

inquisitive

FLORIDA LEARNING STANDARDS FOR SCIENCE & Inquisitive Crosswalk

Florida Learning Standards for Science:
86% Inquisitive Alignment & Coverage



inquisitive

What does it mean to be Inquisitive?

Our mission is for teachers to enjoy teaching and for students to learn with purpose and depth. Inquisitive lessons inspire wonder, curiosity and engagement by introducing science and engineering through real world phenomena and relevant focus questions. That's what it means to be Inquisitive.

Open-and-Go Lessons

Inquisitive's open-and-go lessons clearly cover the three dimensions of the NGSS and Florida learning standards so teachers can easily see the lesson objectives and be confident while teaching standards-aligned science. Inquisitive strives to reduce teachers' planning time. Simple, easy to use, and a beautiful experience on any device. With integrated and varied stimulus in each unit, Inquisitive is a comprehensive phenomena-based curriculum, made easy.

Phenomena-Based

Experiencing science through the lens of true observable phenomena offers all students a deep and meaningful learning experience. Each Inquisitive lesson centers around a phenomenon and includes a variety of learning tools to help students make the link from science to the real world.

Inquisitive Florida Crosswalk

This document maps Inquisitive content to the Florida Next Generation Sunshine State Standards. We have included the relevant NGSS Performance Expectations and Inquisitive lesson learning targets, for ease of use and reference to the content statements.

Florida Learning Standards: 86% Inquisitive coverage

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
K	Life Science	SC.K.L.14 Organization and Development of Living Organisms	SC.K.L.14.1 Recognize the five senses and related body parts.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 1-LS1-1 Scaredy-Cat! - Identify that animals have body parts that capture and convey different kinds of information needed for growth and survival. - Identify that animals respond to these stimuli with behaviors that help them survive. - Identify that plants also respond to some external stimuli.
			SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.	PK-LS1-1 Use observations to describe the difference between living and nonliving things and recognize that living things grow and change.	<i>These Inquisitive lessons partially address the benchmark.</i> PK-LS1-1 Living Things Grow - Identify a living thing. - Describe a living thing as something that grows. Living Things Change - Identify that living things (including humans) change as they grow.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
K	Physical Science	SC.K.P.8 Properties of Matter	SC.K.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 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.	<i>These Inquisitive lessons partially address the benchmark.</i> 2-PS1-1 What IS This Stuff? - Understand that matter is all of the substances we can see and feel. - Investigate the differences between solids and liquids. - Understand that solids keep their shape while liquids take the shape of their container. Sorting Our Stuff - Explain that matter has properties. - Classify matter by its properties. - Observe that the properties of matter can change when heated or cooled. 2-PS1-2

					The Best Materials for the Job ● Explain how different materials have properties that make them suited for different purposes.
		SC.K.P.9 Changes in Matter	SC.K.P.9.1 Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-PS1-1 Sorting our Stuff ● Explain that matter has properties. ● Classify matter by its properties. ● Observe that the properties of matter can change when heated or cooled.
		SC.K.P.10 Forms of Energy	SC.K.P.10.1 Observe that things that make sound vibrate.	1-PS4-1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	1-PS4-1 Good Vibrations ● Identify what happens when materials vibrate. ● Investigate materials and their relationship with sound. ● Determine that vibrating materials make sound.
		SC.K.P.12 Motion of Objects	SC.K.P.12.1 Investigate that things move in different ways, such as fast, slow etc.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> K-PS2-1 Speed it Up! Slow it Down! ● Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change.
		SC.K.P.13 Forces and Changes in Motion	SC.K.P.13.1 Observe that a push or a pull can change the way an object is moving.	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.	K-PS2-1 Which Way? ● Demonstrate how pushes and pulls can cause the direction of objects to change. ● Explain that when objects collide, objects will move in different directions.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
K	Earth and Space Science	SC.K.E.5 Earth in Space and Time	SC.K.E.5.1 Explore the Law of Gravity by investigating how objects are pulled toward the ground unless something holds them up.	3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-PS2-1 Falling With Style! ● Describe the forces of gravity and air resistance. ● Use arrows to accurately represent gravity and air resistance in a specific situation.

				forces on the motion of an object.	Explain how the shape of an object affects the amount of air resistance it experiences.
			SC.K.E.5.2 Recognize the repeating pattern of day and night.	5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-ESS1-2 Day And Night - It's A Fine Line - Use a model to explain why we experience day and night. - Graph data of the numbers of daylight hours and use their graphs to describe patterns.
			SC.K.E.5.3 Recognize that the Sun can only be seen in the daytime.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted.	1-ESS1-1 The Sun Is Out - Identify that when the sun appears in the sky, it is daylight. - Observe, describe, and predict the pattern of motion of the sun as it appears in the sky.
			SC.K.E.5.4 Observe that sometimes the Moon can be seen at night and sometimes during the day.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted.	1-ESS1-1 Bright Moon - Identify that the moon appears brighter when it is nighttime. - Identify that the moon can appear at different times during the day and night. - Observe and describe that the moon's position in the sky appears to move.
			SC.K.E.5.5 Observe that things can be big and things can be small as seen from Earth.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.K.E.5.6 Observe that some objects are far away and some are nearby as seen from Earth.		<i>Inquisitive does not currently have content for this benchmark.</i>

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Grade Level	Body of Knowledge	Big Idea	Benchmark		
K	Nature of Science	SC.K.N.1 The Practice of Science	SC.K.N.1.1 Collaborate with a partner to collect information.	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.	K-PS2-1 Speed it Up! Slow it Down! - Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change. K-PS3-1 Sunlight Warms Earth - Describe the warming effect of the sun on Earth's surface.

				K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface	
		SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.	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.	K-2-ETS1-1 What is a House? ● Ask questions based on observations. ● Identify that houses are designed and built for a purpose to solve a problem. ● Understand that houses give us shelter.	
		SC.K.N.1.3 Keep records as appropriate -- such as pictorial records -- of investigations conducted.	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.	K-2-ETS1-2 I'll Huff and I'll Puff ● Develop a simple model of a house. ● Test and evaluate their model. ● Understand the importance of the materials used in helping the shape and stability of a structure.	
		SC.K.N.1.4 Observe and create a visual representation of an object which includes its major features.	K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.	K-LS1-1 Staying Alive! ● Identify living things and nonliving things. ● State that animals need food and water to survive. ● Describe the foods that different animals eat. K-ESS3-1 This is Home ● Describe the relationships among living things, the resources they need to survive, and where those things live. ● Use a model to describe how the needs of living things are met by the places in which they live and the resources found in those places.	
		SC.K.N.1.5 Recognize that learning can come from careful observation.	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. K-ESS2-1	K-PS2-2 Does it Work? ● Understand that there are several ways to solve a problem. ● Analyze data from a design solution and draw a conclusion. ● Explain how changing the force acting on an object changes the speed of its motion. K-ESS2-1 Watching the Weather	

				Use and share observations of local weather conditions to describe patterns over time.	● Recognize the symbols used to depict weather. ● Understand that the weather changes daily. ● Record weather over time and look for patterns.
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Grade Level	Body of Knowledge	Big Idea	Benchmark		
1	Life Science	SC.1.L.14 Organization and Development of Living Organisms	SC.1.L.14.1 Make observations of living things and their environment using the five senses.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 1-LS1-1 Scaredy-Cat! ● Identify that animals have body parts that capture and convey different kinds of information needed for growth and survival.
			SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.	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.	1-LS1-1 Plant Parts ● Identify that plants have different external structures (parts). ● Identify that plants use these external structures to survive and grow.
			SC.1.L.14.3 Differentiate between living and nonliving things.	PK-LS1-1 Use observations to describe the difference between living and nonliving things and recognize that living things grow and change.	<i>These Inquisitive lessons partially address the benchmark.</i> PK-LS1-1 Living Things Grow ● Identify a living thing. ● Describe a living thing as something that grows. Living Things Change ● Identify that living things (including humans) change as they grow.
		SC.1.L.16 Heredity and Reproduction	SC.1.L.16.1 Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.	1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	1-LS3-1 Are We Alike? ● Explain that young animals are very much, but not exactly like, their parents. Plants Have Parents Too ● Determine that young plants are similar but different from the adult version of the same plant. Same But Different ● Explain that types of plants or animals are recognizable as similar but can also vary in many ways.

