Grade Level	Performance Expectation	Activate Learning **Prime**
Kindergarten	**K: Forces and Interactions: Pushes and Pulls** K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	**Unit: Pushes and Pulls** ***Cluster: Pushes and Pulls Everywhere*** Lesson: Motion Walk Lesson: Drawing Objects in Motion Lesson: Starting Things Moving Lesson: Turns, Curves, and Zigzags Lesson: Big and Small Pushes and Pulls ***Cluster: Using Pushes and Pulls Lessons*** Lesson: Playing with Collisions Lesson: Playground Motion
	K: Forces and Interactions: Pushes and Pulls K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	**Unit: Pushes and Pulls** ***Cluster: Using Pushes and Pulls Lessons*** Lesson: Solving Motion Challenges
	K: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	**Unit: Plants and Animals** ***Cluster: Animals and Where They Live*** Lesson: What Is an Animal? Lesson: Our Animal Library Lesson: What Do Animals Need? Lesson: What Does My Animal Eat? ***Cluster: Plants Around Us Lessons*** Lesson: Meet Our Class Plant Lesson: What Do Plants Need? Lesson: Plants in Our World ***Cluster: People and Their Needs*** Lesson: What People Need
	K: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	**Unit: Plants and Animals** ***Cluster: Animals and Where They Live*** Lesson: Animals in the Wild ***Cluster: People and Their Needs***

		Lesson: Neighborhood Walk Lesson: Making Our Surroundings Better **Unit: Animal Homes Design Project Lessons** ***Cluster: Animal Homes Design Project*** Lesson: Looking at Animal Homes Lesson: Researching Animal Homes Lesson: Making Animal Homes Lesson: Presenting Animal Homes
	K: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	**Unit: Plants and Animals** ***Cluster: Animals and Where They Live*** Lesson: Where Does My Animal Live? Lesson: Where My Animals Gets Air and Water Lesson: What Does My Animal Eat? Lesson: Animals in the Wild **Unit: Animal Homes Design Project Lessons** ***Cluster: Animal Homes Design Project*** Lesson: Looking at Animal Homes Lesson: Researching Animal Homes Lesson: Making Animal Homes Lesson: Presenting Animal Homes
	K: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	**Unit: Plants and Animals** ***Cluster: People and Their Needs*** Lesson: People Use Resources Lesson: Making Choices Lesson: Making Our Surroundings Better
	K: Weather and Climate K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	**Unit: Tracking the Weather** ***Cluster: Observing the Weather*** Lesson: Sun's Light, Sun's Heat
	K: Weather and Climate K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	**Unit: Tracking the Weather** ***Cluster: Observing the Weather*** Lesson: Making a Sun Shield
	K: Weather and Climate	**Unit: Tracking the Weather** ***Cluster: Observing the Weather***

	K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.	Lesson: What Is Weather? Lesson: What Am I Wearing? Lesson: Weather Calendar Lesson: Cloud and Precipitation Observations Lesson: Observing Evidence of Wind ***Cluster: Weather Over a Year*** Lesson: Weather Data for a Month Lesson: Fall Weather Data Lesson: Seasonal Weather Books Lesson: Winter Weather Data Lesson: Spring Weather Data
	K: Weather and Climate K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	**Unit: Tracking the Weather** ***Cluster: Weather Over a Year*** Lesson: Severe Weather
	K-2 Engineering Design K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	**Unit: Animal Homes Design Project Lessons** ***Cluster: Animal Homes Design Project*** Lesson: Looking at Animal Homes Lesson: Researching Animal Homes **Unit: Tracking the Weather** ***Cluster: Observing the Weather*** Lesson: Making a Sun Shield
	K-2 Engineering Design K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	**Unit: Animal Homes Design Project Lessons** ***Cluster: Animal Homes Design Project*** Lesson: Making Animal Homes Lesson: Presenting Animal Homes **Unit: Tracking the Weather** ***Cluster: Observing the Weather*** Lesson: Making a Sun Shield
	K-2 Engineering Design K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	**Unit: Animal Homes Design Project Lessons** ***Cluster: Animal Homes Design Project*** Lesson: Presenting Animal Homes

