Edition: pages 18, 19, 20, 21 **Teacher's Guide:** pages 8, 9 **Skills Workbook:** pages 7, 8

Strand A: The Nature of Science
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.3: The student knows that the weight of an object always equals the sum of its parts.
Grade Level Expectations: The student: **1. knows that the weight of an object is equal to the sum if the weight of its parts.**
This concept is not covered at this level.

Strand A: The Nature of Science
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.2.1: The student knows that materials may be made of parts too small to be seen without magnification.
Grade Level Expectations: The student: **1. uses a tool to observe and study minute details of objects (for example, hand lens).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.2: The student recognizes various forms of energy (e.g., heat, light, and electricity).
Grade Level Expectations: The student: **1. knows objects that emit heat and light.**
Student Edition: pages 146, 147, 148, 149, 150, 151

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.2: The student recognizes various forms of energy (e.g., heat, light, and electricity).
Grade Level Expectations: The student: **2. knows different forms of energy (for example, heat, light, sound).**
Student Edition: pages 64, 65, 66, 67, 146, 147, 148, 149, 150, 151 **Teacher's Guide:** pages 26, 27 **Skills Workbook:** pages 25, 26

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.3: The student knows that most things that emit light also emit heat.
Grade Level Expectations: The student: **1. knows that the Sun provides energy for the Earth in the form of heat and light.**
Student Edition: pages 146, 147, 148, 149, 150, 151

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.4: The student knows the many ways in which energy can be transformed from one type to another.
Grade Level Expectations: The student: **1. knows that heat can be produced by chemical reactions, electrical machines, and friction.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.5: The student knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed.
Grade Level Expectations: The student: **1. uses a variety of tools to measure the gain or loss of energy.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.6: The student knows ways that heat can move from one object to another.
Grade Level Expectations: The student: **1. knows that when a warmer object comes in contact with a cooler one, the warm object loses heat and the cool one gains it until they are both at the same temperature.**
This concept is not covered at this level.

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.1: The student knows that some source of energy is needed for organisms to stay alive and grow.
Grade Level Expectations: The student: **1. knows that some source of energy is needed for organisms to stay alive and grow.**
Student Edition: pages 166, 167, 168, 169

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.2: The student recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy.
Grade Level Expectations: The student: **1. knows ways natural resources are important.**
Skills Workbook: pages 75, 76

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.2: The student recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy.
Grade Level Expectations: The student: **2. classifies resources as renewable or nonrenewable.**
Student Edition: pages 170, 171, 172, 173 **Teacher's Guide:** pages 68, 69 **Skills Workbook:** pages 67, 68

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.3: The student knows that the limited supply of usable energy sources (e.g., fuels such as coal or oil) places great significance on the development of renewable energy sources.
Grade Level Expectations: The student: **1. knows that alternate energy sources (for example, synthetic fuels, geothermal energy) are being explored using natural and mechanical processes.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.1: The student understands that the motion of an object can be described and measured.
Grade Level Expectations: The student: **1. describes the motion of various objects (for example, forward, circular, wave).**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 10, 11, 12, 13 **Skills Workbook:** pages 9, 10, 11, 12

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.2: The student knows that waves travel at different speeds through different materials.
Grade Level Expectations: The student: **1. understands the characteristics of waves (for example, crest, though, length).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.1: The student recognizes that forces of gravity, magnetism, and electricity operate simple machines.
Grade Level Expectations: The student: **1. knows the six types of simple machines (screw, inclined plane, wedge, pulley, lever, and wheel and axle).**
Student Edition: pages 96, 97, 98, 99, 118, 119, 120, 121 **Teacher's Guide:** pages 40, 41, 48, 49 **Skills Workbook:** pages 39, 40, 47, 48

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.2: The student knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object.
Grade Level Expectations: The student: **1. 1. knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting in the object.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 10, 11, 12, 13 **Skills Workbook:** pages 9, 10, 11, 12

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.1: The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil.
Grade Level Expectations: The student: **1. knows that smaller rocks come from the breaking and weathering of bedrock and larger rocks.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.2: The student knows that 75% of the surface of the Earth is covered by water.
Grade Level Expectations: The student: **1. knows that approximately 75 percent of the surface of the Earth is covered by water.**
Student Edition: pages 4, 5, 6, 7 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.3: The student knows that the water cycle is influenced by temperature, pressure, and the topography of the land.
Grade Level Expectations: The student: **1. understands the stages of the water cycle (for example, evaporation, condensation, precipitation).**
Student Edition: pages 18, 19, 20, 21 **Teacher's Guide:** pages 8, 9 **Skills Workbook:** pages 7, 8

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.4: The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.
Grade Level Expectations: The student: **1. understands the processes of weathering and erosion.**
Student Edition: pages 32, 33, 34, 35, 36, 37, 88, 89, 90, 91, 178, 179, 180, 181 **Teacher's Guide:** pages 14, 15, 36, 37, 72, 73 **Skills Workbook:** pages 13, 14, 35, 36, 71, 72

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.5: The student knows that some changes in the Earth's surface are due to slow processes and some changes are due to rapid processes.
Grade Level Expectations: The student: **1. knows that landforms change over time (for example, earthquakes, volcanoes).**
Student Edition: pages 32, 33, 34, 35, 36, 37, 88, 89, 90, 91, 178, 179, 180, 181, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 14, 15, 36, 37, 72, 73, 80, 81 **Skills Workbook:** pages 13, 14, 35, 36, 71, 72, 79, 80

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.2.1: The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.
Grade Level Expectations: The student: **1. knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.**
Student Edition: pages 170, 171, 172, 173 **Teacher's Guide:** pages 68, 69 **Skills Workbook:** pages 67, 68

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **1. knows that days and nights change in length throughout the year.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **2. knows the patterns of average temperatures throughout the year.**
Student Edition: pages 106, 107, 108, 109, 110, 111 **Teacher's Guide:** pages 44, 45 **Skills Workbook:** pages 43, 44

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.2: The student knows that the combination of the Earth's movement and the Moon's own orbit around the Earth results in the appearance of cyclical phases of the Moon.
Grade Level Expectations: The student: **1. knows the frequency of the lunar cycle is approximately 28 days.**
Student Edition: pages 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 18, 19 **Skills Workbook:** pages 17, 18

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.3: The student knows that the Sun is a star and that its energy can be captured or concentrated to generate heat and light for work on Earth.
Grade Level Expectations: The student: **1. knows the Sun is a star that is much nearer to the Earth than the other stars.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.4: The student knows that the planets differ in size, characteristics, and composition and that they orbit the Sun in our Solar System.
Grade Level Expectations: The student: **1. knows characteristics of Mercury, Venus, Earth, and Mars.**
Student Edition: pages 50, 51, 52, 53, 54, 55 **Teacher's Guide:** pages 20, 21 **Skills Workbook:** pages 19, 20

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.5: The student understands the arrangement of planets in our Solar System.
Grade Level Expectations: The student: **1. knows the relative position of all the planets.**
Student Edition: pages 50, 51, 52, 53, 54, 55 **Teacher's Guide:** pages 20, 21 **Skills Workbook:** pages 19, 20

Strand E: Earth and Space
Standard 2: The student recognizes the vastness of the universe and the Earth's place in it.
Benchmark SC.E.2.2.1: The student knows that, in addition to the Sun, there are many other stars that are far away.
Grade Level Expectations: The student: **1. knows that, in addition to the Sun, there are many other stars that are far away.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.2: The student knows how all animals depend on plants.
Grade Level Expectations: The student: **1. understands the various ways that animals depend on plants for survival (for example, food, shelter, oxygen).**
Student Edition: pages 128, 129, 130, 131 **Teacher's Guide:** pages 52, 53 **Skills Workbook:** pages 51, 52

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.3: The student knows that living things are different but share similar structures.
Grade Level Expectations: The student: **1. knows the common and distinguishing characteristics of groups of vertebrate animals (mammals, birds, fish, reptiles, amphibians).**
Student Edition: pages 102, 103, 104, 105, 132, 133, 134, 135 **Teacher's Guide:** pages 42, 43, 54, 55 **Skills Workbook:** pages 41, 42, 53, 54

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.3: The student knows that living things are different but share similar structures.
Grade Level Expectations: The student: **2. understands similarities and differences among plants.**
Student Edition: pages 60, 61, 62, 63 **Teacher's Guide:** pages 24, 25 **Skills Workbook:** pages 23, 24

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.3: The student knows that living things are different but share similar structures.
Grade Level Expectations: The student: **3. understands that although plants and animals are different, they also share common characteristics (for example, they both have structures for reproduction, respiration, and growth).**
Student Edition: pages 122, 123, 124, 125, 126, 127 **Teacher's Guide:** pages 50, 51 **Skills Workbook:** pages 49, 50

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.2: The student knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment.
Grade Level Expectations: The student: **1. knows how organisms with similar needs in a climatic region compete with one another for resources such as food, water, oxygen, or space.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.2: The student knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment.
Grade Level Expectations: The student: **2. knows behavioral and structural adaptations that allow plants and animals to survive in an environment.**
Student Edition: pages 38, 39, 40, 41, 60, 61, 62, 63, 68, 69, 70, 71, 72, 73, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 128, 129, 130, 131, 174, 175, 176, 177 **Teacher's Guide:** pages 16, 17, 24, 25, 28, 29, 32, 33, 34, 35, 70, 71 **Skills Workbook:** pages 15, 16, 23, 24, 27, 28, 31, 32, 33, 34, 69, 70

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.5: The student knows that animals eat plants or other animals to acquire the energy they need for survival.
Grade Level Expectations: The student: **1. understands that energy is transferred to living organisms through the food they eat.**
Student Edition: pages 56, 57, 58, 59, 166, 167, 168, 169 **Teacher's Guide:** pages 22, 23, 66, 67 **Skills Workbook:** pages 21, 22, 65, 66

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.5: The student knows that animals eat plants or other animals to acquire the energy they need for survival.
Grade Level Expectations: The student: **2. knows examples of living things that are classified as producers, consumers, carnivores, herbivores, and omnivores.**
Student Edition: pages 68, 69, 70, 71, 72, 73 **Teacher's Guide:** pages 28, 29 **Skills Workbook:** pages 27, 28

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.1: The student knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring.
Grade Level Expectations: The student: **1. understands that plants and animals share and compete for limited resources such as oxygen, water, food, and space.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.2: The student knows that the size of a population is dependent upon the available resources within its community.
Grade Level Expectations: The student: **1. knows that the size of a population is dependent upon the available resources within its community.**
This concept is not covered at this level.