		SC.1.L.17 Interdependence	SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.	PK-LS1-2 Observe patterns to identify what living things need to survive. K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.	PK-LS1-2 Animals Have Needs - Identify that animals need food, water, and shelter to grow. Plants Have Needs - Identify that plants need sunlight and water to grow. K-LS1-1 Staying Alive - Identify living things and nonliving things. - State that animals need food and water to survive. - Describe the foods that different animals eat. What do Plants Need? - Identify the needs of plants to live and grow.

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1	Physical Science	SC.1.P.8 Properties of Matter	SC.1.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	<i>These Inquisitive lessons partially address the benchmark.</i> 2-PS1-1 What IS This Stuff? - Understand that matter is all of the substances we can see and feel. - Investigate the differences between solids and liquids. - Understand that solids keep their shape while liquids take the shape of their container. Sorting Our Stuff - Explain that matter has properties. - Classify matter by its properties. - Observe that the properties of matter can change when heated or cooled.
		SC.1.P.12 Motion of Objects	SC.1.P.12.1 Demonstrate and describe the various ways that objects can move, such as in a straight line, zigzag, back-and-forth, round-and-round, fast, and slow.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> K-PS2-1 Which Way? - Pushes and pulls can have different strengths and directions. - When objects touch or collide, they push on one another and can change motion.
		SC.1.P.13 Forces and	SC.1.P.13.1 Demonstrate that the way to change the motion of an object is by applying a push or a pull.	K-PS2-1 Plan and conduct an investigation to compare the	K-PS2-1 Push and Pull

		Changes in Motion		effects of different strengths or different directions of pushes and pulls on the motion of an object.	• Understand that pushes and pulls are used to start and stop the motion of objects. • Identify and classify pushes and pulls. Speed It Up! Slow It Down! • Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change. Which Way? • Demonstrate how pushes and pulls can cause the direction of objects to change. • Explain that when objects collide, objects will move in different directions.
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Grade Level	Body of Knowledge	Big Idea	Benchmark		
1	Earth and Space Science	SC.1.E.5 Earth in Space and Time	SC.1.E.5.1 Observe and discuss that there are more stars in the sky than anyone can easily count and that they are not scattered evenly in the sky.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted. 5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	<i>These Inquisitive lessons partially address the benchmark.</i> 1-ESS1-1 Starry, Starry Night • Understand that the appearance of stars in the sky can be observed and predicted. • Identify that stars (other than our own sun) are visible at night but not during the day. 5-ESS1-2 Star Patterns • Explain that the apparent movement and changing position of the stars across the night sky is due to the rotation of Earth. • Explain that different stars are visible at different times of the year because Earth revolves around the sun.
			SC.1.E.5.2 Explore the Law of Gravity by demonstrating that Earth's gravity pulls any object on or near Earth toward it even though nothing is touching the object.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-PS2-1 Falling With Style! • Describe the forces of gravity and air resistance. • Use arrows to accurately represent gravity and air resistance in a specific situation. • Explain how the shape of an object affects the amount of air resistance it experiences.

			SC.1.E.5.3 Investigate how magnifiers make things appear bigger and help people see things they could not see without them.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.1.E.5.4 Identify the beneficial and harmful properties of the Sun.	K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth's surface.	K-PS3-1 Sunlight Warms Earth - Describe the warming effect of the sun on Earth's surface. K-PS3-2 Shelter from the Sun - Explain negative effects from too much sunlight and heat. - Plan, design, and build a structure to provide shade and protection from the sun's light and heat.
		SC.1.E.6 Earth Structures	SC.1.E.6.1 Recognize that water, rocks, soil, and living organisms are found on Earth's surface.	2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-ESS2-2 Map it! - Develop a model that identifies natural landforms and bodies of water. - Understand that maps can be used to represent many types of areas.
			SC.1.E.6.2 Describe the need for water and how to be safe around water.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.1.E.6.3 Recognize that some things in the world around us happen fast and some happen slowly.	2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	2-ESS1-1 Earth Changes S-l-o-w-l-y - Understand that elements and features on Earth (dirt, sand, rocks, hills, mountains, rivers, lakes, and seas) change over time. Earth Changes Fast! - Understand that elements and features on Earth (soil, sand, rocks, hills, mountains, rivers, lakes, and seas) change over time. - Recognize that volcanic eruptions, earthquakes, and floods are examples of changes that happen quickly, and transform Earth's surface suddenly.

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1	Nature of Science	SC.1.N.1 The Practice of Science	SC.1.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration, and generate	1-PS4-4 Use tools and materials to design and build a device that uses light or sound to solve	1-PS4-4 Sound Signals - Identify that devices allow us to communicate. - Design and build a device that uses sound to communicate.

			appropriate explanations based on those explorations.	the problem of communicating over a distance.	Determine communication means to send and receive information
			SC.1.N.1.2 Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.	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.	K-2-ETS1-1 I'll Huff and I'll Puff - Develop a simple model of a house. - Test and evaluate their model. - Understand the importance of the materials used in helping the shape and stability of a structure.
			SC.1.N.1.3 Keep records as appropriate - such as pictorial and written records - of investigations conducted.	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.	K-2-ETS1-2 It's in the Design - Identify a need or problem that needs a solution. - Develop and evaluate a simple design solution to the problem.
			SC.1.N.1.4 Ask "how do you know?" in appropriate situations.	1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents	1-LS3-1 Are We Alike? Explain that young animals are very much, but not exactly like, their parents.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
2	Life Science	SC.2.L.14 Organization and Development of Living Organisms	SC.2.L.14.1 Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions.	4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 4-LS1-1 The Inside Story! - Identify the position and the function of the heart, lungs, and brain in their body. - Explain how these structures, along with the nerves, work together to aid growth and survival. - Give examples of animals that have internal structures similar to and different from those in humans.
		SC.2.L.16 Heredity and Reproduction	SC.2.L.16.1 Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies.	3-LS1-1 Develop models to describe that organisms have unique	<i>These Inquisitive lessons partially address the benchmark.</i> 3-LS1-1 Plant Life-From Seed to Seed

				and diverse life cycles but all have in common birth, growth, reproduction, and death.	● Produce an informative model that shows the key stages in the life cycle of a plant. Animal Life Cycles ● Produce an informative model that shows the key stages in the life cycle of a chosen animal.
		SC.2.L.17 Interdependence	SC.2.L.17.1 Compare and contrast the basic needs that all living things, including humans, have for survival.	K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.	<i>These Inquisitive lessons partially address the benchmark.</i> K-LS1-1 Staying Alive ● Identify living things and nonliving things. ● State that animals need food and water to survive. ● Describe the foods that different animals eat. What do Plants Need? ● Identify the needs of plants to live and grow.
			SC.2.L.17.2 Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.	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.	K-ESS3-1 This Is Home ● Describe the relationships among living things, the resources they need to survive, and where those things live. ● Use a model to describe how the needs of living things are met by the places in which they live and the resources found in those places. Whose Habitat Is This? ● Identify and describe different habitats. ● Describe living things in a certain habitat. ● Compare the different plants and animals that live in a certain habitat.