		Unit: Tracking the Weather ***Cluster: Observing the Weather*** Lesson: Making a Sun Shield
1st Grade	**1: Waves: Light and Sound** 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	**Unit: Light and Sound** ***Cluster: What Is Sound? Lessons*** Lesson: Sound Detectives Lesson: Sound Vibrations ***Cluster: How Sound Travels Lessons*** Lesson: Sound Travels Through Materials Lesson: Sound Travels Through Air Lesson: Cup and String Telephones Lesson: Sound and Hearing
	1: Waves: Light and Sound 1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.	**Unit: Light and Sound** ***Cluster: Light All Around Us Lessons*** Lesson: Light Around Us Lesson: Dark and Light Lesson: Light Travels
	1: Waves: Light and Sound 1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	**Unit: Light and Sound** ***Cluster: Light Meeting Materials Lessons*** Lesson: Light Investigations Lesson: Blocking and Reflecting Light Lesson: Light and Shadow Lesson: Prisms and Rainbows
	1: Waves: Light and Sound 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	**Unit: Light and Sound** ***Cluster: Communications Project for Lower Elementary Lessons*** Lesson: Exploring Communication Devices Lesson: Making a Simple Communication Device Lesson: Building a New Communication Device Lesson: Testing and Demonstrating Devices
	1: Structure, Function, and Information Processing 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	**Unit: Examining Living Things** ***Cluster: Living Things Lessons*** Lesson: What Is a Biologist? Lesson: Fall Wild Walk

		Cluster: Plant Parts Lessons Lesson: Exploring Plant Parts Lesson: Examining Roots Lesson: Experimenting with Stems Lesson: Studying Leaves Lesson: Inspecting Flowers Lesson: Finding Seeds in Fruit Lesson: Sprouting New Plants ***Cluster: Animal Parts Lessons*** Lesson: Animal Body Parts Lesson: Snails: Parts and Functions Lesson: Crickets: Parts and Functions Lesson: Fish: Parts and Functions Lesson: Invent an Animal ***Cluster: Nature-Inspired Inventions*** Lesson: Exploring Nature-Inspired Inventions Lesson: Testing a Nature-Inspired Invention Lesson: Building the Tallest Tower
	1: Structure, Function, and Information Processing 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive	**Unit: Examining Living Things** ***Cluster: Animal Family Lessons*** Lesson: Animal Family Research Lesson: Animal Family Books
	1: Structure, Function, and Information Processing 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents	**Unit: Examining Living Things** ***Cluster: Animal Family Lessons*** Lesson: Comparing Animal Parents and Offspring
	1: Space Systems: Patterns and Cycles 1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.	**Unit: Watching the Sky** ***Cluster: Sky Objects Lessons*** Lesson: Objects in the Sky Lesson: Day and Night Sky Lesson: Watching the Sun During a Day Lesson: Moon Detectives Lesson: Star Detectives

	1: Space Systems: Patterns and Cycles 1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.	**Unit: Watching the Sky** ***Cluster: Length of Day Lessons*** Lesson: What Are Sunrise and Sunset? Lesson: Fall Sunrise and Sunset Patterns Lesson: Winter Sunrise and Sunset Patterns Lesson: Spring Sunrise and Sunset Patterns Lesson: Planning an Event
	K-2 Engineering Design K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	**Unit: Light and Sound** *Cluster: Communications Project for Lower Elementary Lessons* Lesson: Exploring Communication Devices Lesson: Making a Simple Communication Device Lesson: Building a New Communication Device Lesson: Testing and Demonstrating Devices
	K-2 Engineering Design K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	**Unit: Light and Sound** *Cluster: Communications Project for Lower Elementary Lessons* Lesson: Building a New Communication Device Lesson: Testing and Demonstrating Devices
	K-2 Engineering Design K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	**Unit: Light and Sound** *Cluster: Communications Project for Lower Elementary Lessons* Lesson: Making a Simple Communication Device
	2: Structure and Properties of Matter 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	**Unit: Solids, Liquids, and Gases** ***Cluster: Objects and Materials Lessons*** Lesson: Properties of Objects ***Cluster: Properties of Solids and Liquids Lessons*** Lesson: A Walk Outside Lesson: Comparing Liquids
	2: Structure and Properties of Matter 2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	**Unit: Solids, Liquids, and Gases** ***Cluster: Objects and Materials Lessons*** Lesson: What Are Things Made Of? ***Cluster: Properties of Solids and Liquids Lessons***