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.1: The student knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.
Grade Level Expectations: The student: **1. knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47, 106, 107, 108, 109, 110, 111 **Teacher's Guide:** pages 10, 11, 12, 13, 14, 15, 18, 19, 44, 45 **Skills Workbook:** pages 9, 10, 11, 12, 13, 14, 17, 18, 43, 44

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **1. plans and investigates an experiment that defines a problem, proposes a solution, identifies variables, collects and organizes data, interprets data in tables, charts, and graphs, analyzes information, makes predictions and presents and supports findings.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 82, 83, 84, 85, 86, 87, 106, 107, 108, 109, 110, 111, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 34, 35, 44, 45, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 33, 34, 43, 44, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **2. uses various kinds of instruments to collect and analyze information (for example, meter sticks, timing devices, graduated cylinders, force meters, pan balances, calipers, microscopes, cameras, sound recorders, hot plates, magnets, collecting nets).**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 4, 5, 6, 7, 10, 11, 12, 13 **Skills Workbook:** pages 3, 4, 5, 6, 9, 10, 11, 12

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.3: The student knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.
Grade Level Expectations: The student: **1. knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.**
Student Edition: pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 , 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150,1 51, 152, 153, 154, 155, 156, 157, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 , 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.4: The student knows that to compare and contrast observations and results is an essential skill in science.
Grade Level Expectations: The student: **1. knows that to compare and contrast observations and results is an essential skill in science.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47, 60, 61, 62, 63, 132, 133, 134, 135 **Teacher's Guide:** pages 10, 11, 12, 13, 14, 15, 18, 19, 24, 25, 54, 55 **Skills Workbook:** pages 9, 10, 11, 12, 13, 14, 17, 18, 23, 24, 53, 54

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.5: The student knows that a model of something is different from the real thing, but can be used to learn something about the real thing.
Grade Level Expectations: The student: **1. uses sketches, diagrams and models to understand scientific ideas.**
Student Edition: pages 4, 5, 6, 7, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 132, 133, 134, 135 **Teacher's Guide:** pages 2, 3, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 54, 55 **Skills Workbook:** pages 1, 2, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 53, 54

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **1. makes predictions and inferences based on observations.**
Student Edition: pages 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 106, 107, 108, 109, 110, 111 **Teacher's Guide:** pages 16, 17, 18, 19, 34, 35, 36, 37, 44, 45 **Skills Workbook:** pages 15, 16, 17, 18, 33, 34, 35, 36, 43, 44

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **2. uses charts and graphs to understand patterns of change.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 10, 11, 12, 13, 18, 19 **Skills Workbook:** pages 9, 10, 11, 12, 17, 18

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **1. understands the relationships between science concepts and the history of science and the contributions of scientists.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 10, 11, 12, 13 **Skills Workbook:** pages 9, 10, 11, 12

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **2. uses reference materials to obtain information related to science concepts.**
Student Edition: pages 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151 **Teacher's Guide:** pages 58, 59, 60, 61 **Skills Workbook:** pages 57, 58, 59, 60

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.2: The student knows that data are collected and interpreted in order to explain an event or concept.
Grade Level Expectations: The student: **1. knows that data are collected and interpreted in order to explain an event or concept.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 42, 43, 44, 45, 46, 47, 64, 65, 66, 67, 152, 153, 154, 155, 156, 157 **Teacher's Guide:** pages 10, 11, 12, 13, 18, 19, 26, 27, 62, 63 **Skills Workbook:** pages 9, 10, 11, 12, 17, 18, 25, 26, 61, 62

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.2: The student knows that data are collected and interpreted in order to explain an event or concept.
Grade Level Expectations: The student: **2. understands that scientific information can be presented in several ways (for example, using numbers and mathematics, drawings, words, graphs, tables).**
Student Edition: pages 4, 5, 6, 7, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 42, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 55,56, 57, 58, 59, 112, 113, 114, 115, 116, 117, 152, 153, 154, 155, 156, 157, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 2, 3, 10, 11, 12, 13, 18, 19, 20, 21, 22, 23, 46, 47, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 1, 2, 9, 10, 11, 12, 17, 18, 19, 20, 21, 22, 45, 46, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.3: The student knows that before a group of people build something or try something new, they should determine how it may affect other people.
Grade Level Expectations: The student: **1. understands how scientific discoveries have helped or hindered progress regarding human health and lifestyles.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 56, 57, 58, 59, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 10, 11, 22, 23, 64, 65 **Skills Workbook:** pages 9, 10, 22, 23, 64, 65

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.4: The student knows that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas.
Grade Level Expectations: The student: **1. knows that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 38, 39, 40, 41, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 8, 9, 10, 11, 18, 19, 64, 65 **Skills Workbook:** pages 7, 8, 9, 10, 17, 18, 63, 64

SRA Skills Handbook: Using Science
correlation to
Florida Grade Level Expectations for the Sunshine State Standards: Science
Grade 4

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.1: The student determine that the properties of materials (e.g., density and volume) can be compared and measured (e.g., using rulers, balances, and thermometers).
Grade Level Expectations: The student: **1. uses a variety of measurements to compare and contrast the physical properties of matter.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 **Teacher's Guide:** pages 4, 5, 6, 7 **Skills Workbook:** pages 3, 4, 5, 6

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.2: The student knows that common materials (e.g., water) can be changed from one state to another by heating and cooling.
Grade Level Expectations: The student: **1. understands that heating or cooling of matter will speed up or slow down, respectively, the motion of the small particles within matter and that this is what causes a phase change.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 132, 133, 134, 135 **Teacher's Guide:** pages 4, 5, 54, 55 **Skills Workbook:** pages 3, 4, 53, 54

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.2.1: The student knows that materials may be made of parts too small to be seen without magnification.
Grade Level Expectations: The student: **1. uses a variety of tools (hand lens, microscope) to observe and study minute details of objects.**
Student Edition: pages 114, 115, 116, 117, 118, 119 **Teacher's Guide:** pages 48, 49

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.1: The student knows how to trace the flow of energy in a system (e.g., as in an ecosystem).
Grade Level Expectations: The student: **1. knows that most living things use energy from the Sun to live and grow.**
Student Edition: pages 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 12, 13, 14, 15 **Skills Workbook:** pages 11, 12, 13, 14

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.1: The student knows how to trace the flow of energy in a system (e.g., as in an ecosystem).
Grade Level Expectations: The student: **2. knows how to trace the flow of energy in a system (for example, in an ecosystem).**
Student Edition: pages 94, 95, 96, 97 **Teacher's Guide:** pages 40, 41 **Skills Workbook:** pages 39, 40

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.2: The student recognizes various forms of energy (e.g., heat, light, and electricity).
Grade Level Expectations: The student: **1. knows that there are a variety of sources for electricity (for example, hydroelectric, geothermal, windmills).**
Student Edition: pages 108, 109, 110, 111, 112, 113 **Teacher's Guide:** pages 46, 47 **Skills Workbook:** pages 45, 46

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.2: The student recognizes various forms of energy (e.g., heat, light, and electricity).
Grade Level Expectations: The student: **2. knows the relationship between attributes of all waves (for example, wavelength, frequency) and attributes of sound waves (for example, pitch, intensity).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.3: The student knows that most things that emit light also emit heat.
Grade Level Expectations: The student: **1. knows that most objects that emit light also emit heat.**
Student Edition: pages 108, 109, 110, 111, 112, 113, 194, 195, 196, 197 **Teacher's Guide:** pages 46, 47, 78, 79 **Skills Workbook:** pages 45, 46, 77, 78

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.4: The student knows the many ways in which energy can be transformed from one type to another.
Grade Level Expectations: The student: **1. knows ways that energy can be transformed (for example, electricity to light, light to heat, mechanical to heat).**
Student Edition: pages 72, 73, 74, 75, 76, 77, 108, 109, 110, 111, 112, 113 **Teacher's Guide:** pages 30, 31, 46, 47, 78, 79 **Skills Workbook:** pages 29, 30, 45, 46, 77, 78

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.4: The student knows the many ways in which energy can be transformed from one type to another.
Grade Level Expectations: The student: **2. knows that moving electric charges produce magnetic forces and moving magnets produce electric currents.**
Student Edition: pages 18, 19, 20, 21 **Teacher's Guide:** pages 8, 9 **Skills Workbook:** pages 7, 8

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.5: The student knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed.
Grade Level Expectations: The student: **1. extends and refines use of a variety of tools to measure the gain or loss of energy.**
This concept is not covered at this level.

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.2: The student recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy.
Grade Level Expectations: The student: **1. understands the reasons for energy conservation.**
Student Edition: pages 72, 73, 74, 75, 76, 77, 108, 109, 110, 111, 112, 113 **Teacher's Guide:** pages 30, 31, 46, 47 **Skills Workbook:** pages 29, 30, 45, 46

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.2: The student recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy.
Grade Level Expectations: The student: **2. knows the risk factors associated with the use of nonrenewable energy sources (for example, economic factors and health factors).**
Student Edition: pages 108, 109, 110, 111, 112, 113, 154, 155, 156, 157, 158, 159 **Teacher's Guide:** pages 46, 47, 62, 63 **Skills Workbook:** pages 45, 46, 61, 62

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.3: The student knows that the limited supply of usable energy sources (e.g., fuels such as coal or oil) places great significance on the development of renewable energy sources.
Grade Level Expectations: The student: **1. knows the processes that created fossil fuels and why they are nonrenewable.**
Student Edition: pages 108, 109, 110, 111, 112, 113 **Teacher's Guide:** pages 46, 47 **Skills Workbook:** pages 45, 46

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.1: The student understands that the motion of an object can be described and measured.
Grade Level Expectations: The student: **1. knows that velocity describes a change in distance over time.**
Student Edition: pages 22, 23, 24, 25, 26, 27 **Teacher's Guide:** pages 10, 11, 70, 71 **Skills Workbook:** pages 9, 10, 69, 70

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.2: The student knows that waves travel at different speeds through different materials.
Grade Level Expectations: The student: **1. understands that waves behave differently in different media (for example, water, a wall, the atmosphere, a vacuum).**
Skills Workbook: pages 77, 78

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.1: The student recognizes that forces of gravity, magnetism, and electricity operate simple machines.
Grade Level Expectations: The student: **1. understands how simple machines are used to make tasks possible.**
Student Edition: pages 50, 51, 52, 53, 142, 143, 144, 145, 146, 147 **Teacher's Guide:** pages 20, 21, 58, 59 **Skills Workbook:** pages 19, 20, 57, 58

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.2: The student knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object.
Grade Level Expectations: The student: **1. uses tools to measure changes in position, direction, and speed of an object after a push or pull has been applied.**
Student Edition: pages 22, 23, 24, 25, 26, 27 **Teacher's Guide:** pages 10, 11 **Skills Workbook:** pages 9, 10

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.1: The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil.
Grade Level Expectations: The student: **1. understands the stages of the rock cycle.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.1: The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil.
Grade Level Expectations: The student: **2. knows the properties of different types of soil.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.3: The student knows that the water cycle is influenced by temperature, pressure, and the topography of the land.
Grade Level Expectations: The student: **1. understands how the water cycle is influenced by temperature and land features.**
Student Edition: pages 190, 191, 192, 193 **Teacher's Guide:** pages 76, 77 **Skills Workbook:** pages 75, 76

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.4: The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.
Grade Level Expectations: The student: **1. understands how processes of weathering and erosion constantly change the surface of the Earth.**
Student Edition: pages 82, 83, 84, 85 **Teacher's Guide:** pages 34, 35 **Skills Workbook:** pages 33, 34