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2	Physical Science	SC.2.P.8 Properties of Matter	SC.2.P.8.1 Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 3-PS2-3 Ask questions to determine cause and effect relationships of electrical or magnetic interactions	<i>These Inquisitive lessons partially address the benchmark.</i> 2-PS1-1 What IS This Stuff? ● Understand that matter is all of the substances we can see and feel. ● Investigate the differences between solids and liquids. ● Understand that solids keep their shape while liquids take the shape of their container. Sorting Our Stuff ● Explain that matter has properties. ● Classify matter by its properties.

			between two objects not in contact with each other. 3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.	● Observe that the properties of matter can change when heated or cooled. 3-PS2-3 It's Magnetic! ● Identify when a magnetic force is at work and what types of materials are magnetic. ● Describe the interaction between two magnetic objects in terms of a cause and effect relationship. 3-PS2-4 What's the Problem? ● Identify and define a problem that can be solved using magnets. ● Use their knowledge of magnets and magnetic force to design a solution to the problem.
		SC.2.P.8.2 Identify objects and materials as solid, liquid, or gas.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.	2-PS1-1 What IS This Stuff? ● Understand that matter is all of the substances we can see and feel. ● Investigate the differences between solids and liquids. ● Understand that solids keep their shape while liquids take the shape of their container. 5-PS1-1 Too Small to Be Seen ● State that all matter is made of particles too small to see. ● Describe differences among the particles in solids, liquids, and gases. ● Use the movement of particles to explain observations of matter.
		SC.2.P.8.3 Recognize that solids have a definite shape and that liquids and gases take the shape of their container.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	<i>These Inquisitive lessons partially address the benchmark.</i> 2-PS1-1 What IS This Stuff? ● Understand that matter is all of the substances we can see and feel. ● Investigate the differences between solids and liquids. ● Understand that solids keep their shape while liquids take the shape of their container.
		SC.2.P.8.4 Observe and describe water in its solid, liquid, and gaseous states.	2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be a solid or liquid.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-ESS2-3 Water, Water Everywhere! ● Identify where water is found on Earth. ● Understand that water can be found in liquid or solid (ice) form.

			SC.2.P.8.5 Measure and compare temperatures taken every day at the same time.	K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.	<i>These Inquisitive lessons partially address the benchmark.</i> K-ESS2-1 What is Weather? ● Observe the current local weather. ● Describe the weather as a combination of different conditions at a particular time. K-ESS2-1 Watching the Weather ● Recognize the symbols used to depict weather. ● Understand that the weather changes daily. ● Record weather over time and look for patterns.
			SC.2.P.8.6 Measure and compare the volume of liquids using containers of various shapes and sizes.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-PS1-1 What IS This Stuff? ● Understand that matter is all of the substances we can see and feel. ● Investigate the differences between solids and liquids. ● Understand that solids keep their shape while liquids take the shape of their container.
		SC.2.P.9 Changes in Matter	SC.2.P.9.1 Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.	3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. 5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	3-5-ETS1-2 Design Challenge - Keeping the Rain Off ● Understand that the properties of a material can be changed. ● Design, test, and evaluate a sustainable product made from a material with suitable properties. 2-PS1-4 Changes from Heating and Cooling ● Explain that heating and cooling can change matter. ● Compare and contrast changes that can be undone and cannot be undone. 5-PS1-4 Mixing Matter ● Use experimental observations to determine whether mixing substances has produced a new substance. ● Identify variables that are changed or kept the same so that an experiment can be a fair test.
		SC.2.P.10 Forms of Energy	SC.2.P.12.1 Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.	4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts	<i>This Inquisitive lesson partially addresses the benchmark.</i> 4-PS3-4 Converting Energy

				energy from one form to another.	● Explain, with an example, how energy can be converted from one form into another.
	SC.2.P.13 Forces and Changes in Motion	SC.2.P.13.1 Investigate the effect of applying various pushes and pulls on different objects.	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.	K-PS2-1 Speed It Up! Slow It Down! ● Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change. Which Way? ● Demonstrate how pushes and pulls can cause the direction of objects to change. ● Explain that when objects collide, objects will move in different directions.	
		SC.2.P.13.2 Demonstrate that magnets can be used to make some things move without touching them.	3-PS2-3 Ask questions to determine cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other. 3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.	3-PS2-3 It's Magnetic! ● Identify when a magnetic force is at work and what types of materials are magnetic. ● Describe the interaction between two magnetic objects in terms of a cause and effect relationship. 3-PS2-4 What's the Problem? ● Identify and define a problem that can be solved using magnets. ● Use their knowledge of magnets and magnetic force to design a solution to the problem.	
		SC.2.P.13.3 Recognize that objects are pulled toward the ground unless something holds them up.	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. 5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.	3-PS2-1 Falling With Style! ● Describe the forces of gravity and air resistance. ● Use arrows to accurately represent gravity and air resistance in a specific situation. ● Explain how the shape of an object affects the amount of air resistance it experiences. 5-PS2-1 Goin' Down! ● Explain that objects near Earth's surface fall downward because the force of gravity is pulling them toward the planet's center. ● Carry out an investigation and record observations. ● Make a claim and use evidence and reasoning to support it. ● Evaluate the validity of a claim based on evidence presented.	
		SC.2.P.13.4 Demonstrate that the greater the force (push or pull) applied to an	K-PS2-2 Analyze data to determine if a design solution works as	K-PS2-1 Push and Pull	

			object, the greater the change in motion of the object.	intended to change the speed or direction of an object with a push or pull.	• Understand that pushes and pulls are used to start and stop the motion of objects. • Identify and classify pushes and pulls. Speed It Up! Slow It Down! • Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change. Which Way? • Demonstrate how pushes and pulls can cause the direction of objects to change. • Explain that when objects collide, objects will move in different directions.
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Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
2	Earth and Space Science	SC.2.E.6 Earth Structures	SC.2.E.6.1 Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.	2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	<i>These Inquisitive lessons partially address the benchmark.</i> 2-ESS1-1 Earth Changes S-l-o-w-l-y • Understand that elements and features on Earth (dirt, sand, rocks, hills, mountains, rivers, lakes, and seas) change over time. Earth Changes Fast! • Understand that elements and features on Earth (soil, sand, rocks, hills, mountains, rivers, lakes, and seas) change over time. • Recognize that volcanic eruptions, earthquakes, and floods are examples of changes that happen quickly, and transform Earth's surface suddenly.
			SC.2.E.6.2 Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.2.E.6.3 Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.		<i>Inquisitive does not currently have content for this benchmark.</i>
		SC.2.E.7 Earth Systems and Patterns	SC.2.E.7.1 Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.	3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions	<i>These Inquisitive lessons partially address the benchmark.</i> 3-ESS2-1 Weather Watching • Describe some types of weather data and how they are collected.

			expected during a particular season.	● Represent weather data as a bar graph. ● Use weather data as evidence for decisions or explanations. Weather Patterns and Predictions ● Draw tables and graphs to analyze weather data. ● Use weather data to make a decision about when to hold an outdoor event. ● Use weather data from previous years to make a prediction about future weather.
		SC.2.E.7.2 Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.	K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth's surface.	<i>This Inquisitive lesson partially addresses the benchmark.</i> K-PS3-1 Sunlight Warms Earth ● Describe the warming effect of the sun on Earth's surface.
		SC.2.E.7.3 Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-ESS2-2 Interacting Systems ● Describe how water evaporating and condensing in the atmosphere results in rainfall. ● Develop a model to explain how changes in one of Earth's systems (spheres) results in a change to one (or more) of the other systems.
		SC.2.E.7.4 Investigate that air is all around us and that moving air is wind.	K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time. 3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	<i>These Inquisitive lessons partially address the benchmark.</i> K-ESS2-1 What is Weather? ● Observe the current local weather. ● Describe the weather as a combination of different conditions at a particular time. 3-ESS2-1 Weather Patterns and Predictions ● Draw tables and graphs to analyze weather data. ● Use weather data to make a decision about when to hold an outdoor event
		SC.2.E.7.5 State the importance of preparing for severe weather, lightning, and other weather related events.	K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to severe weather. 3-ESS3-1	K-ESS3-2 Weather Warning! ● Ask questions about severe weather in their local area. ● Describe how people plan and prepare for severe weather. 3-ESS3-1 Weatherproof!