2nd Grade		Lesson: Comparing Liquids Lesson: Changing Solids
	2: Structure and Properties of Matter 2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	**Unit: Solids, Liquids, and Gases** ***Cluster: Objects and Materials Lessons*** Lesson: Building a New Object
	2: Structure and Properties of Matter 2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	**Unit: Solids, Liquids, and Gases** ***Cluster: Heating and Cooling Lessons*** Lesson: Water Changes Lesson: Reversible and Irreversible Changes
	2: Interdependent Relationships in Ecosystems 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.	**Unit: Diversity in Habitats** ***Cluster: Plants Relationships Lessons*** Lesson: Plant Needs Investigation
	2: Interdependent Relationships in Ecosystems 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*	**Unit: Diversity in Habitats** ***Cluster: Plants Relationships Lessons*** Lesson: Pollination Partnerships Lesson: Seed Dispersal
	2: Interdependent Relationships in Ecosystems 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.	**Unit: Diversity in Habitats** ***Cluster: Sharing Habitats*** Lesson: Living in My Habitat Lesson: Sharing an Oak Tree Habitat Lesson: Diversity in Owl Food Lesson: Sharing a Saguaro Habitat Lesson: Sharing a Kelp Forest Habitat Lesson: Diversity Walk
	2: Earth's Systems: Processes that Shape the Earth 2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly	**Unit: Land, Water, and Wind** ***Cluster: Changes to the Shape of the Land Lessons*** Lesson: Water Can Change the Land Lesson: Wind Can Change the Land Lesson: Rapid Changes to the Land
	2: Earth's Systems: Processes that Shape the Earth 2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	**Unit: Land, Water, and Wind** ***Cluster: Changes to the Shape of the Land Lessons*** Lesson: Solutions to Water Erosion Lesson: Wind Can Change the Land

	2: Earth's Systems: Processes that Shape the Earth 2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.	**Unit: Land, Water, and Wind** ***Cluster: Landforms and Bodies of Water Lessons*** Lesson: Looking at Earth's Surface: Landforms Lesson: Looking at Earth's Surface: Bodies of Water Lesson: Modeling Landforms and Bodies of Water Lesson: Mapping Landforms and Bodies of Water
	2: Earth's Systems: Processes that Shape the Earth 2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid	**Unit: Land, Water, and Wind** ***Cluster: Landforms and Bodies of Water Lessons*** Lesson: Looking at Earth's Surface: Bodies of Water Lesson: Mapping Landforms and Bodies of Water
	K-2 Engineering Design K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	**Unit: Land, Water, and Wind** ***Cluster: Changes to the Shape of the Land Lessons*** Lesson: Solutions to Water Erosion Lesson: Wind Can Change the Land
	K-2 Engineering Design K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs	**Unit: Land, Water, and Wind** ***Cluster: Changes to the Shape of the Land Lessons*** Lesson: Solutions to Water Erosion
	3: Forces and Interactions 3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	**Unit: Forces in Action** ***Cluster: Force and Motion Lessons*** Lesson: Forces: Starting Things Moving Lesson: Forces have Strength and Direction Lesson: Examining Forces Lesson: Gravity Is a Force Lesson: Balanced and Unbalanced Forces
	3: Forces and Interactions 3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion	**Unit: Forces in Action** ***Cluster: Force and Motion Lessons*** Lesson: Predicting Motion
	3: Forces and Interactions 3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other	**Unit: Forces in Action** ***Cluster: Magnetic Forces Lessons*** Lesson: Magnets Interacting with Materials Lesson: Forces of Magnets Through Materials Lesson: Magnets on Magnets ***Cluster: Static Electricity Lessons***