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.2.1: The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.
Grade Level Expectations: The student: **1. knows ways in which people can conserve natural resources.**
Student Edition: pages 14, 15, 16, 17, 72, 73, 74, 75, 76, 77, 104, 105, 106, 107, 154, 155, 156, 157, 158, 159, 180, 181, 182, 183 **Teacher's Guide:** pages 6, 7, 30, 31, 44, 45, 62, 63, 72, 73 **Skills Workbook:** pages 5, 6, 29, 30, 43, 44, 61, 62, 71, 72

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.2.1: The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.
Grade Level Expectations: The student: **2. knows ways misuse of natural resources affects the quality of life for all species.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 104, 105, 106, 107, 154, 155, 156, 157, 158, 159 **Teacher's Guide:** pages 26, 27, 44, 45, 62, 63 **Skills Workbook:** pages 43, 44, 61, 62

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **1. knows that the tilt of the Earth causes the changes of seasons, length of day, and the amount of energy available.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.2: The student knows that the combination of the Earth's movement and the Moon's own orbit around the Earth results in the appearance of cyclical phases of the Moon.
Grade Level Expectations: The student: **1. understands the cause of the phases of the Moon (for example, the movement patterns of the Earth and Moon relative to the Sun).**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.3: The student knows that the Sun is a star and that its energy can be captured or concentrated to generate heat and light for work on Earth.
Grade Level Expectations: The student: **1. knows how the energy of the Sun can be captured as a source of heat and light on Earth (for example, plants, solar panels).**
Skills Workbook: pages 45, 46

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.4: The student knows that the planets differ in size, characteristics, and composition and that they orbit the Sun in our Solar System.
Grade Level Expectations: The student: **1. knows characteristics of Jupiter, Saturn, Uranus, Neptune, and Pluto.**
Student Edition: pages 54, 55, 56, 57 **Teacher's Guide:** pages 22, 23 **Skills Workbook:** pages 21, 22

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.5: The student understands the arrangement of planets in our Solar System.
Grade Level Expectations: The student: **1. knows that gravity is one of the forces that keeps planets arranged in orbits around the Sun and Moon in orbit around the Earth.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 2: The student recognizes the vastness of the universe and the Earth's place in it.
Benchmark SC.E.2.2.1: The student knows that, in addition to the Sun, there are many other stars that are far away.
Grade Level Expectations: The student: **1. understands that the Sun is a medium-sized star located near the edge of a galaxy containing billions of other stars, which in turn is one of innumerable galaxies in the Universe.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.1: The student knows that the human body is made of systems with structures and functions that are related.
Grade Level Expectations: The student: **1. knows that complex animals have specialized organs to carry out life processes.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.1: The student knows that the human body is made of systems with structures and functions that are related.
Grade Level Expectations: The student: **2. knows the major organ systems of the human body.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.1: The student knows that the human body is made of systems with structures and functions that are related.
Grade Level Expectations: The student: **3. understands the functions of various body systems.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.4: The student knows that similar cells form different kinds of structures.
Grade Level Expectations: The student: **1. knows that living things are composed of cells.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.4: The student knows that similar cells form different kinds of structures.
Grade Level Expectations: The student: **2. knows that processes needed for life are carried out by the cells.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.1: The student knows ways that plants, animals, and protests interact.
Grade Level Expectations: The student: **1. knows how plants and animals interact with one another in an ecosystem (for example, organization of communities, flow of energy through food webs).**
Student Edition: pages 14, 15, 16, 17, 42, 43, 44, 45, 46, 47, 68, 69, 70, 71, 94, 95, 96, 97 **Teacher's Guide:** pages 6, 7, 18, 19, 28, 29, 40, 41 **Skills Workbook:** pages 5, 6, 17, 18, 27, 28, 39, 40

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.1: The student knows ways that plants, animals, and protests interact.
Grade Level Expectations: The student: **2. understands the relationship among the organisms in aquatic and terrestrial food chains (for example, the role of producers, consumers, and decomposers).**
Student Edition: pages 14, 15, 16, 17, 42, 43, 44, 45, 46, 47, 68, 69, 70, 71, 94, 95, 96, 97 **Teacher's Guide:** pages 6, 7, 18, 19, 28, 29, 40, 41 **Skills Workbook:** pages 5, 6, 17, 18, 27, 28, 39, 40

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.4: The student knows that some organisms decompose dead plants and animals into simple minerals and nutrients for use by living things and thereby recycle matter.
Grade Level Expectations: The student: **1. knows organisms that act as decomposers.**
Student Edition: pages 14, 15, 16, 17, 42, 43, 44, 45, 46, 47, 68, 69, 70, 71 **Teacher's Guide:** pages 6, 7, 18, 19, 28, 29 **Skills Workbook:** pages 5, 6, 17, 18, 27, 28

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.4: The student knows that some organisms decompose dead plants and animals into simple minerals and nutrients for use by living things and thereby recycle matter.
Grade Level Expectations: The student: **2. understands the need for nutrients and minerals for living organisms.**
Student Edition: pages 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 68, 69, 70, 71, 78, 79, 80, 81 **Teacher's Guide:** pages 12, 13, 14, 15, 28, 29, 32, 33 **Skills Workbook:** pages 11, 12, 13, 14, 27, 28, 31, 32

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.4: The student knows that some organisms decompose dead plants and animals into simple minerals and nutrients for use by living things and thereby recycle matter.
Grade Level Expectations: The student: **3. understands the process of decay (for example, the stages of decay, the organisms that help the decay process, the nonliving factors that influence the rate of decay, the products of decay).**
Student Edition: pages 14, 15, 16, 17, 42, 43, 44, 45, 46, 47, 68, 69, 70, 71 **Teacher's Guide:** pages 6, 7, 18, 19, 28, 29 **Skills Workbook:** pages 5, 6, 17, 18, 27, 28

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.6: The student knows that organisms are growing, dying, and decaying and that new organisms are being produced from the materials of dead organisms.
Grade Level Expectations: The student: **1. knows that organisms are growing, dying, and decaying and that new organisms are being produced.**
Student Edition: pages 14, 15, 16, 17, 42, 43, 44, 45, 46, 47, 68, 69, 70, 71, 184, 185, 186, 187 188, 189 **Teacher's Guide:** pages 6, 7, 18, 19, 28, 29, 74, 75 **Skills Workbook:** pages 5, 6, 17, 18, 27, 28, 73, 74

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.7: The student knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem.
Grade Level Expectations: The student: **1. knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem.**
Student Edition: pages 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47, 62, 63, 64, 65, 66, 67 **Teacher's Guide:** pages 12, 13, 14, 15, 18, 19, 26, 27 **Skills Workbook:** pages 11, 12, 13, 14, 17, 18, 25, 26

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.1: The student knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring.
Grade Level Expectations: The student: **1. knows the kinds of organisms that lived in the past and compares them to existing species.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.1: The student knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring.
Grade Level Expectations: The student: **2. knows characteristics that allow members within a species to survive and reproduce.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 86, 87, 88, 89, 100, 101, 102, 103, 184, 185, 186, 187, 188, 189 **Teacher's Guide:** pages 26, 27, 36, 37, 42, 43, 74, 75 **Skills Workbook:** pages 25, 26, 35, 36, 41, 42, 73, 74

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.3: The student understands that changes in the habitat of an organism may be beneficial or harmful.
Grade Level Expectations: The student: **1. understands patterns of interdependency in ecological systems.**
Student Edition: pages 104, 105, 106, 107, 166, 167, 168, 169, 198, 199, 200, 201 **Teacher's Guide:** pages 44, 45, 66, 67, 80, 81 **Skills Workbook:** pages 43, 44, 65, 66, 79, 80

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.3: The student understands that changes in the habitat of an organism may be beneficial or harmful.
Grade Level Expectations: The student: **2. understands that what benefits one organism may be harmful to other organisms.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 154, 155, 156, 157, 158, 159, 166, 167, 168, 169 **Teacher's Guide:** pages 26, 27, 62, 63, 66, 67 **Skills Workbook:** pages 25, 26, 61, 62, 65, 66

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.3: The student understands that changes in the habitat of an organism may be beneficial or harmful.
Grade Level Expectations: The student: **3. understands that changes in an ecological system usually affect the whole system.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 104, 105, 106, 107, 154, 155, 156, 157, 158, 159, 166, 167, 168, 169, 198, 199, 200, 201 **Teacher's Guide:** pages 26, 27, 44, 45, 62, 63, 66, 67, 80, 81 **Skills Workbook:** pages 25, 26, 43, 44, 61, 62, 65, 66, 79, 80

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.1: The student knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.
Grade Level Expectations: The student: **1. knows that scientists make the results of their investigations public, and they decide the investigations in ways that enable others to repeat the investigations.**
Student Edition: pages 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 108, 109, 110, 111, 112, 113, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135 **Teacher's Guide:** pages 14, 15, 16, 17, 18, 19, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55 **Skills Workbook:** pages 13, 14, 15, 16, 17, 18, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **1. plans and investigates experiments in which hypotheses are formulated, based on cause and effect relationships; distinctions are made among observations, conclusions/inferences and predictions; a limited number of variables are controlled; and numerical data that are contradictory or unusual in experimental results are recognized.**
Student Edition: pages 18, 19, 20, 21, 22, 21, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **2. uses metric tools to measure, record, and interpret data.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 174, 175, 176, 177, 178, 179 **Teacher's Guide:** pages 4, 5, 6, 7, 10, 11, 12, 13, 70, 71 **Skills Workbook:** pages 3, 4, 5, 6, 9, 10, 11, 12, 69, 70

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.3: The student knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.
Grade Level Expectations: The student: **1. works collaboratively to collect, share, and record information for a scientific investigation.**
Student Edition: pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 , 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 , 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.4: The student knows that to compare and contrast observations and results is an essential skill in science.
Grade Level Expectations: The student: **1. knows that comparisons between experiments can be made when conditions are the same.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 , 38, 39 40, 41, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.5: The student knows that a model of something is different from the real thing, but can be used to learn something about the real thing.
Grade Level Expectations: The student: **1. knows that a model of something is different from the real thing, but can be used to learn something about the real thing.**
Student Edition: pages 4, 5, 6, 7 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **1. makes predictions based on data from picture graphs, bar graphs, and line graphs.**
Student Edition: pages 82, 83, 84, 85, 154, 155, 156, 157, 158, 159, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183 **Teacher's Guide:** pages 34, 35, 62, 63, 68, 69, 70, 71, 72, 73 **Skills Workbook:** pages 33, 34, 61, 62, 67, 68, 69, 70, 71, 72

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **2. knows basic patterns, sequences, and cycles occurring in nature.**
Student Edition: pages 58, 59, 60, 61, 82, 83, 84, 85, 132, 133, 134, 135, 184, 185, 186, 187, 188, 189 **Teacher's Guide:** pages 24, 25, 34, 35, 54, 55, 74, 75 **Skills Workbook:** pages 23, 24, 33, 34, 53, 54, 73, 74