				Make a claim about the merit of a design solution that reduces the impact of a weather-related hazard.	- Give some examples of extreme weather and the problems they cause. - Make a claim about the effectiveness of a solution for a particular weather hazard and use evidence to support the claim.
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Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
2	Nature of Science	SC.2.N.1 The Practice of Science	SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.	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.	K-2-ETS1-1 No Rotten Apples - Ask questions based on observations to find out more about the process of food production and handling. - Define a problem (how to stop fruit from turning brown) and explore and investigate solutions to the problem.
			SC.2.N.1.2 Compare the observations made by different groups using the same tools.	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.	2-PS1-3 Building New Things From Parts - Identify that objects are made from parts. - Explain that an object can be disassembled into parts, and these parts can be reassembled to make something new.
			SC.2.N.1.3 Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.	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.	K-2-ETS1-2 Useful or Not? - Describe the usefulness of kitchen gadgets. - Generate, develop, and record a design for a new kitchen gadget.
			SC.2.N.1.4 Explain how particular scientific investigations should yield similar conclusions when repeated.	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. 5-PS1-4 Conduct an investigation to determine whether the	3-PS2-1 Forceful Friction - Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. - Describe and represent how friction affects the motion of an object. - Use force concepts, including friction, to explain experimental observations. 5-PS1-4

				mixing of two or more substances results in new substances.	Mixing Matter - Use experimental observations to determine whether mixing substances has produced a new substance. - Identify variables that are changed or kept the same so that an experiment can be a fair test.
			SC.2.N.1.5 Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).	3-LS4-1 Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	3-LS4-1 Fossil Stories - Describe what a fossil is and name an example of one. - Give a simple explanation of how fossils are formed. - Give an example of the type of information we can obtain from a fossil. - Explain how the locations of fossils can tell us about changes to the environment over time.
			SC.2.N.1.6 Explain how scientists alone or in groups are always investigating new ways to solve problems.	3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	3-5-ETS1-2 Let's Build Bridges - Understand that the design process is important in generating safe products. - Work collaboratively to generate and compare multiple solutions to a problem. - Recognize that engineers improve existing technologies when designing new products.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
3	Life Science	SC.3.L.14 Organization and Development of Living Organisms	SC.3.L.14.1 Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.	4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 4-LS1-1 Plantific! - Identify important external structures of a plant and describe their function. - Identify an important internal structure of a plant and describe its function. - Understand that plant structures work together as a connected system.
			SC.3.L.14.2 Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 1-LS1-1 Scaredy-Cat! - Identify that animals have body parts that capture and convey different kinds of information needed for growth and survival. - Identify that animals respond to these stimuli with behaviors that help them survive.

					Identify that plants also respond to some external stimuli.
		SC.3.L.15 Diversity and Evolution of Living Organisms	SC.3.L.15.1 Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.3.L.15.2 Classify flowering and nonflowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-LS1-1 Plant Life—From Seed to Seed Produce an informative model that shows the key stages in the life cycle of a plant.
		SC.3.L.17 Interdependence	SC.3.L.17.1 Describe how animals and plants respond to changing seasons.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-LS4-4 What Happens When Environments Change? - Describe some of the ways that environments can change. - Describe how changes to an environment can affect the organisms that live there. - Evaluate the effectiveness of a solution designed to solve a problem caused by changes to an environment.
			SC.3.L.17.2 Recognize that plants use energy from the Sun, air, and water to make their own food.	2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-LS2-1 Growing Plants - Plan and conduct an investigation. - Collect and interpret data about plant growth. - Understand that plants need water and sunlight to grow.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
3	Physical Science	SC.3.P.8 Properties of Matter	SC.3.P.8.1 Measure and compare temperatures of various samples of solids and liquids.	2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-PS1-4 Changes From Heating and Cooling - Explain that heating and cooling can change matter. - Compare and contrast changes that can be undone and cannot be undone.

			SC.3.P.8.2 Measure and compare the mass and volume of solids and liquids.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.3.P.8.3 Compare materials and objects according to properties such as size, shape, color, texture, and hardness.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties	<i>This Inquisitive lesson partially addresses the benchmark.</i> 2-PS1-1 Sorting our Stuff ● Explain that matter has properties. ● Classify matter by its properties. ● Observe that the properties of matter can change when heated or cooled.
		SC.3.P.9 Changes in Matter	SC.3.L.P.9.1 Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.	2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. 5-ESS2-2 Describe and graph the amounts and percentages of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	<i>These Inquisitive lessons partially address the benchmark.</i> 2-PS1-4 Changes From Heating and Cooling ● Explain that heating and cooling can change matter. ● Compare and contrast changes that can be undone and cannot be undone. 5-ESS2-2 Interacting Systems ● Describe how water evaporating and condensing in the atmosphere results in rainfall. ● Develop a model to explain how changes in one of Earth's systems (spheres) results in a change to one (or more) of the other systems.
			SC.3.P.10 Forms of Energy	SC.3.L.P.10.1 Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical. 4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	<i>These Inquisitive lessons partially address the benchmark.</i> 4-PS3-2 Sound Moves ● Explain how sound is produced. ● State that sound travels from one place to another, and cite practical observations as evidence. Heat Moves ● Use their measurements and observations to explain how heat moves. ● Identify how heat moves from one object to another in familiar, real-life contexts. 4-PS3-3 When Objects Collide ● Identify and give examples of instances of how motion energy is transferred through collisions. ● Explain that some of the motion energy in a collision is transformed into sound and heat.

			SC.3.L.P.10.2 Recognize that energy has the ability to cause motion or create change.	4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 4-PS3-3 When Objects Collide - Identify and give examples of instances of how motion energy is transferred through collisions. - Explain that some of the motion energy in a collision is transformed into sound and heat.
			SC.3.L.P.10.3 Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another.	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. 4-PS4-2 Develop a model to describe that light reflecting from objects and entering the eyes allows objects to be seen.	<i>These Inquisitive lessons partially address the benchmark.</i> 1-PS4-3 Mirror, Mirror - Identify how a beam of light can reflect off objects. - Investigate what effects a beam of light has on objects made from different materials. - Determine that some objects allow light to bounce off them and light their surrounding space. 4-PS4-2 Eye, Eye! - State that light travels in straight lines called rays. - Explain that we see objects when light rays reflect off them and into our eyes. - Describe how mirrors change the path of light and help us to see things we cannot look at directly.
			SC.3.L.P.10.4 Demonstrate that light can be reflected, refracted, and absorbed.	1-PS4-3 Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.	<i>These Inquisitive lessons partially address the benchmark.</i> 1-PS4-3 Mirror Mirror - Identify how a beam of light can reflect off objects. - Investigate what effects a beam of light has on objects made from different materials. - Determine that some objects allow light to bounce off them and light their surrounding space. Beam of Light - Identify that a beam of light shines in one direction. - Investigate what effects a beam of light has on objects made from different materials. - Determine that some objects allow all light to pass through, some allow a portion of the light to pass through, and some block light and create shadows.
		SC.3.P.11 Energy Transfer and Transformations	SC.3.P.11.1 Investigate, observe, and explain that things that give off light often also give off heat.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to	<i>These Inquisitive lessons partially address the benchmark.</i> 4-PS3-2 Heat Moves Use their measurements and observations to explain how heat moves.

				place by sound, light, heat, and electric currents.	- Identify how heat moves from one object to another in familiar, real-life contexts. Switch the Light On! - Describe how light energy travels from one place to another. - Describe how to build a circuit that changes electrical energy into light energy.
			SC.3.P.11.2 Investigate, observe, and explain that heat is produced when one object rubs against another, such as rubbing one's hands together.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents. 4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	<i>These Inquisitive lessons partially address the benchmark.</i> 4-PS3-2 Heat Moves - Use their measurements and observations to explain how heat moves. - Identify how heat moves from one object to another in familiar, real-life contexts. 4-PS3-3 When Objects Collide - Identify and give examples of instances of how motion energy is transferred through collisions. - Explain that some of the motion energy in a collision is transformed into sound and heat.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
3	Earth and Space Science	SC.3.E.5 Earth in Space and Time	SC.3.E.5.1 Explain that stars can be different; some are smaller, some are larger, and some appear brighter than others; all except the Sun are so far away that they look like points of light.	5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-ESS1-2 Star Patterns - Explain that the apparent movement and changing position of the stars across the night sky is due to the rotation of Earth. - Explain that different stars are visible at different times of the year because Earth revolves around the sun.
			SC.3.E.5.2 Identify the Sun as a star that emits energy; some of it in the form of light.	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.	5-ESS1-1 Hello Sun! - State that the sun is a star. - Explain why the sun appears to be the biggest and brightest object in the sky.
			SC.3.E.5.3 Recognize that the Sun appears large and bright because it is the closest star to Earth.	5-ESS1-1 Support an argument that differences in the apparent	5-ESS1-1 Hello Sun! State that the sun is a star.

