SCIENCE SCOPE AND SEQUENCE

STRAND	STANDARDS/SKILLS	KG1	KG2
PHYSICAL SCIENCE	**MOTION AND STABILITY: Forces and Interaction** **PS2.K2.1** 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. **PS2.A: Forces and Motion** • Pushes and pulls can have different strengths and directions. • Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. **PS2.B: Types of Interactions** • When objects touch or collide, they push on one another and can change motion. **PS3.C: Relationship Between Energy and Forces** • A bigger push or pull makes things speed up or slow down more quickly. (secondary)	STEM Investigation	STEM Investigation
	MOTION AND STABILITY: Forces and Interaction **PS2.K2.2** 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. **PS2.A: Forces and Motion** • Pushes and pulls can have different strengths and directions. • Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. **ETS1.A: Defining Engineering Problems**	STEM Investigation	STEM Investigation

	• A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (secondary)		
	ENERGY **PS3.K2.1** Make observations to determine the effect of sunlight on Earth's surface. **PS3.B: Conservation of Energy and Energy Transfer** • Sunlight warms Earth's surface.	STEM Investigation	STEM Investigation
	ENERGY **PS3.K2.2** Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. **PS3.B: Conservation of Energy and Energy Transfer** • Sunlight warms Earth's surface.	STEM Investigation	STEM Investigation

STRAND	STANDARDS/SKILLS	KG1	KG2
LIFE SCIENCES	**FROM MOLECULES TO ORGANISMS: Structures and Processes** **LS1.K2.1** Use observations to describe patterns of what plants and animals (including humans) need to survive. **LS1.C: Organization for Matter and Energy Flow in Organisms** • All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	STEM Investigation	**HOW THE WORLD WORKS** An inquiry into: The parts of the plants and how they function. The importance of plants in our environment. The resources plants need for growth/survival.

STRAND	STANDARDS/SKILLS	KG1	KG2
EARTH ANS SPACE SCIENCES	**EARTH'S PLACE IN THE UNIVERSE** **ESS1.K2.1** Use and share observations of local weather conditions to describe patterns over time. **ESS2.D: Weather and Climate** • Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.	**HOW THE WORLD WORKS** An inquiry into: Patterns in the sky impact daily life. Seasonal weather impacts the way we live. Our choices impact life on Earth.	STEM Investigation
	EARTH'S PLACE IN THE UNIVERSE **ESS1.K2.2** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. **ESS2.E: Biogeology** • Plants and animals can change their environment. ESS3.C: Human Impacts on Earth Systems	STEM Investigation	STEM Investigation

	• Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary)		
	EARTH AND HUMAN ACTIVITY **ESS3.K2.1** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. **ESS3.A: Natural Resources** • Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.	**SHARING THE PLANET** An inquiry into: Animal life on our planet. The interdependence of living things. Our actions impact the survival of animals.	**HOW THE WORLD WORKS** An inquiry into: The parts of the plants and how they function. The importance of plants in our environment. The resources plants need for growth/survival.
	EARTH AND HUMAN ACTIVITY **ESS3.K2.2** Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. **ESS3.B: Natural Hazards** • Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. **ETS1.A: Defining and Delimiting an Engineering Problem** • Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary)	**HOW THE WORLD WORKS** An inquiry into: Patterns in the sky impact daily life. **Seasonal weather impacts the way we live. (Natural disasters)** Our choices impact life on Earth.	STEM Investigation
	EARTH AND HUMAN ACTIVITY **ESS3.K2.3** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. **ESS3.C: Human Impacts on Earth Systems**	**SHARING THE PLANET** An inquiry into: Animal life on our planet. The interdependence of living things. Our actions impact the survival of animals.	**SHARING THE PLANET** An inquiry into: The needs of a healthy ocean. Human choices affect the ocean. Ways people interact with the ocean.

	• Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. **ETS1.B: Developing Possible Solutions** • Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary)		
	EARTH AND HUMAN ACTIVITY **ESS3.K3.1** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. **ESS3.C: Human Impacts on Earth Systems** • Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. **ETS1.B: Developing Possible Solutions** • Designs can be conveyed through sketches, drawings, or physical models. These representations are usefu l in communicating ideas for a problem's solutions to other people. (secondary)	**SHARING THE PLANET** An inquiry into: Animal life on our planet. The interdependence of living things. Our actions impact the survival of animals.	**SHARING THE PLANET** An inquiry into: The needs of a healthy ocean. Human choices affect the ocean. Ways people interact with the ocean.

STRAND	STANDARDS/SKILLS	KG1	KG2
ENGINEERING AND DESIGN	**ENGINEERING AND DESIGN** **ED1.K-2.1** 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. **ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering. • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem.	STEM Investigation	**WHERE WE ARE IN PLACE AND TIME** An inquiry into: How needs lead to inventions. How objects change through time. Why humans are changing objects for the future.
	ED1.K-2.2 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. **ETS1.B: Developing Possible Solutions** • Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	STEM Investigation	**WHERE WE ARE IN PLACE AND TIME** An inquiry into: How needs lead to inventions. How objects change through time. Why humans are changing objects for the future.
	ENGINEERING AND DESIGN **ED1.K-2.3** Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. **ETS1.C: Optimizing the Design Solution** • Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	STEM Investigation	**WHERE WE ARE IN PLACE AND TIME** An inquiry into: How needs lead to inventions. How objects change through time. Why humans are changing objects for the future.