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **1. knows that technologies often have costs, as well as benefits, and can have an enormous effect on people and other living things.**
Student Edition: pages 50, 51, 52, 53, 72, 73, 74, 75, 76, 77, 126, 127, 128, 129, 130, 31, 148, 149, 150, 151, 152, 153, 162, 163, 164, 165 **Teacher's Guide:** pages 20, 21, 30, 31, 52, 53, 60, 61, 64, 65 **Skills Workbook:** pages 19, 20, 29, 30, 51, 52, 59, 60, 63, 64

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **2. researches and reports on a science topic.**
Student Edition: pages 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153 **Teacher's Guide:** pages 56, 57, 58, 59, 60, 61 **Skills Workbook:** pages 55, 56, 57, 58, 59, 60

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.2: The student knows that data are collected and interpreted in order to explain an event or concept.
Grade Level Expectations: The student: **1. constructs and analyzes graphs, tables, maps, and charts to organize, examine, and evaluate information.**
Student Edition: pages 154, 155, 156, 157, 158, 159, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.3: The student knows that before a group of people build something or try something new, they should determine how it may affect other people.
Grade Level Expectations: The student: **1. uses criteria to understand and analyze the impact of scientific discoveries (for example, determines whether or not scientific claims are backed by sufficient evidence and logical arguments).**
Student Edition: pages 38, 39, 40, 41, 72, 73, 74, 75, 76, 77, 126, 127, 128, 129, 130, 131, 170, 171, 172, 173 **Teacher's Guide:** pages 16, 17, 30, 31, 52, 53, 68, 69 **Skills Workbook:** pages 15, 16, 29, 30, 51, 52, 67, 68

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.4: The student knows that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas.
Grade Level Expectations: The student: **1. knows ways that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas.**
Student Edition: pages 38, 39, 40, 41, 72, 73, 74, 75, 76, 77, 90, 91, 92, 93, 114, 115, 116, 117, 118, 119, 126, 127, 128, 129, 130, 131, 154, 155, 156, 157, 158, 159, 170, 171, 172, 173 **Teacher's Guide:** pages 16, 17, 30, 31, 38, 39, 48, 49, 52, 53, 62, 63, 68, 69 **Skills Workbook:** pages 15, 16, 29, 30, 37, 38, 47, 48, 51, 52, 61, 62, 67, 68

SRA Skills Handbook: Using Science
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Grade 5

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.1: The student determine that the properties of materials (e.g., density and volume) can be compared and measured (e.g., using rulers, balances, and thermometers).
Grade Level Expectations: The student: **1. uses metric tools to determine the density and volume of materials.**
Student Edition: pages 10, 11, 12, 13, 22, 23, 24, 25 **Teacher's Guide:** pages 4, 5, 10, 11 **Skills Workbook:** pages 3, 4, 9, 10

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.2: The student knows that common materials (e.g., water) can be changed from one state to another by heating and cooling.
Grade Level Expectations: The student: **1. knows that matter is conserved during heating and cooling.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.4: The student knows that different materials are made by physically combining substances and that different materials can be made by combining different materials.
Grade Level Expectations: The student: **1. knows that different materials can be physically combined to produce different substances.**
Skills Workbook: pages 17, 18

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.4: The student knows that different materials are made by physically combining substances and that different materials can be made by combining different materials.
Grade Level Expectations: The student: **2. knows the differences and similarities between mixtures and solutions.**
Student Edition: pages 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 18, 19 **Skills Workbook:** pages 17, 18

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.5: The student knows that materials made by chemically combining two or more substances may have properties that differ from the original materials.
Grade Level Expectations: The student: **1. knows that materials made by chemically combining two or more substances have properties that differ from the original materials.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.2.5: The student knows that materials made by chemically combining two or more substances may have properties that differ from the original materials.
Grade Level Expectations: The student: **2. knows the difference between physical and chemical change.**
Student Edition: pages 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 14, 15, 18, 19 **Skills Workbook:** pages 13, 14, 17, 18

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.2.1: The student knows that materials may be made of parts too small to be seen without magnification.
Grade Level Expectations: The student: **1. knows that materials may be made of parts too small to be seen without magnification.**
Student Edition: pages 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 18, 19 **Skills Workbook:** pages 17, 18

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.1: The student knows how to trace the flow of energy in a system (e.g., as in an ecosystem).
Grade Level Expectations: The student: **1. knows how to trace the flow of energy in a system (for example, electricity in a circuit to produce heat, light, sound, or magnetic fields).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.2: The student recognizes various forms of energy (e.g., heat, light, and electricity).
Grade Level Expectations: The student: **1. knows that energy can be described as stored energy (potential) or energy of motion (kinetic).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.5: The student knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed.
Grade Level Expectations: The student: **1. extends and refines use of a variety of tools to measure the gain or loss of energy.**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.6: The student knows ways that heat can move from one object to another.
Grade Level Expectations: The student: **1. knows that some materials conduct heat better than others.**
Student Edition: pages 80, 81, 82, 83, 84, 85 **Teacher's Guide:** pages 34, 35

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.2.6: The student knows ways that heat can move from one object to another.
Grade Level Expectations: The student: **2. understands that convection, radiation, and conduction are methods of heat transfer.**
Student Edition: pages 106, 107, 108, 109 **Teacher's Guide:** pages 44, 45 **Skills Workbook:** pages 43, 44

Strand B: Energy
Standard 2: The student understands the interactions of matter and energy.
Benchmark SC.B.2.2.3: The student knows that the limited supply of usable energy sources (e.g., fuels such as coal or oil) places great significance on the development of renewable energy sources.
Grade Level Expectations: The student: **1. knows that the limited supply of usable energy sources (for example, fuels such as coal or oil) places great significance on the development of renewable energy sources.**
Student Edition: pages 106, 107, 108, 109 **Teacher's Guide:** pages 44, 45 **Skills Workbook:** pages 43, 44

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.1: The student understands that the motion of an object can be described and measured.
Grade Level Expectations: The student: **1. uses scientific tools (for example, stopwatch, meter stick, compass) to measure speed, distance, and direction of an object.**
Student Edition: pages 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 12, 13 **Skills Workbook:** pages 11, 12

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.2.2: The student knows that waves travel at different speeds through different materials.
Grade Level Expectations: The student: **1. knows that waves travel at different speeds through different materials.**
Student Edition: pages 166, 167, 168, 169 **Teacher's Guide:** pages 66, 67 **Skills Workbook:** pages 65, 66, 75, 76

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.1: The student recognizes that forces of gravity, magnetism, and electricity operate simple machines.
Grade Level Expectations: The student: **1. understands the relationship between force and distance as it relates to simple machines (for example, levers and fulcrums working to lift objects).**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.2: The student knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object.
Grade Level Expectations: The student: **1. knows that objects do not change their motion unless acted upon by an outside force.**
Student Edition: pages 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 12, 13 **Skills Workbook:** pages 11, 12

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.2: The student knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object.
Grade Level Expectations: The student: **2. understands how friction affects an object in motion.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.3: The student knows that the more massive an object is, the less effect a given force has.
Grade Level Expectations: The student: **1. knows the relationship between the strength of a force and its effect on an object (for example, he greater the force, the greater the change in motion; the more massive the object, the smaller the effect of a given force).**
Student Edition: pages 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 12, 13 **Skills Workbook:** pages 11, 12

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.4: The student knows that the motion of an object is determined by the overall effect of all of the forces acting on the object.
Grade Level Expectations: The student: **1. knows that motion in space is different from motion on Earth due to changes in gravitational force and friction.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.2.4: The student knows that the motion of an object is determined by the overall effect of all of the forces acting on the object.
Grade Level Expectations: The student: **2. understands how inertia, gravity, friction, mass, and force affect motion.**
Student Edition: pages 10, 11, 12, 13, 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 4, 5, 12, 13 **Skills Workbook:** pages 3, 4, 11, 12

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.1: The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil.
Grade Level Expectations: The student: **1. knows that rocks are constantly being formed and worn away.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.3: The student knows that the water cycle is influenced by temperature, pressure, and the topography of the land.
Grade Level Expectations: The student: **1. understands how atmospheric pressure affects the water cycle.**
Student Edition: pages 4, 5, 6, 7, 8, 9 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.4: The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.
Grade Level Expectations: The student: **1. understands how eroded materials are transported and deposited over time in new areas to form new features (for example, deltas, beaches, dunes).**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.4: The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.
Grade Level Expectations: The student: **2. understands that geological features result from the movement of the crust of the Earth (for example, mountains, volcanic islands).**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.2.5: The student knows that some changes in the Earth's surface are due to slow processes and some changes are due to rapid processes.
Grade Level Expectations: The student: **1. understands how the surface of the Earth is shaped by both slow processes (for example, weathering erosion, deposition) and rapid, cataclysmic events (for example, earthquakes, tsunamis, volcanoes).**
Student Edition: pages 32, 33, 34, 35, 36, 37, 166, 167, 168, 169 **Teacher's Guide:** pages 14, 15, 66, 67 **Skills Workbook:** pages 13, 14, 65, 66

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.2.1: The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.
Grade Level Expectations: The student: **1. extends and refines knowledge of ways people can reuse, recycle, and reduce the use of resources to improve and protect the quality of life.**
Student Edition: pages 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 178, 179, 180, 181 **Teacher's Guide:** pages 50, 51, 52, 53, 72, 73 **Skills Workbook:** pages 49, 50, 51, 52, 71, 72

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **1. knows the orbit of the Earth is slightly elliptical and the Earth is closest to the Sun in the Northern Hemisphere in winter.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **2. knows that the angle that the rays of the Sun strike the surface of the Earth determines the amount of energy received and thus the season of the year.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.1: The student knows that the tilt of the Earth on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
Grade Level Expectations: The student: **3. knows the effect of the tilt of the Earth on polar climates.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.2: The student knows that the combination of the Earth's movement and the Moon's own orbit around the Earth results in the appearance of cyclical phases of the Moon.
Grade Level Expectations: The student: **1. knows the relative positions of the Moon, Earth, and Sun during each of the phases of the Moon.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.4: The student knows that the planets differ in size, characteristics, and composition and that they orbit the Sun in our Solar System.
Grade Level Expectations: The student: **1. knows that the planets differ in size, characteristics, and composition and that they orbit the Sun in our Solar System.**
Skills Workbook: pages 41,42

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.2.5: The student understands the arrangement of planets in our Solar System.
Grade Level Expectations: The student: **1. knows the arrangement of the planets and the asteroid belt in our Solar System. Sun and Moon in orbit around the Earth.**
Skills Workbook: pages 41, 42

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.1: The student knows that the human body is made of systems with structures and functions that are related.
Grade Level Expectations: The student: **1. understands how body systems interact (for example, how bones and muscles work together for movement).**
Student Edition: pages 54, 55, 56, 57, 188, 189, 190, 191, 192, 193 **Teacher's Guide:** pages 22, 23, 74, 75 **Skills Workbook:** pages 21, 22, 73, 74

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.4: The student knows that similar cells form different kinds of structures.
Grade Level Expectations: The student: **1. uses magnifying tools to identify similar cells and different kinds of structures.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.4: The student knows that similar cells form different kinds of structures.
Grade Level Expectations: The student: **2. knows the parts of plant and animal cells.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.2.4: The student knows that similar cells form different kinds of structures.
Grade Level Expectations: The student: **3. understands how similar cells are organized to form structures (for example, tissue, organ) in plants and animals.**
Skills Workbook: pages 21, 22