3rd grade		Lesson: Discovering Static Electricity Lesson: Static Electricity Tests
	3: Forces and Interactions 3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.	**Unit: Forces in Action** ***Cluster: Magnetic Forces Lessons*** Lesson: Designing Magnetic Devices Lesson: Building Magnetic Devices Lesson: Sharing Magnetic Devices
	3: Interdependent Relationships in Ecosystems 3-LS2-1. Construct an argument that some animals form groups that help members survive.	**Unit: Changing Environments** ***Cluster: Survival in Different Environments*** Lesson: Exploring Behaviors
	3: Interdependent Relationships in Ecosystems 3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	**Unit: Changing Environments** ***Cluster: Learning from Fossils*** Lesson: Backyard Discovery Lesson: What Can Fossils Tell Us? Lesson: Fossils Tell of Changes
	3: Interdependent Relationships in Ecosystems 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	**Unit: Changing Environments** ***Cluster: Survival in Different Environments*** Lesson: Environmental Matchup Lesson: Exploring Behaviors Lesson: How a Bird Feeds Lesson: How a Cactus Survives ***Cluster: Consequences of Variation*** Lesson: Does Variation in Color Matter
	3: Interdependent Relationships in Ecosystems 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	**Unit: Changing Environments** ***Cluster: Solutions to Change*** Lesson: Effects of Environmental Change Lesson: Evaluating Solutions to Environmental Change
	3: Inheritance and Variation of Traits: Life Cycles and Traits 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	**Unit: Patterns in Life Cycles** ***Cluster: Life Cycles Introduction*** Lesson: Introduction to Life Cycles Lesson: Comparing Life Cycles

		Cluster: Seed to Seed Study Lesson: Planting Seeds Lesson: Transplanting Sprouts Lesson: Looking at Flowers Lesson: Observing Fruit and Seeds ***Cluster: Butterflies Study*** Lesson: Baby Caterpillars Lesson: Larger Caterpillars Lesson: Chrysalises Lesson: Adult Butterflies Lesson: Generations
	3: Inheritance and Variation of Traits: Life Cycles and Traits 3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	**Unit: Inheritance and Variation** ***Cluster: Inheriting Traits Lessons*** Lesson: Are All Dogs Alike? Lesson: Where Do Traits Come From? Lesson: Variation from Parents ***Cluster: Consequences of Variation*** Lesson: Does Variation in Color Matter?
	3: Inheritance and Variation of Traits: Life Cycles and Traits 3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.	**Unit: Inheritance and Variation** ***Cluster: Environment and Variation Lessons*** Lesson: Variation in Plants Lesson: Variation in Animals ***Cluster: Consequences of Variation*** Lesson: Variation and Survival
	3: Inheritance and Variation of Traits: Life Cycles and Traits 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	**Unit: Inheritance and Variation** ***Cluster: Consequences of Variation*** Lesson: Variation and Survival
	3: Weather and Climate 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	**Unit: Weather and Climate** ***Cluster: What Is Weather? Lessons*** Lesson: Describing Weather Lesson: Where Does Weather Happen?

		Lesson: Weather in Different Places? ***Cluster: Weather Data Lessons*** Lesson: Making Weather Tools Lesson: Observing and Measuring Weather Lesson: Analyzing Weather Data Lesson: Making Weather Maps
	3: Weather and Climate 3-ESS2-2. Obtain and combine information to describe climates in different regions of the world	**Unit: Weather and Climate** ***Cluster: Climate Lessons*** Lesson: What Is a Climate Zone? Lesson: Identifying Mystery Climates Lesson: Discovering Climate Patterns
	3: Weather and Climate 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	**Unit: Weather and Climate** ***Cluster: Severe Weather Lessons*** Lesson: What Is Severe Weather? Lesson: Predicting Severe Weather Lesson: Reducing Severe Weather Effects
	3-5: Engineering Design 3-5-ETS1-1: Define a simple design problem reflecting a need or want that includes specific criteria for success and constraints on materials, time or cost.	**Unit: Forces in Action** ***Cluster: Magnetic Forces Lessons*** Lesson: Designing Magnetic Devices Lesson: Building Magnetic Devices Lesson: Sharing Magnetic Devices **Unit: Weather and Climate** Lesson: Reducing Severe Weather Effects (this lessons requires students to define a problem, research ways to reduce the effects of a problem and create a design to reduce the effects.)
	4: Energy 4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object.	**Unit: Energy Transfers** ***Cluster: Motion Energy Transfers Lessons*** Lesson: Energy of Moving Objects Lesson: Colliding Marbles
	4: Energy 4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**Unit: Energy Transfers** ***Cluster: Changing Energy Lessons*** Lesson: Energy Is All Around Us