			brightness of the sun compared to other stars is due to their relative distances from Earth.	● Explain why the sun appears to be the biggest and brightest object in the sky.
		SC.3.E.5.4 Explore the Law of Gravity by demonstrating that gravity is a force that can be overcome.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-PS2-1 Goin' Down! ● Explain that objects near Earth's surface fall downward because the force of gravity is pulling them toward the planet's center. ● Carry out an investigation and record observations. ● Make a claim and use evidence and reasoning to support it. ● Evaluate the validity of a claim based on evidence presented.
		SC.3.E.5.5 Investigate that the number of stars that can be seen through telescopes is dramatically greater than those seen by the unaided eye.		<i>Inquisitive does not currently have content for this benchmark.</i>
	SC.3.E.6 Earth Structures	SC.3.E.6.1 Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost.	K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface.	<i>This Inquisitive lesson partially addresses the benchmark.</i> K-PS3-1 Sunlight Warms the Earth ● Describe the warming effect of the sun on Earth's surface.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
3	Nature of Science	SC.3.N.1 The Practice of Science	SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.	3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	3-ESS2-1 Weather Patterns and Predictions ● Draw tables and graphs to analyze weather data. ● Use weather data to make a decision about when to hold an outdoor event. ● Use weather data from previous years to make a prediction about future weather.
			SC.3.N.1.2 Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.	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.	3-PS2-2 Patterns in Motion ● Identify patterns in motion and use these patterns to predict future motion. ● Make observations and measurements to produce data that serves as the basis for evidence for an explanation of an observed phenomenon.
			SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple	3-PS2-1 Plan and conduct an investigation to provide	3-PS2-1 Forceful Friction

		charts and graphs, of investigations conducted.	evidence of the effects of balanced and unbalanced forces on the motion of an object.	- Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. - Describe and represent how friction affects the motion of an object. - Use force concepts, including friction, to explain experimental observations.
		SC.3.N.1.4 Recognize the importance of communication among scientists.	3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-5-ETS1-1 How Can We Help? - Explore and define design opportunities. - Develop and communicate design ideas through describing, drawing, and modeling a sequence of steps. - Use given components and equipment to safely make a solution.
		SC.3.N.1.5 Recognize that scientists question, discuss, and check each other's evidence and explanations.	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.	3-PS2-3 Hair Raising - Identify electrostatic force as a non-contact force. - Describe the interaction between two charged objects in terms of a cause and effect relationship.
		SC.3.N.1.6 Infer based on observation.	3-LS4-1 Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	3-LS4-1 Fossil Stories - Describe what a fossil is and name an example of one. - Give a simple explanation of how fossils are formed. - Give an example of the type of information we can obtain from a fossil. - Explain how the locations of fossils can tell us about changes to the environment over time.
		SC.3.N.1.7 Explain that empirical evidence is information, such as observations or measurements, that is used to help validate explanations of natural phenomena.	K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	K-ESS3-2 Weather Warning! - Ask questions about severe weather in their local area. - Describe how people plan and prepare for severe weather.
	SC.3.N.3 The Role of Theories, Laws, Hypotheses, and Models	SC.3.N.3.1 Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.		<i>Inquisitive does not currently have content for this benchmark.</i>

			SC.3.N.3.2 Recognize that scientists use models to help understand and explain how things work.	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.	3-LS1-1 Plant Life – From Seed to Seed ● Produce an informative model that shows the key stages in the life cycle of a plant.
			SC.3.N.3.3 Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations.	2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	2-LS2-2 Animal Helpers ● Understand that animals help to spread seeds from plants. ● Develop a simple model to demonstrate how animals help spread seeds.

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Grade Level	Body of Knowledge	Big Idea	Benchmark		
4	Life Science	SC.4.L.16 Heredity and Reproduction	SC.4.L.16.1 Identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination.	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.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-LS1-1 Plant Life-From Seed to Seed ● Produce an informative model that shows the key stages in the life cycle of a plant.
			SC.4.L.16.2 Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.	3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-LS3-2 Can the Environment Affect Traits? ● Identify and use evidence to support the idea that the environment of a living thing can affect both its physical and behavioral traits.
			SC.4.L.16.3 Recognize that animal behaviors may be shaped by heredity and learning.	3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment. 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,	<i>These Inquisitive lessons partially address the benchmark.</i> 3-LS3-2 Can the Environment Affect Traits? ● Identify and use evidence to support the idea that the environment of a living thing can affect both its physical and behavioral traits. 3-LS4-2 What's My Advantage? ● Use evidence to construct an explanation for why a variation in a trait gives certain individuals in a species a survival advantage.

				finding mates, and reproducing.	
			SC.4.L.16.4 Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.	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.	<i>These Inquisitive lessons partially address the benchmark and offer activities that can be adapted to FL plants and animals.</i> 3-LS1-1 Animal Life Cycles ● Produce an informative model that shows the key stages in the life cycle of a chosen animal Plant Life – From Seed to Seed ● Produce an informative model that shows the key stages in the life cycle of a plant.
		SC.4.L.17 Interdependence	SC.4.L.17.1 Compare the seasonal changes in Florida plants and animals to those in other regions of the country.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.4.L.17.2 Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.	5-PS3-1 Use models to describe that energy in animals' food was once energy from the sun.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-PS3-1 Energy for Living Things ● State reasons as to why animals need to eat food. ● Create an accurate model of a food chain. ● Identify that energy in animals' food was once energy from the sun.
			SC.4.L.17.3 Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers.	5-PS3-1 Use models to describe that energy in animals' food was once energy from the sun. 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	5-PS3-1 Energy for Living Things ● State reasons as to why animals need to eat food. ● Create an accurate model of a food chain. ● Identify that energy in animals' food was once energy from the sun. 5-LS2-1 Nature's Recyclers ● Explain observations of rotting plant and animal matter as the actions of decomposers. ● Describe the important role decomposers play in recycling matter. A Web of Life ● Describe, with examples, how individual food chains connect to form food webs. ● Understand that food webs show the movement of matter through an ecosystem. A Damaged Web

					- Describe, with examples, how removing a species from a food web damages an ecosystem. - Describe, with examples, the effect on an ecosystem of introducing a new species.
			SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.	5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. K-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.	<i>These Inquisitive lessons partially address the benchmark.</i> 5-ESS3-1 Science to the Rescue! - Describe the harmful effects on the environment of certain human activities. - Give an example of a science-based action that has repaired or protected the environment. K-ESS3-3 Helping Earth - Describe how people affect the land, water, air, and other living things in the local environment in positive and negative ways. - Communicate solutions that will reduce the impact of humans on the land, water, air, and other living things in the local community.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
4	Physical Science	SC.4.P.8 Properties of Matter	SC.4.P.8.1 Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 5-PS1-3 Make observations and measurements to identify materials based on their properties.	<i>These Inquisitive lessons partially address the supporting objective.</i> 2-PS1-1 What IS This Stuff? - Understand that matter is all of the substances we can see and feel. - Investigate the differences between solids and liquids. - Understand that solids keep their shape while liquids take the shape of their container. Sorting Our Stuff - Explain that matter has properties. - Classify matter by its properties. - Observe that the properties of matter can change when heated or cooled. 5-PS1-3 Material Properties - Accurately describe the properties of common materials. - Use the results of testing for particular properties to identify a material.