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.2.1: The student knows that many characteristics off an organism are inherited from the parents of the organism, but that other characteristics are learned from an individual's interactions with the environment.
Grade Level Expectations: The student: **1. knows many characteristics of an organism are inherited from the genetic ancestors of the organism (for example, eye color, flower color).**
Student Edition: pages 70, 71, 72, 73, 74, 75, 142, 143, 144, 145, 146, 147 **Teacher's Guide:** pages 30, 31, 58, 59 **Skills Workbook:** pages 29, 30, 57, 58

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.2.1: The student knows that many characteristics off an organism are inherited from the parents of the organism, but that other characteristics are learned from an individual's interactions with the environment.
Grade Level Expectations: The student: **2. knows that some characteristics result from the organism's interactions with the environment (for example, flamingos eat certain crustacean that causes their feathers to be pink).**
Student Edition: pages 96, 97, 98, 99, 100, 101, 142, 143, 144, 145, 146, 147, 194, 195, 196, 197 **Teacher's Guide:** pages 40, 41, 58, 59, 78, 79 **Skills Workbook:** pages 39, 40, 57, 58, 77, 78

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.1: The student knows ways that plants, animals, and protests interact.
Grade Level Expectations: The student: **1. understands the various roles of single-celled organisms in the environment.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.1: The student knows ways that plants, animals, and protests interact.
Grade Level Expectations: The student: **2. knows ways in which protists interact with plants and animals in the environment.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.2: The student knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment.
Grade Level Expectations: The student: **1. understands how changes in the environment affect organisms (for example, some organisms move in, others move out; some organisms survive and reproduce, others die).**
Student Edition: pages 32, 33, 34, 35, 36, 37, 62, 63, 64, 65, 76, 77, 78, 79, 174, 175, 176, 177 **Teacher's Guide:** pages 14, 15, 26, 27, 32, 33, 70, 71 **Skills Workbook:** pages 13, 14, 25, 26, 31, 32, 69, 70

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.2.3: The student knows that green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction.
Grade Level Expectations: The student: **1. knows that green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction.**
Student Edition: pages 38, 39, 40, 41, 86, 87, 88, 89 **Teacher's Guide:** pages 16, 17, 36, 37 **Skills Workbook:** pages 15, 16, 35, 36

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.2.1: The student knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring.
Grade Level Expectations: The student: **1. knows that adaptations to their environment may increase the survival of a species.**
Student Edition: pages 110, 111, 112, 113, 114, 115, 116, 117, 118, 119 **Teacher's Guide:** pages 46, 47, 48, 49 **Skills Workbook:** pages 35, 36, 45, 46, 47, 48

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.1: The student knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.
Grade Level Expectations: The student: **1. understands that although the same scientific investigation may give slightly different results when it is carried out by different persons or at different times or places, the general evidence collected from the investigation should be replicable by others.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **1. understands that scientists use different kinds of investigations (for example, observations of events in nature, controlled experiments) depending on the questions they are trying to answer.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 96, 97, 98, 99, 100, 101, 110, 111, 112, 113, 114, 115, 154, 155, 156, 157 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 40, 41, 46, 47, 62, 63 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 39, 40, 45, 46, 61, 62

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.2: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
Grade Level Expectations: The student: **2. understands the importance of accuracy in conducting measurements, and uses estimation when exact measurements are not possible.**
Student Edition: pages 10, 11, 12, 13, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38,39, 40, 41, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 4, 5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 **Skills Workbook:** pages 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.3: The student knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.
Grade Level Expectations: The student: **1. understands the importance of communication among scientists (for example, informing and becoming informed about scientific investigations in progress and the work of others; exposing ideas to the criticism of others).**
Student Edition: pages 18, 19, 20, 21, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 86, 87, 88, 89 **Teacher's Guide:** pages 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 36, 37 **Skills Workbook:** pages 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 35, 36

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.4: The student knows that to compare and contrast observations and results is an essential skill in science.
Grade Level Expectations: The student: **1. uses strategies to review, compare and contrast, and critique scientific investigations.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 54, 55, 56, 57, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 116, 117, 118, 119 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 32, 33, 34, 35, 48, 49 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 31, 32, 33, 34, 47, 48

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.4: The student knows that to compare and contrast observations and results is an essential skill in science.
Grade Level Expectations: The student: **2. knows that an experiment must be repeated many times and yield constant results before the results are accepted.**
Student Edition: pages 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 10, 11, 12, 13, 14 **Skills Workbook:** pages 9, 10, 11, 12, 13, 14

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.5: The student knows that a model of something is different from the real thing, but can be used to learn something about the real thing.
Grade Level Expectations: The student: **1. uses sketches and diagrams to propose scientific solutions to problems.**
Student Edition: pages 86, 87, 88, 89, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 198, 199, 200, 201 **Teacher's Guide:** pages 36, 37, 50, 51, 52, 53, 80, 81 **Skills Workbook:** pages 35, 36, 49, 50, 51, 52, 79, 80

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.2.5: The student knows that a model of something is different from the real thing, but can be used to learn something about the real thing.
Grade Level Expectations: The student: **2. constructs models to compare objects in science.**
Student Edition: pages 4, 5, 6, 7, 8, 9 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **1. makes a prediction for a new investigation using the data from a previous investigation.**
Student Edition: pages 18, 19, 20, 21, 76, 77, 78, 79 **Teacher's Guide:** pages 8, 9, 32, 33 **Skills Workbook:** pages 7, 8, 31, 32

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.2.1: The student knows that natural events are often predictable and logical.
Grade Level Expectations: The student: **2. understands that change is constantly occurring and uses strategies to analyze different patterns of change.**
Student Edition: pages 4, 5, 6, 7, 8, 9, 18, 19, 20, 21, 32, 33, 34, 35, 36, 37, 96, 97, 98, 99, 100, 101, 160, 161, 162, 163, 164, 165, 174, 175, 176, 177 **Teacher's Guide:** pages 2, 3, 8, 9, 14, 15, 40, 41, 64, 65, 70, 71 **Skills Workbook:** pages 1, 2, 7, 8, 13, 14, 39, 40, 63, 64, 69, 70

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **1. knows areas in which technology has improved human lives (for example, transportation, communication, nutrition, sanitation, health care, entertainment).**
Student Edition: pages 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 90, 91, 92, 93, 106, 107, 108, 109, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 154, 155, 156, 157, 182, 183, 184, 185, 186, 187, 198, 199, 200, 201 **Teacher's Guide:** pages 28, 29, 30, 38, 39, 44, 45, 54, 55, 56, 57, 62, 63, 74, 75, 80, 81 **Skills Workbook:** pages 27, 28, 29, 30, 37, 38, 43, 44, 53, 54, 55, 56, 61, 62, 73, 74, 79, 80

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.1: The student understands that people, alone or in groups, invent new tools to solve problems and do work that affect aspects of life outside of science.
Grade Level Expectations: The student: **2. knows that new inventions often lead to other new inventions and ways of doing things.**
Student Edition: pages 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 102, 103, 104, 105, 154, 155, 156, 157, 182, 183, 184, 185, 186, 187 **Teacher's Guide:** pages 28, 29, 30, 31, 42, 43, 62, 63, 74, 75 **Skills Workbook:** pages 27, 28, 29, 30, 41, 42, 61, 62, 73, 74

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.2: The student knows that data are collected and interpreted in order to explain an event or concept.
Grade Level Expectations: The student: **1. selects appropriate graphical representations (for example, graphs, charts, diagrams) to collect, record, and report data.**
Student Edition: pages 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 80, 81, 82, 83, 84, 85, 116, 117, 118, 119, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 21, 33, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81 **Skills Workbook:** pages 19, 20, 21, 22, 23, 24, 33, 34, 47, 48, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.3: The student knows that before a group of people build something or try something new, they should determine how it may affect other people.
Grade Level Expectations: The student: **1. understands how a solution to one scientific problem can create another problem.**
Student Edition: pages 32, 33, 34, 35, 36, 37, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129 **Teacher's Guide:** pages 14, 15, 20, 27, 28, 29, 30, 31, 51, 52, 53 **Skills Workbook:** pages 13, 14, 25, 26, 27, 28, 29, 30, 49, 50, 51, 52

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.2.4: The student knows that, through the use of scientific processes and knowledge, people can solve problems, make decisions, and form new ideas.
Grade Level Expectations: The student: **1. extends and refines knowledge of ways that, through the use of science processes and knowledge, people can solve problems, make decisions, and form new ideas.**
Student Edition: pages 4, 5, 6, 7, 8, 9, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 102, 103, 104, 105, 106, 107, 108, 109, 124, 125, 126, 127, 128, 129, 178, 179, 180, 181 **Teacher's Guide:** pages 2, 3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 26, 27, 28, 29, 30, 31, 34, 35, 36, 37, 42, 43, 44, 45, 50, 51, 72, 73 **Skills Workbook:** pages 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 41, 42, 43, 44, 49, 50, 71, 72

SRA Skills Handbook: Using Science
correlation to
Florida Grade Level Expectations for the Sunshine State Standards: Science
Grade 6

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.1: The student identifies various ways in which substances differ (e.g., mass, volume, shape, density, texture, and reaction to temperature and light).
Grade Level Expectations: The student: **1. knows ways in which substances differ (for example, mass, volume, shape, density, texture, reaction to heat and light).**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 **Teacher's Guide:** pages 4, 5, 6, 7, 8, 9 **Skills Workbook:** pages 3, 4, 5, 6, 7, 8

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.2: The student understands the difference between weight and mass.
Grade Level Expectations: The student: **1. understands that mass is the amount of material in an object.**
Student Edition: pages 8, 9, 10, 11, 12, 13 **Teacher's Guide:** pages 4, 5 **Skills Workbook:** pages 3, 4

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.3: The student knows that temperature measures the average energy of motion of the particles that make up the substance.
Grade Level Expectations: The student: **1. understands that increasing the average motion of the particles in a substance increases the temperature of the substance.**
Student Edition: pages 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 14, 15 **Skills Workbook:** pages 13, 14

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.3: The student knows that temperature measures the average energy of motion of the particles that make up the substance.
Grade Level Expectations: The student: **2. understands that decreasing the average motion of the particles decreases the temperature.**
Student Edition: pages 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 14, 15 **Skills Workbook:** pages 13, 14

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.3: The student knows that temperature measures the average energy of motion of the particles that make up the substance.
Grade Level Expectations: The student: **3. determines the effect of a change in temperature on common materials (for example, butter, food coloring in water, isopropol alcohol).**
Student Edition: pages 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 14, 15 **Skills Workbook:** pages 13, 14

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.4: The student knows that atoms in solids are close together and do not move around easily; in liquids, atoms tend to move farther apart; in gas, atoms are quite far apart and move around freely.
Grade Level Expectations: The student: **1. understands that matter may exist as solids, liquids, and gases.**
Student Edition: pages 54, 55, 56, 57 **Teacher's Guide:** pages 22, 23 **Skills Workbook:** pages 21, 22