4th Grade		Lesson: Forms of Energy Lesson: Energy Transfer in Toys ***Cluster: Light Energy Lessons*** Lesson: Light Is Energy Lesson: Modeling Traveling Light ***Cluster: Putting Energy to Work Lessons*** Lesson: Inventions with Energy **Unit: Technology and Energy** ***Cluster: Using Electric Current*** Lesson: Light a Bulb Lesson: More Light Connections Lesson: Circuits for Other Effects Lesson: Conductors and Insulators Lesson: Recognizing Electrical Hazards ***Cluster: Electrical Circuits Design Project*** Lesson: Creating a Bulb Holder Lesson: Circuits and Schematics Lesson: Designing Circuits Lesson: Building and Refining Circuits Lesson: Demonstrating Circuits **Unit: Waves** ***Cluster: Different Kinds of Waves Lessons*** Lesson: Sound Travels in Waves
	4: Energy 4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide.	**Unit: Energy Transfers** ***Cluster: Motion Energy Transfers Lessons*** Lesson: Energy of Moving Objects Lesson: Colliding Marbles
	4: Energy 4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	**Unit: Technology and Energy** ***Cluster: Electrical Circuits Design Project*** Lesson: Building Parallel Circuits

		Lesson: Designing Circuits Lesson: Building and Refining Circuits Lesson: Demonstrating Circuits
	4: Energy 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.	**Unit: Technology and Energy** ***Cluster: Energy for Human Technologies*** Lesson: Stored Energy and Fuels Lesson: Effects on Our Planet
	4: Waves: Waves and Information 4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	**Unit: Waves** ***Cluster: What Is a Wave? Lessons*** Lesson: What Are Waves? Lesson: Wave Behavior Lesson: Wave Shape Lesson: Wave Motion and Energy ***Cluster: Different Kinds of Waves Lessons*** Lesson: Deep and Shallow Water Waves Lesson: Sound Travels in Waves
	4: Waves: Waves and Information 4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.	**Unit: Waves** ***Cluster: Communications Project for Upper Elementary Lessons*** Lesson: Exploring a Communication Solution Lesson: Using Codes to Communicate Lesson: Developing a Communication Solution Lesson: Refining a Communication Solution Lesson: Demonstrating a Communication Solution Lesson: History of Communication Technology
	4: Structure, Function, and Information Processing 4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	**Unit: Energy Transfers** ***Cluster: Light Energy Lessons*** Lesson: Reflecting Light Lesson: The Eye and Light Lesson: Modeling Traveling Light
	4: Structure, Function, and Information Processing 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [	**Unit: Structures in Living Things** ***Cluster: Animals – Structure, Function, and Information Processing*** Lesson: Animal Structures

		Lesson: Human Body Structures and Functions Lesson: Observing Earthworms ***Cluster: Plants – Structure and Function*** Lesson: Plants Structures and Systems Lesson: Observing Plant Structures
	4: Structure, Function, and Information Processing 4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	**Unit: Structures in Living Things** ***Cluster: Animals – Structure, Function, and Information Processing*** Lesson: Investigating Earthworm Senses
	4: Earth's Systems: Processes that Shape the Earth 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time	**Unit: Our Geosphere** ***Cluster: Explaining Earth's Changes Lessons*** Lesson: Shaping the Earth Lesson: Fossils in Rock Layers
	4: Earth's Systems: Processes that Shape the Earth 4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	**Unit: Our Geosphere** ***Cluster: Effects of Weathering and Erosion Lessons*** Lesson: Landscapes Change Lesson: Abrasion Weathers Rock Lesson: Glaciers Change Landscapes Lesson: Investigating Erosion and Deposition
	4: Earth's Systems: Processes that Shape the Earth 4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.	**Unit: Our Geosphere** ***Cluster: A Moving Earth Lessons*** Lesson: Moving Plates Create Landscapes Lesson: Mapping Earthquakes
	4: Earth's Systems: Processes that Shape the Earth 4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans	Investigating Erosion and Deposition? **Unit: Technology and Energy** ***Cluster: Energy for Human Technologies*** Lesson: Energy Conservation
	5: Structure and Properties of Matter 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen	**Unit: Investigating Matter** ***Cluster: Properties of Matter*** Lesson: Properties of Gases ***Cluster: Mixing and Changing Matter*** Lesson: Modeling Mixtures
	5: Structure and Properties of Matter	**Unit: Investigating Matter**