			SC.4.P.8.2 Identify properties and common uses of water in each of its states.	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. 5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	<i>These Inquisitive lessons partially address the supporting objective.</i> 5-ESS2-2 Interacting Systems - Describe how water evaporating and condensing in the atmosphere results in rainfall. - Develop a model to explain how changes in one of Earth's systems (spheres) results in a change to one (or more) of the other systems. 5-ESS3-1 Water World - Describe the relative amounts of salt water and freshwater found on Earth as well as the main sources of each. - Represent the actual amounts of Earth's salt water and freshwater in a graphical way.
			SC.4.P.8.3 Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts.	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.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 5-PS1-2 Weighing Matter - Understand that the weight of matter is always conserved, even when that matter undergoes change. - Use their own observations and measurements as evidence to support a claim.
			SC.4.P.8.4 Investigate and describe that magnets can attract magnetic materials and attract and repel other magnets.	3-PS2-3 Ask questions to determine cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other. 3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.	<i>These Inquisitive lessons partially address the supporting objective.</i> 3-PS2-3 It's Magnetic! - Identify when a magnetic force is at work and what types of materials are magnetic. - Describe the interaction between two magnetic objects in terms of a cause and effect relationship. 3-PS2-4 What's the Problem? - Identify and define a problem that can be solved using magnets. - Use their knowledge of magnets and magnetic force to design a solution to the problem.
		SC.4.P.9 Changes in Matter	SC.4.P.9.1 Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.	2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling	<i>These Inquisitive lessons partially address the supporting objective.</i> 2-PS1-4 Changes from Heating and Cooling Explain that heating and cooling can change matter.

				can be reversed and some cannot. 5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. 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.	● Compare and contrast changes that can be undone and cannot be undone. 5-LS2-1 Nature's Recyclers ● Explain observations of rotting plant and animal matter as the actions of decomposers. ● Describe the important role decomposers play in recycling matter. K-2-ETS1-1 No Rotten Apples ● Ask questions based on observations to find out more about the process of food production and handling. ● Define a problem (how to stop fruit from turning brown) and explore and investigate solutions to the problem.
	SC.4.P.10 Forms of Energy	SC.4.P.10.1 Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.	<i>These Inquisitive lessons partially address the supporting objective.</i> 4-PS3-2 Heat Moves ● Use their measurements and observations to explain how heat moves. ● Identify how heat moves from one object to another in familiar, real-life contexts. Sound Moves ● Explain how sound is produced. ● State that sound travels from one place to another, and cite practical observations as evidence. Switch the Light On! ● Describe how light energy travels from one place to another. ● Describe how to build a circuit that changes electrical energy into light energy.	
		SC.4.P.10.2 Investigate and describe that energy has the ability to cause motion or create change.	4-PS3-1 Use evidence to construct an explanation relating the speed of an object to the energy of that object. 4-PS3-3 Ask questions and predict outcomes about the changes in	4-PS3-1 Fast Energy ● State that objects that are moving faster have more energy. ● Use practical examples or observations as evidence to support their statement. 4-PS3-3 When Objects Collide	

				energy that occur when objects collide.	● Identify and give examples of instances of how motion energy is transferred through collisions. ● Explain that some of the motion energy in a collision is transformed into sound and heat.
			SC.4.P.10.3 Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.	<u>1-PS4-1</u> Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	<i>These Inquisitive lessons partially address the supporting objective.</i> <u>1-PS4-1</u> <u>Good Vibrations</u> ● Identify what happens when materials vibrate. ● Investigate materials and their relationship with sound. ● Determine that vibrating materials make sound. <u>Move to the Sound</u> ● Identify what happens to materials when sound is played. ● Investigate sound and its relationship to materials. ● Determine that sound can make materials vibrate.
			SC.4.P.10.4 Describe how moving water and air are sources of energy and can be used to move things.	<u>4-ESS3-1</u> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> <u>4-ESS3-1</u> <u>Energy Resources</u> ● Explain the difference between a renewable and a nonrenewable energy resource. ● Describe the effects of a particular energy resource on the environment.
		SC.4.P.11 Energy Transfer and Transformations	SC.4.P.11.1 Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature.	<u>4-PS3-2</u> Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> <u>4-PS3-2</u> <u>Heat Moves</u> ● Use their measurements and observations to explain how heat moves. ● Identify how heat moves from one object to another in familiar, real-life contexts.
			SC.4.P.11.2 Identify common materials that conduct heat well or poorly.	<u>5-PS1-3</u> Make observations and measurements to identify materials based on their properties.	<u>5-PS1-3</u> <u>Material Properties</u> ● Accurately describe the properties of common materials. ● Use the results of testing for particular properties to identify a material.
		SC.4.P.12 Motion of Objects	SC.4.P.12.1 Recognize that an object in motion always changes its position and may change its direction.	<u>3-PS2-1</u> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced	<i>These Inquisitive lessons partially address the supporting objective.</i> <u>3-PS2-1</u> <u>Which Way?</u>

				forces on the motion of an object. 4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	● Demonstrate how pushes and pulls can cause the direction of objects to change. ● Explain that when objects collide, objects will move in different directions. Move It! ● Identify a force as a push or a pull. ● Use arrows to represent the magnitude and direction of a force. 4-PS3-3 When Objects Collide ● Identify and give examples of instances of how motion energy is transferred through collisions. ● Explain that some of the motion energy in a collision is transformed into sound and heat.
			SC.4.P.12.2 Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.	4-PS3-1 Use evidence to construct an explanation relating the speed of an object to the energy of that object.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 4-PS3-1 Fast Energy ● State that objects that are moving faster have more energy. ● Use practical examples or observations as evidence to support their statement.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
4	Earth and Space Science	SC.4.E.5 Earth in Space and Time	SC.4.E.5.1 Observe that the patterns of stars in the sky stay the same although they appear to shift across the sky nightly, and different stars can be seen in different seasons.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted. 5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	<i>These Inquisitive lessons partially address the benchmark.</i> 1-ESS1-1 Starry, Starry Night ● Understand that the appearance of stars in the sky can be observed and predicted. ● Identify that stars (other than our own sun) are visible at night but not during the day. 5-ESS1-2 Star Patterns ● Explain that the apparent movement and changing position of the stars across the night sky is due to the rotation of Earth. ● Explain that different stars are visible at different times of the year because Earth revolves around the sun.

			SC.4.E.5.2 Describe the changes in the observable shape of the moon over the course of about a month.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 1-ESS1-1 Bright Moon ● Identify that the moon appears brighter when it is nighttime. ● Identify that the moon can appear at different times during the day and night. ● Observe and describe that the moon's position in the sky appears to move.
			SC.4.E.5.3 Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day.	5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	5-ESS1-2 Day And Night - It's A Fine Line ● Use a model to explain why we experience day and night. ● Graph data of the numbers of daylight hours and use their graphs to describe patterns.
			SC.4.E.5.4 Relate that the rotation of Earth (day and night) and apparent movements of the Sun, Moon, and stars are connected.	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.	5-ESS1-2 Day And Night - It's A Fine Line ● Use a model to explain why we experience day and night. ● Graph data of the numbers of daylight hours and use their graphs to describe patterns.
			SC.4.E.5.5 Investigate and report the effects of space research and exploration on the economy and culture of Florida.		<i>Inquisitive does not currently have content for this benchmark.</i>
		SC.4.E.6 Earth Structures	SC.4.E.6.1 Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure).		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.4.E.6.2 Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks.		<i>Inquisitive does not currently have content for this benchmark.</i>

			SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.	4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	4-ESS3-1 Energy Resources ● Explain the difference between a renewable and a nonrenewable energy resource. ● Describe the effects of a particular energy resource on the environment.
			SC.4.E.6.4 Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice).	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.	4-ESS2-1 Weathering ● Describe a process by which rocks become weathered. ● Use observations from an investigation as evidence for an explanation of how weathering occurs. Erosion ● Give an example of an erosion process and explain how it moves weathered rock. ● Use practical observations as evidence for an explanation of how the slope of the land can affect the rate of erosion.
			SC.4.E.6.5 Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.4.E.6.6 Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).	4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	<i>This Inquisitive lesson partially addresses the benchmark and can be adapted to include FL resources.</i> 4-ESS3-1 Energy Resources ● Explain the difference between a renewable and a nonrenewable energy resource. ● Describe the effects of a particular energy resource on the environment.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
4	Nature of Science	SC.4.N.1 The Practice of Science	SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate	4-ESS3-2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	4-ESS3-2 Living with Earth's Hazards ● Describe some natural hazards that cause problems for humans. ● Design and evaluate a potential solution to reduce harm caused by a natural hazard.