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.4: The student knows that atoms in solids are close together and do not move around easily; in liquids, atoms tend to move farther apart; in gas, atoms are quite far apart and move around freely.
Grade Level Expectations: The student: **2. knows that molecular motion increases from solids to liquids to gases.**
Student Edition: pages 54, 55, 56, 57 **Teacher's Guide:** pages 22, 23 **Skills Workbook:** pages 21, 22

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.5: The student knows the difference between a physical change in a substance (e.g., altering the shape, form, volume, or density) and a chemical change (i.e., producing new substances with different characteristics).
Grade Level Expectations: The student: **1. knows the physical properties of various substances.**
Student Edition: pages 54, 55, 56, 57 **Teacher's Guide:** pages 22, 23 **Skills Workbook:** pages 21, 22

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.5: The student knows the difference between a physical change in a substance (e.g., altering the shape, form, volume, or density) and a chemical change (i.e., producing new substances with different characteristics).
Grade Level Expectations: The student: **2. knows the chemical properties of various substances.**
Student Edition: pages 166, 167, 168, 169 **Teacher's Guide:** pages 66, 67 **Skills Workbook:** pages 65, 66

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.5: The student knows the difference between a physical change in a substance (e.g., altering the shape, form, volume, or density) and a chemical change (i.e., producing new substances with different characteristics).
Grade Level Expectations: The student: **3. knows the difference between a physical and chemical change.**
Student Edition: pages 166, 167, 168, 169 **Teacher's Guide:** pages 66, 67 **Skills Workbook:** pages 65, 66

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.6: The student knows that equal volumes of different substances may have different masses.
Grade Level Expectations: The student: **1. knows that equal volumes of different substances may have different masses.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 **Teacher's Guide:** pages 4, 5, 6, 7 **Skills Workbook:** pages 3, 4, 5, 6

Strand A: The Nature of Matter
Standard 1: The student understands that all matter has observable, measurable properties.
Benchmark SC.A.1.3.6: The student knows that equal volumes of different substances may have different masses.
Grade Level Expectations: The student: **2. uses the water displacement method to find the volume of common items (for example, rocks, nails, marbles).**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.1: The student describes and compares the properties of particles and waves.
Grade Level Expectations: The student: **1. understands that particles and objects my be either neutral or have a positive or negative charge.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.1: The student describes and compares the properties of particles and waves.
Grade Level Expectations: The student: **2. knows the properties of waves (frequency, amplitude, wavelength).**
Student Edition: pages 186, 187, 188, 189, 190, 191 **Teacher's Guide:** pages 76, 77 **Skills Workbook:** pages 75, 76

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.1: The student describes and compares the properties of particles and waves.
Grade Level Expectations: The student: **3. knows how to compare and contrast the properties of particles and waves.**
Student Edition: pages 186, 187, 188, 189, 190, 191 **Teacher's Guide:** pages 76, 77 **Skills Workbook:** pages 75, 76

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.2: The student knows the general properties of the atom (a massive nucleus of neutral neutrons and positive protons surrounded by a cloud of negative electrons) and accepts that single atoms are not visible.
Grade Level Expectations: The student: **1. understands the behavior of charged particles as evidenced by simple static electricity experiments.**
This concept is not covered at this level.

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.2: The student knows the general properties of the atom (a massive nucleus of neutral neutrons and positive protons surrounded by a cloud of negative electrons) and accepts that single atoms are not visible.
Grade Level Expectations: The student: **2. determines the charge of an ion by comparing the number of protons and electrons associated with it.**
Student Edition: pages 18, 19, 20, 21 **Teacher's Guide:** pages 8, 9 **Skills Workbook:** pages 7, 8

Strand A: The Nature of Matter
Standard 2: The student understands the basic principles of atomic theory.
Benchmark SC.A.2.3.3: The student knows that radiation, light, and heat are forms of energy used to cook food, treat diseases, and provide energy.
Grade Level Expectations: The student: **1. knows forms of radiant energy and their applications to everyday life (for example, visible, microwave, radio).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.3.1: The student identifies forms of energy and explains that they can be measured and compared.
Grade Level Expectations: The student: **1. knows different types of energy and the units used to quantify the energy (for example, solar, nuclear, electrical, chemical).**
Student Edition: pages 178, 179, 180, 181 **Teacher's Guide:** pages 72, 73 **Skills Workbook:** pages 26, 71, 72

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.3.1: The student identifies forms of energy and explains that they can be measured and compared.
Grade Level Expectations: The student: **2. understands that energy can be converted from one form to another (for example, solar energy to heat energy).**
Student Edition: pages 62, 63, 64, 65, 178, 179, 180, 181 **Teacher's Guide:** pages 26, 27, 72, 73 **Skills Workbook:** pages 25, 26, 71, 72

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B1.3.2: The student knows that energy cannot be created or destroyed, but only changed from one form to another.
Grade Level Expectations: The student: **1. understands that energy can be changed in form.**
Student Edition: pages 62, 63, 64, 65, 178, 179, 180, 181 **Teacher's Guide:** pages 26, 27, 72, 73 **Skills Workbook:** pages 25, 26, 71, 72

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B1.3.2: The student knows that energy cannot be created or destroyed, but only changed from one form to another.
Grade Level Expectations: The student: **2. uses examples to demonstrate common energy transformations.**
Student Edition: pages 32, 33, 34, 35, 36, 37, 100, 101, 102, 103 **Teacher's Guide:** pages 14, 15, 42, 43 **Skills Workbook:** pages 13, 14, 41, 42

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.3.3: The student knows the various forms in which energy comes to Earth from the Sun (e.g., visible light, infrared, and microwave).
Grade Level Expectations: The student: **1. knows types of radiant energy that come to Earth from the Sun (for example, visible, infrared, ultraviolet).**
This concept is not covered at this level.

Strand B: Energy
Standard 1: The student recognizes that energy may be changed in form with varying efficiency.
Benchmark SC.B.1.3.3: The student knows the various forms in which energy comes to Earth from the Sun (e.g., visible light, infrared, and microwave).
Grade Level Expectations: The student: **2. knows the effect of sunlight on photosynthetic pigments.**
This concept is not covered at this level.

Strand B: Energy
Standard 2: The student understands the interaction of matter and energy.
Benchmark SC.B.2.3.1: The student knows that most events in the universe (e.g., weather changes, moving cars, and the transfer of nervous impulses in the human body) involve some form of energy transfer and that these changes almost always increase the total disorder of the system and its surroundings, reducing the amount of useful energy.
Grade Level Expectations: The student: **1. understands that energy moves through systems.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.3.1: The student knows that the motion of an object can be describe by its position, direction of motion, and speed.
Grade Level Expectations: The student: **1. knows that a change in motion and position can be measured.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.3.1: The student knows that the motion of an object can be describe by its position, direction of motion, and speed.
Grade Level Expectations: The student: **2. knows ways to measure time intervals.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.3.1: The student knows that the motion of an object can be describe by its position, direction of motion, and speed.
Grade Level Expectations: The student: **3. knows ways to estimate speed.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 1: The student understands that types of motion may be described, measured, and predicted.
Benchmark SC.C.1.3.2: The student knows that vibrations in materials set up waves disturbances that spread away from the source (e.g., sound and earthquake waves).
Grade Level Expectations: The student: **1. uses common items (a pebble dropped in water, a marble dropped in sand) to demonstrate that vibrations in materials set up visible disturbances that spread away form a force in all directions.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.3: The student knows that if more than one force acts on an object, then the forces can reinforce or cancel each other, depending on their direction and magnitude.
Grade Level Expectations: The student: **1. recognizes the result of several forces acting on an object.**
Student Edition: pages 140, 141, 142, 143, 144, 145 **Teacher's Guide:** pages 58. 59 **Skills Workbook:** pages 57, 58

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.3: The student knows that if more than one force acts on an object, then the forces can reinforce or cancel each other, depending on their direction and magnitude.
Grade Level Expectations: The student: **2. knows that the net force is dependent on the direction and magnitude of forces acting on a body.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.4: The student knows that simple machines can be used to change the direction or size of a force.
Grade Level Expectations: The student: **1. knows uses of simple machines.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.4: The student knows that simple machines can be used to change the direction or size of a force.
Grade Level Expectations: The student: **2. knows advantages and disadvantages of simple machines.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.5: The student understands that an object in motion will continue at a constant speed and in a straight line until acted upon by a force that an object at rest will remain at rest until acted upon by a force.
Grade Level Expectations: The student: **1. knows that an object at rest will stay at rest unless acted upon by an outside force.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.5: The student understands that an object in motion will continue at a constant speed and in a straight line until acted upon by a force that an object at rest will remain at rest until acted upon by a force.
Grade Level Expectations: The student: **2. knows objects in motion will remain in motion unless acted upon by an outside force.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.7: The student knows that gravity is a universal force that every mass exerts on every other mass.
Grade Level Expectations: The student: **1. knows that gravity is a force that causes an object to fall to the ground.**
This concept is not covered at this level.

Strand C: Force and Motion
Standard 2: The student understands that the types of force that act upon an object and the effect of that force can be described, measured, and predicted.
Benchmark SC.C.2.3.7: The student knows that gravity is a universal force that every mass exerts on every other mass.
Grade Level Expectations: The student: **2. knows that gravity causes an object to have weight.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.1: The student knows that mechanical and chemical activities shape and reshape the Earth's land surface by eroding rock and soil in some areas and depositing them in other areas, sometimes in seasonal layers.
Grade Level Expectations: The student: **1. understands that the surface of the Earth is constantly changing due to mechanical and chemical action.**
Student Edition: pages 26, 27, 28, 29, 30, 31, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 12, 13, 64, 65 **Skills Workbook:** pages 11, 12, 63, 64

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.2: The student knows that over the whole Earth, organisms are growing, dying, and decaying as new organisms are produced by the old ones.
Grade Level Expectations: The student: **1. knows that sedimentary rock may contain fossils of plants, animals, and microbes.**
Student Edition: pages 78, 79, 80, 81 **Teacher's Guide:** pages 34, 35 **Skills Workbook:** pages 33, 34

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.2: The student knows that over the whole Earth, organisms are growing, dying, and decaying as new organisms are produced by the old ones.
Grade Level Expectations: The student: **2. knows ways the systems of Earth change over time and predicts the causes of the change.**
Student Edition: pages 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 64, 65 **Skills Workbook:** pages 63, 64

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.3: The student knows how conditions that exist in one system influence the conditions that exist in other systems.
Grade Level Expectations: The student: **1. knows that different events on the Earth change features on Earth (for example, hurricanes, earthquakes, volcanoes).**
Student Edition: pages 174, 175, 176, 177 **Teacher's Guide:** pages 70, 71 **Skills Workbook:** pages 69, 70

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.4: The student knows the ways in which plants and animals reshape the landscape (e.g., bacteria, fungi, worms, rodents, and other organisms add organic matter to the soil, increasing soil fertility, encouraging plant growth, and strengthening resistance to erosion).
Grade Level Expectations: The student: **1. records seasonal changes of the landscape in a specific area over time.**
This concept is not covered at this level.