5th Grade	5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	***Cluster: Mixing and Changing Matter*** Lesson: Heating and Cooling Matter Lesson: Mixtures Lesson: Modeling Mixtures Lesson: Exploring Chemical Reactions
	5: Structure and Properties of Matter 5-PS1-3. Make observations and measurements to identify materials based on their properties	**Unit: Investigating Matter** ***Cluster: Properties of Matter*** Lesson: What is Matter? Lesson: Properties of Matter Lesson: Identifying Materials' Properties
	5: Structure and Properties of Matter 5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances	**Unit: Investigating Matter** ***Cluster: Mixing and Changing Matter*** Lesson: Modeling Mixtures Lesson: Exploring Chemical Reactions Lesson: Investigating Whatzit?!
	5: Matter and Energy in Organisms and Ecosystems 5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	**Unit: Ecosystems** ***Cluster: Matter and Energy in Ecosystems*** Lesson: Matter and Energy ***Cluster: Producers*** Lesson: Sunlight on the Menu
	5: Matter and Energy in Organisms and Ecosystems 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.	**Unit: Ecosystems** ***Cluster: Producers*** Lesson: Plants as Producers
	5: Matter and Energy in Organisms and Ecosystems 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Unit: Ecosystems** ***Cluster: Matter and Energy in Ecosystems*** Lesson: What Is an Ecosystem? Lesson: Matter and Energy Lesson: Players in an Ecosystem ***Cluster: Producers*** Lesson: Testing Plant Growth ***Cluster: Waste and Decomposers*** Lesson: Nature's Waste Matter

		Lesson: Nature Breaks It Down Lesson: Nature Cleans It Up Lesson: Worms: Consumers and Decomposers ***Cluster: Completing the Cycle*** Lesson: Nutrients Help Plants Lesson: Matter on the Move Lesson: Prairie Ecosystem
	5: Earth's Systems 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	**Unit: Earth's Systems** ***Cluster: Discovering Earth's Systems Lessons*** Lesson: Watching a Drop of Rain Lesson: Earth Walk Part I Lesson: Studying Earth's Systems Lesson: Modeling Earth's Systems Lesson: Earth Walk Part II ***Cluster: Earth's Water Systems Lessons*** Lesson: Learning About Surface Water Lesson: Water Beneath Earth's Surface Lesson: Frozen Water on Earth Lesson: Water in the Atmosphere Lesson: Modeling the Hydrosphere
	5: Earth's Systems 5-ESS2-2. Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	**Unit: Earth's Systems** ***Cluster: Earth's Water Systems Lessons*** Lesson: Water Beneath Earth's Surface Lesson: Frozen Water on Earth Lesson: Water in the Atmosphere Lesson: Modeling the Hydrosphere
	5: Earth's Systems 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**Unit: Earth's Systems** ***Cluster: Protecting Water Resources*** Lesson: Water Is a Resource Lesson: Human Water Systems Lesson: Conserving Water at Home Lesson: Cleaning Polluted Water

		Cluster: Human Impacts Project Lesson: Humans Affect the Environment Lesson: Investigating Human Impacts
	5: Space Systems: Stars and the Solar System 5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down	**Unit: Earth in Space** ***Cluster: Gravity on Earth*** Lesson: Modeling Earth's Shape Lesson: Earth's Gravitational Force
	5: Space Systems: Stars and the Solar System 5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	**Unit: Earth in Space** ***Cluster: Sun and Other Stars*** Lesson: Our Sun Is a Star
	5: Space Systems: Stars and the Solar System 5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	**Unit: Earth in Space** ***Cluster: Daily Pattern of the Sun*** Lesson: Day and Night Lesson: Observing Shadow Patterns Lesson: Observing the Sun for a Day Lesson: Tracking Shadows During a Day Lesson: Models of the Sun and Shadow Lesson: Models of Daytime and Nighttime Lesson: Modeling Earth's Rotation **Unit: Earth in Space** ***Cluster: Sun and Other Stars*** Lesson: Seeing Stars from Earth Lesson: Earth's Orbit and Stars Lesson: Star Patterns