			explanations based on those explorations.		
			SC.4.N.1.2 Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.	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.	3-LS1-1 Animal Life Cycles Produce an informative model that shows the key stages in the life cycle of a chosen animal.
			SC.4.N.1.3 Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.	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.	4-PS4-1 Catch the Wave - Describe wave patterns found in nature. - Describe differences in wave patterns in terms of their wavelength and amplitude.
			SC.4.N.1.4 Attempt reasonable answers to scientific questions and cite evidence in support.	3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	3-5-ETS1-3 Water Transporter Design, plan, produce, test, and evaluate a model of a water irrigation system that could be used to water a vegetable garden.
			SC.4.N.1.5 Compare the methods and results of investigations done by other classmates.	3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	3-5-ETS1-2 What a Pest! - Understand that a pest can be a plant or animal in the wrong place. - Collaborate to develop possible solutions by modifying a bike helmet to prevent a bird swooping and attacking.
			SC.4.N.1.6 Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.	4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide	4-PS3-3 When Objects Collide - Identify and give examples of instances of how motion energy is transferred through collisions. - Explain that some of the motion energy in a collision is transformed into sound and heat
			SC.4.N.1.7 Recognize and explain that scientists base their explanations on evidence.	4-PS3-1 Use evidence to construct an explanation relating the speed of an object to the energy of that object. 4-ESS2-1 Make observations and/or measurements to provide	4-PS3-1 Fast Energy - State that objects that are moving faster have more energy. - Use practical examples or observations as evidence to support their statement. 4-ESS2-1 Erosion

				evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	● Give an example of an erosion process and explain how it moves weathered rock. ● Use practical observations as evidence for an explanation of how the slope of the land can affect the rate of erosion.
		SC.4.N.1.8 Recognize that science involves creativity in designing experiments.		3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	3-5-ETS1-2 What a Pest! ● Understand that a pest can be a plant or animal in the wrong place. ● Collaborate to develop possible solutions by modifying a bike helmet to prevent a bird swooping and attacking. 4-PS3-4 Converting Energy ● Explain, with an example, how energy can be converted from one form into another.
	SC.4.N.2 The Practice of Science	SC.4.N.2.1 Explain that science focuses solely on the natural world.		3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.	3-PS2-4 What's the Problem? ● Identify and define a problem that can be solved using magnets. ● Use their knowledge of magnets and magnetic force to design a solution to the problem.
	SC.4.N.3 The Role of Theories, Laws, Hypotheses, and Models	SC.4.N.3.1 Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.		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.	3-LS1-1 Animal Life Cycles ● Produce an informative model that shows the key stages in the life cycle of a chosen animal.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
5	Life Science	SC.5.L.14 Organization and Development of Living Organisms	SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.	4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 4-LS1-1 The Inside Story! ● Identify the position and the function of the heart, lungs, and brain in their body.

					● Explain how these structures, along with the nerves, work together to aid growth and survival. ● Give examples of animals that have internal structures similar to and different from those in humans.
			SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support — some with internal skeletons others with exoskeletons — while some plants have stems for support.	4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	<i>These Inquisitive lessons partially address the supporting objective.</i> 4-LS1-1 The Inside Story ● Identify the position and the function of the heart, lungs, and brain in their body. ● Explain how these structures, along with the nerves, work together to aid growth and survival. ● Give examples of animals that have internal structures similar to and different from those in humans. Plantific ● Identify important external structures of a plant and describe their function. ● Identify an important internal structure of a plant and describe its function. ● Understand that plant structures work together as a connected system.
		SC.5.L.15 Diversity and Evolution of Living Organisms	SC.5.L.15.1 Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.	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. 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.	3-LS4-3 Happy in My Habitat ● Describe what a habitat is and give some examples of different habitats. ● Describe the features an animal has that enable it to survive in its habitat. ● Explain why an animal could not live in a different habitat 3-LS4-4 What Happens When Environments Change? ● Describe some of the ways that environments can change. ● Describe how changes to an environment can affect the organisms that live there. ● Evaluate the effectiveness of a solution designed to solve a problem caused by changes to an environment.
		SC.5.L.17 Interdependence	SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.	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,	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-LS4-2 What's My Advantage? ● Use evidence to construct an explanation for why a variation in a trait gives certain individuals in a species a survival advantage.

				finding mates, and reproducing.	
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Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
5	Physical Science	SC.5.P.8 Properties of Matter	SC.5.P.8.1 Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.	5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen. 5-PS1-3 Make observations and measurements to identify materials based on their properties.	<i>These Inquisitive lessons partially address the supporting objective.</i> 5-PS1-1 Too Small to Be Seen - State that all matter is made of particles too small to see. - Describe differences among the particles in solids, liquids, and gases. - Use the movement of particles to explain observations of matter. 5-PS1-3 Material Properties - Accurately describe the properties of common materials. - Use the results of testing for particular properties to identify a material.
			SC.5.P.8.2 Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.	5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 5-PS1-4 Mixing Matter - Use experimental observations to determine whether mixing substances has produced a new substance. - Identify variables that are changed or kept the same so that an experiment can be a fair test.
			SC.5.P.8.3 Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.	5-PS1-3 Make observations and measurements to identify materials based on their properties.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-PS1-3 Material Properties - Accurately describe the properties of common materials. - Use the results of testing for particular properties to identify a material.
			SC.5.P.8.4 Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.	5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-PS1-1 Too Small to Be Seen - State that all matter is made of particles too small to see. - Describe differences among the particles in solids, liquids, and gases.

					● Use the movement of particles to explain observations of matter.
		SC.5.P.9 Changes in Matter	SC.5.P.9.1 Investigate and describe that many physical and chemical changes are affected by temperature.	2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	<i>This Inquisitive lesson partially addresses the supporting objective.</i> 2-PS1-4 Changes from Heating and Cooling ● Explain that heating and cooling can change matter. ● Compare and contrast changes that can be undone and cannot be undone.
		SC.5.P.10 Forms of Energy	SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.	<i>These Inquisitive lessons partially address the supporting objective.</i> 4-PS3-2 Sound Moves ● Explain how sound is produced. ● State that sound travels from one place to another, and cite practical observations as evidence. Heat Moves ● Use their measurements and observations to explain how heat moves. ● Identify how heat moves from one object to another in familiar, real-life contexts. Switch the Light On! ● Describe how light energy travels from one place to another. ● Describe how to build a circuit that changes electrical energy into light energy.
			SC.5.P.10.2 Investigate and explain that energy has the ability to cause motion or create change.	4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 4-PS3-3 When Objects Collide ● Identify and give examples of instances of how motion energy is transferred through collisions. ● Explain that some of the motion energy in a collision is transformed into sound and heat.
			SC.5.P.10.3 Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.	3-PS2-3 Ask questions to determine cause and effect relationships of electrical or magnetic interactions between two objects not in contact with each other. 3-PS2-4	3-PS2-3 Hair Raising! ● Identify electrostatic force as a non-contact force. ● Describe the interaction between two charged objects in terms of a cause and effect relationship. It's Magnetic! ● Identify when a magnetic force is at work and what types of materials are magnetic.

				Define a simple design problem that can be solved by applying scientific ideas about magnets.	- Describe the interaction between two magnetic objects in terms of a cause and effect relationship. 3-PS2-4 What's the Problem? - Identify and define a problem that can be solved using magnets. - Use their knowledge of magnets and magnetic force to design a solution to the problem.
			SC.5.P.10.4 Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.	<i>These Inquisitive lessons partially address the supporting objective.</i> 4-PS3-2 Sound Moves - Explain how sound is produced. - State that sound travels from one place to another, and cite practical observations as evidence. Heat Moves - Use their measurements and observations to explain how heat moves. - Identify how heat moves from one object to another in familiar, real-life contexts. Switch the Light On! - Describe how light energy travels from one place to another. - Describe how to build a circuit that changes electrical energy into light energy.
		SC.5.P.11 Energy Transfer and Transformations	SC.5.P.11.1 Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.	4-PS3-2 Switch the Light On! - Describe how light energy travels from one place to another. - Describe how to build a circuit that changes electrical energy into light energy.
			SC.5.P.11.2 Identify and classify materials that conduct electricity and materials that do not.	4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 5-PS1-3 Make observations and measurements to identify materials based on their properties.	<i>These Inquisitive lessons partially address the benchmark.</i> 4-PS3-2 Switch the Light On! - Describe how light energy travels from one place to another. - Describe how to build a circuit that changes electrical energy into light energy. 5-PS1-3 Material Properties - Accurately describe the properties of common materials.