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.4: The student knows the ways in which plants and animals reshape the landscape (e.g., bacteria, fungi, worms, rodents, and other organisms add organic matter to the soil, increasing soil fertility, encouraging plant growth, and strengthening resistance to erosion).
Grade Level Expectations: The student: **2. knows ways that plants and animals reconstitute the soil and alter the landscape.**
Student Edition: pages 26, 27, 28, 29, 30, 31, 42, 43, 44, 45, 46, 47, 160, 161, 162, 163, 164 165 **Teacher's Guide:** pages 12, 13, 18, 19, 64, 65 **Skills Workbook:** pages 11, 12, 17, 18, 63, 64

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.4: The student knows the ways in which plants and animals reshape the landscape (e.g., bacteria, fungi, worms, rodents, and other organisms add organic matter to the soil, increasing soil fertility, encouraging plant growth, and strengthening resistance to erosion).
Grade Level Expectations: The student: **3. understands the processes that prevent or cause erosion.**
Student Edition: pages 26, 27, 28, 29, 30, 31 **Teacher's Guide:** pages 12, 13 **Skills Workbook:** pages 11, 12

Strand D: Processes that Shape the Earth
Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.
Benchmark SC.D.1.3.5: The student understands concepts of time and size relating to the interaction of Earth's processes (e.g., lightning striking in a split second as opposed to the shifting of the Earth's plates altering the landscape, distance between atoms measured in Angstrom units as opposed to distance between stars measured in light-years).
Grade Level Expectations: The student: **1. understands the range of time over which natural events occur (for example, lightning in seconds, mountains form over many years).**
Student Edition: pages 26, 27, 28, 29, 30, 31, 104, 105, 106, 107, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 12, 13, 44, 45, 64, 65 **Skills Workbook:** pages 11, 12, 43, 44, 63, 64

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.3.1: The student understands that quality of life is relevant to personal experience.
Grade Level Expectations: The student: **1. knows that a change in the environment affects the quality of life in different ways for different organisms.**
Student Edition: pages 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 44, 45, 46, 47, 64, 65 **Skills Workbook:** pages 43, 44, 45, 46, 63, 64

Strand D: Processes that Shape the Earth
Standard 2: The student understands the need for protection of the natural systems on Earth.
Benchmark SC.D.2.3.2: The student knows the positive and negative consequences of human action on the Earth's systems.
Grade Level Expectations: The student: **1. knows positive and negative consequences of human action on the Earth's systems (for example, farming, transportation, mining, manufacturing).**
Student Edition: pages 26, 27, 28, 29, 30, 31, 82, 83, 84, 85, 86, 87, 108, 109, 110, 111, 112, 113, 152, 153, 154, 155, 156, 157 **Teacher's Guide:** pages 12, 13, 36, 37, 46, 47, 62, 63 **Skills Workbook:** pages 11, 12, 35, 36, 45, 46, 61, 62

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.3.1: The student understands the vast size of our Solar System and the relationship of the planets and their satellites.
Grade Level Expectations: The student: **1. knows the relationship between tides on Earth and the positions of the Moon, the Sun, and Earth.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.3.1: The student understands the vast size of our Solar System and the relationship of the planets and their satellites.
Grade Level Expectations: The student: **2. knows the relative sizes of the planets, Sun, Solar System, galaxy, and universe.**
Student Edition: pages 170, 171, 172, 173 **Teacher's Guide:** pages 68, 69 **Skills Workbook:** pages 67, 68

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E.1.3.1: The student understands the vast size of our Solar System and the relationship of the planets and their satellites.
Grade Level Expectations: The student: **3. understands the positions of the Earth, Moon, and Sun during a solar eclipse and a lunar eclipse.**
This concept is not covered at this level.

Strand E: Earth and Space
Standard 1: The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.
Benchmark SC.E. 1.3.3: The student understands that our Sun is one of many stars in our galaxy.
Grade Level Expectations: The student: **1. understands that our Sun is one of many stars in our galaxy.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.1: The student understands that living things are composed of major systems that function in reproduction, growth, maintenance, and regulation.
Grade Level Expectations: The student: **1. knows ways systems in an organism function and interact (for example, the muscular system provides the ability to move and is supported by the skeletal system when one is present).**
Student Edition: pages 4, 5, 6, 7, 120, 121, 122, 123, 124, 125 **Teacher's Guide:** pages 2, 3, 32, 33, 50, 51 **Skills Workbook:** pages 1, 2, 31, 32, 49, 50

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.1: The student understands that living things are composed of major systems that function in reproduction, growth, maintenance, and regulation.
Grade Level Expectations: The student: **2. understands the differences between growth and maintenance.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.2: The student knows that the structural basic of most organisms is the cell and most organisms are single cells, while come, including humans, are multicellular.
Grade Level Expectations: The student: **1. knows that the cell is the basic unit of structure ad function in all living things.**
Student Edition: pages 4, 5, 6, 7 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.2: The student knows that the structural basic of most organisms is the cell and most organisms are single cells, while come, including humans, are multicellular.
Grade Level Expectations: The student: **2. knows that there is great diversity among unicellular organisms.**
Student Edition: pages 104, 105, 106, 107 **Teacher's Guide:** pages 44, 45 **Skills Workbook:** pages 43, 44

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.2: The student knows that the structural basic of most organisms is the cell and most organisms are single cells, while come, including humans, are multicellular.
Grade Level Expectations: The student: **3. knows the basic processes that occur in cells.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.3: The student knows that in multicellular organisms cells grow and divide to make more cells in order to form and repair various organs and tissues.
Grade Level Expectations: The student: **1. knows that in multicellular organisms cells grow and divide to form and repair various organs and tissues.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.3: The student knows that in multicellular organisms cells grow and divide to make more cells in order to form and repair various organs and tissues.
Grade Level Expectations: The student: **2. understands cells reproduce to ensure the growth and repair of tissue.**
Student Edition: pages 120, 121, 122, 123, 124, 125 **Teacher's Guide:** pages 50, 51 **Skills Workbook:** pages 49, 50

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.4: The student knows that the levels of structural organization for function in living things include cells, tissues, organs, systems, and organisms.
Grade Level Expectations: The student: **1. knows that the levels of structural organization in living things include cells, tissues, organs, systems, and organisms.**
Student Edition: pages 4, 5, 6, 7 **Teacher's Guide:** pages 2, 3 **Skills Workbook:** pages 1, 2

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.5: The student explains how the life functions or organisms are related to what occurs within the cells.
Grade Level Expectations: The student: **1. understands that there are structures with particular functions that are unique to certain types of cells (for example, plants cells have cell walls, animal cells do not).**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.5: The student explains how the life functions or organisms are related to what occurs within the cells.
Grade Level Expectations: The student: **2. understands the process of osmosis and diffusion.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.5: The student explains how the life functions or organisms are related to what occurs within the cells.
Grade Level Expectations: The student: **3. knows the essential functions in cells.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.6: The student knows that the cells with similar functions have similar structures, whereas those with different structures have different functions.
Grade Level Expectations: The student: **1. uses or constructs models of plant and animal cells to identify the basic structures of each.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.6: The student knows that the cells with similar functions have similar structures, whereas those with different structures have different functions.
Grade Level Expectations: The student: **2. knows the functions of structures in plant and animal cells.**
This concept is not covered at this level.

Strand F: Processes of Life
Standard 1: The student describes patterns of structure and function in living things.
Benchmark SC.F.1.3.7: The student knows that behavior is a response to the environment and influences growth, development, maintenance, and reproduction.
Grade Level Expectations: The student: **1. knows that behavior is a response to the environment.**
Student Edition: pages 38, 39, 40, 41, 146, 147, 148, 149, 150, 151 **Teacher's Guide:** pages 16, 17, 60, 61 **Skills Workbook:** pages 15, 16, 59, 60

Strand F: Processes of Life
Standard 2: The student understands the process and importance of genetic diversity.
Benchmark SC.F.2.3.3: The student knows that generally organisms in a population live long enough to reproduce because they have survival characteristics.
Grade Level Expectations: The student: **1. knows adaptations that aid in species survival (for example, protective coloration, hibernation, delayed implantation).**
Student Edition: pages 58, 59, 60, 61 **Teacher's Guide:** pages 24, 25 **Skills Workbook:** pages 23, 24

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.3.3: The student understands that the classification of living things is based on a given set of criteria and is a too for understanding biodiversity and interrelationships.
Grade Level Expectations: The student: **1. understands the living things are sorted for convenience and identification.**
Student Edition: pages 50, 51, 52, 53 **Teacher's Guide:** pages 20, 21 **Skills Workbook:** pages 19, 20

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.3.3: The student understands that the classification of living things is based on a given set of criteria and is a too for understanding biodiversity and interrelationships.
Grade Level Expectations: The student: **2. understands that the structural characteristics among animals and plants are more alike as organisms are closer to the same kind of species within a classification level.**
Student Edition: pages 50, 51, 52, 53 **Teacher's Guide:** pages 20, 21 **Skills Workbook:** pages 19, 20

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.3.4: The student knows that the interactions of organisms with each other and with the non-living parts of the environments result in the flow of energy and the cycling of matter throughout the system.
Grade Level Expectations: The student: **1. knows the nonliving (abiotic) and living (biotic) aspects of an ecosystem.**
Student Edition: pages 42, 43, 44, 45, 46, 47, 104, 105, 106, 107, 192, 193, 194, 195 **Teacher's Guide:** pages 18, 19, 44, 45, 78, 79 **Skills Workbook:** pages 17, 18, 43, 44, 77, 78

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.3.4: The student knows that the interactions of organisms with each other and with the non-living parts of the environments result in the flow of energy and the cycling of matter throughout the system.
Grade Level Expectations: The student: **2. understands how the components of an ecosystem interact.**
Student Edition: pages 58, 59, 60, 61, 92, 93, 94, 95, 96, 97, 104, 105, 106, 107, 196, 197, 198, 199, 200, 201 **Teacher's Guide:** pages 24, 25, 40, 41, 44, 45, 80, 81 **Skills Workbook:** pages 23, 24, 39, 40, 43, 44, 79, 80

Strand G: How Living Things Interact with Their Environment
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.
Benchmark SC.G.1.3.4: The student knows that the interactions of organisms with each other and with the non-living parts of the environments result in the flow of energy and the cycling of matter throughout the system.
Grade Level Expectations: The student: **3. understands that food chains show specific trophic relationships and food webs are used to illustrate interrelationships of trophic levels.**
This concept is not covered at this level.

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.3.1: The student knows that some resources are renewable and others are nonrenewable.
Grade Level Expectations: The student: **1. knows renewable and nonrenewable energy sources.**
Student Edition: pages 178, 179, 180, 181 **Teacher's Guide:** pages 72, 73 **Skills Workbook:** pages 71, 72

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.3.2: The student knows that all biotic and abiotic factors are interrelated and that is one factor is changed or removed, it impacts the availability of other resources within the system.
Grade Level Expectations: The student: **1. distinguishes between biotic and abiotic factors in the environment.**
Student Edition: pages 42, 43, 44, 45, 46, 47, 192, 193, 194, 195 **Teacher's Guide:** pages 18, 19, 78, 79 **Skills Workbook:** pages 17, 18, 77, 78

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.3.3: The student knows that a brief change in the limited resources of an ecosystem may alter the size of a population or the average size of individual organisms and that long-term change may result in the elimination of animal and plant populations inhabiting the Earth.
Grade Level Expectations: The student: **1. understands that changes in the environment may influence the size, number, or diversity of organisms in an area.**
Student Edition: pages 58, 59, 60, 61, 82, 83, 84, 85, 86, 87, 92, 93, 94, 95, 96, 97, 104, 105, 106, 107, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 24, 25, 36, 37, 40, 41, 44, 45, 64, 65 **Skills Workbook:** pages 23, 24, 35, 36, 39, 40, 43, 44, 63, 64

Strand G: How Living Things Interact with Their Environment
Standard 2: The student understands the consequences of using limited natural resources.
Benchmark SC.G.2.3.4: The student understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.
Grade Level Expectations: The student: **1. understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in the ecosystem.**
Student Edition: pages 58, 59, 60, 61, 82, 83, 84, 85, 86, 87, 92, 93, 94, 95, 96, 97, 108, 109, 110, 111, 112, 113, 152, 153, 154, 155, 156, 157 **Teacher's Guide:** pages 24, 25, 36, 37, 40, 41, 46, 47, 62, 63 **Skills Workbook:** pages 23, 24, 35, 36, 39, 40, 45, 46, 61, 62

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.1: The student knows that scientific knowledge is subject to modification as new information challenges prevailing theories and as a new theory leads to looking at old observations in a new way.
Grade Level Expectations: The student: **1. knows ways scientific theories may change with new discoveries.**
Student Edition: pages 22, 23, 24, 25, 66, 67, 68, 69, 136, 137, 138, 139 **Teacher's Guide:** pages 10, 11, 28, 29, 56, 57 **Skills Workbook:** pages 9, 10, 27, 28, 55, 56

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.1: The student knows that scientific knowledge is subject to modification as new information challenges prevailing theories and as a new theory leads to looking at old observations in a new way.
Grade Level Expectations: The student: **2. understands that new technology may lead to new discoveries.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 68, 69, 126, 127, 128, 129, 136, 137, 138, 139 **Teacher's Guide:** pages 26, 27, 28, 29, 52, 53, 56, 57 **Skills Workbook:** pages 25, 26, 27, 28, 51, 52, 55, 56

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.2: The student knows that the study of the events that led scientists to discoveries can provide information about the inquiry process and its effects.
Grade Level Expectations: The student: **1. uses systematic, scientific processes to develop and test hypotheses.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 70, 71, 72, 73 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 30, 31 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.2: The student knows that the study of the events that led scientists to discoveries can provide information about the inquiry process and its effects.
Grade Level Expectations: The student: **2. knows that the scientific method is a process that involves a logical and empirical but flexible approach to problem solving.**
Student Edition: pages 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 70, 71, 72, 73 **Teacher's Guide:** pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 30, 31 **Skills Workbook:** pages 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.3: The student knows that the science disciplines differ from one another in topic, techniques, and outcomes but that they share a common purpose, philosophy, and enterprise.
Grade Level Expectations: The student: **1. knows that the disciplines of science provide in depth study and information that becomes available for all to share and use.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 70, 71, 72, 73 **Teacher's Guide:** pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 30, 31 **Skills Workbook:** pages 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.4: The student knows that accurate record keeping, openness, and replication are essential to maintaining an investigator's credibility with other scientists and society.
Grade Level Expectations: The student: **1. knows that accurate record keeping, openness, and replication are essential to maintaining an investigator's credibility with other scientists and society.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 70, 71, 72, 73 **Teacher's Guide:** pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 30, 31 **Skills Workbook:** pages 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.4: The student knows that accurate record keeping, openness, and replication are essential to maintaining an investigator's credibility with other scientists and society.
Grade Level Expectations: The student: **2. uses accurate records, openness, and replication of experiments to ensure credibility.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 70, 71, 72, 73 **Teacher's Guide:** pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 30, 31 **Skills Workbook:** pages 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.5: The student knows that a change in one or more variables may alter the outcome of an investigation.
Grade Level Expectations: The student: **1. understands the importance of the control in an experiment.**
Student Edition: pages 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 12, 13, 14, 15, 18, 19 **Skills Workbook:** pages 11, 12, 13, 14, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.5: The student knows that a change in one or more variables may alter the outcome of an investigation.
Grade Level Expectations: The student: **2. knows how to identify the independent and dependent variables in an experiment.**
Student Edition: pages 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 12, 13, 14, 15, 18, 19 **Skills Workbook:** pages 11, 12, 13, 14, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.5: The student knows that a change in one or more variables may alter the outcome of an investigation.
Grade Level Expectations: The student: **3. uses appropriate experimental design, with consideration for rules, time, and materials required to solve a problem.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47 **Teacher's Guide:** pages 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 **Skills Workbook:** pages 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.6: The student recognizes the scientific contributions that are made by individuals of diverse backgrounds, interests, talents, and motivations.
Grade Level Expectations: The student: **1. knows selected scientists and their accomplishments.**
Student Edition: pages 22, 23, 24, 25, 140, 141, 142, 143, 144, 145 **Teacher's Guide:** pages 10, 11, 58, 59 **Skills Workbook:** pages 9, 10, 57, 58

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.6: The student recognizes the scientific contributions that are made by individuals of diverse backgrounds, interests, talents, and motivations.
Grade Level Expectations: The student: **2. knows that scientists who make contributions to knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.**
Student Edition: pages 22, 23, 24, 25, 66, 67, 68, 69, 92, 93, 94 95, 96, 97, 140, 141, 142, 143, 144, 145 **Teacher's Guide:** pages 10, 11, 28, 29, 40, 41, 58, 59 **Skills Workbook:** pages 9, 10, 27, 28, 39, 40, 57, 58

Strand H: The Nature of Science
Standard 1: The student uses the scientific processes and habits of mind to solve problems.
Benchmark SC.H.1.3.7: The student knows that when similar investigations give different results, the scientific challenge is to verify whether the differences are significant by further study.
Grade Level Expectations: The student: **1. uses criteria necessary to determine the veracity of the data.**
Student Edition: pages 8, 9, 10, 11, 12, 13, 22, 23, 24, 25, 32, 33, 34, 35, 36, 37, 70, 71, 72, 73 **Teacher's Guide:** pages 4, 5, 10, 11, 14, 15, 30, 31 **Skills Workbook:** pages 3, 4, 9, 10, 13, 14, 29, 30

Strand H: The Nature of Science
Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.
Benchmark SC.H.2.3.1: The student recognizes that patterns exist within and across systems.
Grade Level Expectations: The student: **1. knows that most natural events occur in patterns.**
Student Edition: pages 4, 5, 6, 7, 160, 161, 162, 163, 164, 165 **Teacher's Guide:** pages 2, 3, 64, 65 **Skills Workbook:** pages 1, 2, 63, 64

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.1: The student knows that science ethics demand that scientists must not knowingly subject coworkers, students, the neighborhood, or the community to health or property risks.
Grade Level Expectations: The student: **1. knows that science ethics demand that scientists must not knowingly subject coworkers, students, the neighborhood, or the community to health or property risks.**
Student Edition: pages 58, 59, 60, 61 **Teacher's Guide:** pages 24, 25 **Skills Workbook:** pages 23, 24

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.1: The student knows that science ethics demand that scientists must not knowingly subject coworkers, students, the neighborhood, or the community to health or property risks.
Grade Level Expectations: The student: **2. uses appropriate procedures for safety in the classroom, home, and community.**
Student Edition: pages 14, 15, 16, 17, 32, 33, 34, 35, 36, 37 **Teacher's Guide:** pages 6, 7, 14, 15 **Skills Workbook:** pages 5, 6, 13, 14

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.2: The student knows that specific care must be taken in using animals in scientific research.
Grade Level Expectations: The student: **1. knows that appropriate care, safe practices, and ethical treatment are necessary when animals are involved in scientific research.**
Student Edition: pages 58, 59, 60, 61, 70, 71, 72, 73 **Teacher's Guide:** pages 24, 25, 30, 31 **Skills Workbook:** pages 23, 24, 29, 30

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.3: The student knows that in research involving human subjects, the ethics of science require that potential subjects be fully informed about the risks and benefits associated with the research and of their right to refuse to participate.
Grade Level Expectations: The student: **2. knows that in research involving human subjects, the ethics of science require that potential subjects be fully informed about the risks and benefits associated with the research and of their right to refuse to participate.**
This concept is not covered at this level.

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.4: the student knows that technological design should require taking into account constraints such as natural laws, the properties of the materials used, and economic, political, social, ethical, and aesthetic values.
Grade Level Expectations: The student: **1. knows some ways that scientific discoveries create new technologies that affect society (for example, geographic information systems, gene mapping, electronic communication).**
Student Edition: pages 66, 67, 68, 69, 100, 101, 102, 103, 126, 127, 128, 129, 136, 137, 138, 139, 182, 183, 184, 185 **Teacher's Guide:** pages 28, 29, 42, 43, 52, 53, 56, 57, 74, 75 **Skills Workbook:** pages 27, 28, 41, 42, 51, 52, 55, 56, 73, 74

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.5: The student understands that contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times and are an intrinsic part of the development of human culture.
Grade Level Expectations: The student: **1. knows that the advancement of science, mathematics, and technology is ongoing and influenced by a diverse population of scientists.**
Student Edition: pages 22, 23, 24, 25, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 78, 79, 80, 81, 120, 121, 122, 123, 124, 125, 182, 183, 184, 185 **Teacher's Guide:** pages 10, 11, 24, 25, 26, 27, 28, 29, 30, 31, 34, 35, 50, 51, 74, 75 **Skills Workbook:** pages 9, 10, 23, 24, 25, 26, 27, 28, 29, 30, 33, 34, 49, 50, 73, 74

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.6: The student knows that no matter who does science and mathematics or invents things, or when r where they do it, the knowledge and technology that result can eventually become available to everyone.
Grade Level Expectations: The student: **1. knows that scientific contributions may result in diverse technological products.**
Student Edition: pages 62, 63, 64, 65, 66, 67, 68, 69, 126, 127, 128, 129 **Teacher's Guide:** pages 26, 27, 28, 29, 52, 53 **Skills Workbook:** pages 25, 26, 27, 28, 51, 52

Strand H: The Nature of Science
Standard 3: The student understands that science, technology, and society are interwoven and interdependent.
Benchmark SC.H.3.3.7: The student knows that consumers speed up and extend people's ability to collect, sort, and analyze data; prepare research reports; and share data and ideas with others.
Grade Level Expectations: The student: **1. use a computer to collect, analyze, and report scientific findings.**
Student Edition: pages 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 170, 171, 172, 173 **Teacher's Guide:** pages 54, 55, 56, 57, 68, 69 **Skills Workbook:** pages 53, 54, 55, 56, 67, 68