					● Use the results of testing for particular properties to identify a material.
		SC.5.P.13 Forces and Changes in Motion	SC.5.P.13.1 Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.	<u>3-PS2-1</u> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. <u>5-PS2-1</u> Support an argument that the gravitational force exerted by Earth on objects is directed down.	<u>3-PS2-1</u> <u>Falling With Style!</u> ● Describe the forces of gravity and air resistance. ● Use arrows to accurately represent gravity and air resistance in a specific situation. ● Explain how the shape of an object affects the amount of air resistance it experiences. <u>Move It!</u> ● Identify a force as a push or a pull. ● Use arrows to represent the magnitude and direction of a force. <u>5-PS2-1</u> <u>Goin' Down!</u> ● Explain that objects near Earth's surface fall downward because the force of gravity is pulling them toward the planet's center. ● Carry out an investigation and record observations. ● Make a claim and use evidence and reasoning to support it. ● Evaluate the validity of a claim based on evidence presented.
			SC.5.P.13.2 Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.	<u>3-PS2-1</u> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	<u>3-PS2-1</u> <u>Balancing Forces</u> ● Identify when the forces on an object are balanced or unbalanced. ● Explain how balanced and unbalanced forces affect an object's motion. ● Use arrows to represent balanced and unbalanced forces.
			SC.5.P.13.3 Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.	<u>3-PS2-1</u> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. <u>3-5-ETS1-1</u> Define a simple design problem reflecting a need or a want that includes specified	<i>These Inquisitive lessons partially address the benchmark.</i> <u>3-PS2-1</u> <u>Move It!</u> ● Identify a force as a push or a pull. ● Use arrows to represent the magnitude and direction of a force. <u>3-5-ETS1-1</u> <u>Putting Forces to Work</u> ● Identify and define a design problem that can be solved through the development of an object.

				criteria for success and constraints on materials, time, or cost.	Recognize that the success of a designed solution is determined by considering the desired features of a solution.
			SC.5.P.13.4 Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.	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.	3-PS2-1 Balancing Forces - Identify when the forces on an object are balanced or unbalanced. - Explain how balanced and unbalanced forces affect an object's motion. - Use arrows to represent balanced and unbalanced forces. Forceful Friction - Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. - Describe and represent how friction affects the motion of an object. - Use force concepts, including friction, to explain experimental observations.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
5	Earth and Space Science	SC.5.E.5 Earth in Space and Time	SC.5.E.5.1 Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.	1-ESS1-1 Use observations of the sun, moon and stars to describe patterns that can be predicted.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 1-ESS1-1 Starry, Starry Night - Understand that the appearance of stars in the sky can be observed and predicted. - Identify that stars (other than our own sun) are visible at night but not during the day.
			SC.5.E.5.2 Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.		<i>Inquisitive does not currently have content for this benchmark.</i>
			SC.5.E.5.3 Distinguish among the following objects of the Solar System — Sun, planets, moons, asteroids, comets — and identify Earth's position in it.	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.	<i>These Inquisitive lessons partially address the benchmark.</i> 5-ESS1-2 Star Patterns - Explain that the apparent movement and changing position of the stars across the night sky is due to the rotation of Earth. - Explain that different stars are visible at different times of the year because Earth revolves around the sun.

				<u>5-ESS1-1</u> Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.	<u>5-ESS1-1</u> <u>Hello Sun!</u> ● State that the sun is a star. ● Explain why the sun appears to be the biggest and brightest object in the sky.
		SC.5.E.7 Earth Systems and Patterns	SC.5.E.7.1 Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.	<u>5-ESS2-2</u> Describe and graph the amounts and percentages of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	<u>5-ESS2-2</u> <u>Interacting Systems</u> ● Describe how water evaporating and condensing in the atmosphere results in rainfall. ● Develop a model to explain how changes in one of Earth's systems (spheres) results in a change to one (or more) of the other systems.
			SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.	<u>5-ESS2-2</u> Describe and graph the amounts and percentages of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	<u>5-ESS2-2</u> <u>Interacting Systems</u> ● Describe how water evaporating and condensing in the atmosphere results in rainfall. ● Develop a model to explain how changes in one of Earth's systems (spheres) results in a change to one (or more) of the other systems.
			SC.5.E.7.3 Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.	<u>3-ESS2-1</u> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	<i>These Inquisitive lessons partially address the benchmark.</i> <u>3-ESS2-1</u> <u>Weather Watching</u> ● Describe some types of weather data and how they are collected. ● Represent weather data as a bar graph. ● Use weather data as evidence for decisions or explanations. <u>Weather Patterns and Predictions</u> ● Draw tables and graphs to analyze weather data. ● Use weather data to make a decision about when to hold an outdoor event. ● Use weather data from previous years to make a prediction about future weather.
			SC.5.E.7.4 Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time.	<u>3-ESS2-1</u> Represent data in tables and graphical displays to describe typical weather conditions	<i>This Inquisitive lesson partially addresses the benchmark.</i> <u>3-ESS2-1</u> <u>Weather Patterns and Predictions</u> ● Draw tables and graphs to analyze weather data.

			expected during a particular season.	● Use weather data to make a decision about when to hold an outdoor event. ● Use weather data from previous years to make a prediction about future weather.
		SC.5.E.7.5 Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains.	3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-ESS2-2 What's Your Climate? ● Differentiate between the terms "weather" and "climate." ● Describe some of the climates found around the world.
		SC.5.E.7.6 Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.	3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 3-ESS2-2 What's Your Climate? ● Differentiate between the terms "weather" and "climate." ● Describe some of the climates found around the world.
		SC.5.E.7.7 Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.	3-ESS3-1 Make a claim about the merit of a design solution that reduces the impact of a weather-related hazard.	3-ESS3-1 Weatherproof! ● Give some examples of extreme weather and the problems they cause. ● Make a claim about the effectiveness of a solution for a particular weather hazard and use evidence to support the claim.

Next Generation Sunshine State Standards				NGSS Code (s)	Inquisitive Lessons (Learning Targets)
Grade Level	Body of Knowledge	Big Idea	Benchmark		
5	Nature of Science	SC.5.N.1 The Practice of Science	SC.5.N.1.1 Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	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. 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.	5-PS1-2 Weighing Matter ● Understand that the weight of matter is always conserved, even when that matter undergoes change. ● Use their own observations and measurements as evidence to support a claim. 5-ESS1-2 Day and Night- It's a Fine Line ● Use a model to explain why we experience day and night. ● Graph data of the numbers of daylight hours for a given location and use their graph to describe patterns.

			SC.5.N.1.2 Explain the difference between an experiment and other types of scientific investigation.	5-PS1-3 Make observations and measurements to identify materials based on their properties. 5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	5-PS1-3 Material Properties - Accurately describe the properties of common materials. - Use the results of testing for particular properties to identify a material. 5-PS1-4 Mixing Matter - Use experimental observations to determine whether mixing substances has produced a new substance. - Identify variables that are changed or kept the same so that an experiment can be a fair test.
			SC.5.N.1.3 Recognize and explain the need for repeated experimental trials.	5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	5-PS1-4 Mixing Matter - Use experimental observations to determine whether mixing substances has produced a new substance. - Identify variables that are changed or kept the same so that an experiment can be a fair test.
			SC.5.N.1.4 Identify a control group and explain its importance in an experiment.	5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	<i>This Inquisitive lesson partially addresses the benchmark.</i> 5-PS1-4 Mixing Matter - Use experimental observations to determine whether mixing substances has produced a new substance. - Identify variables that are changed or kept the same so that an experiment can be a fair test.
			SC.5.N.1.5 Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."	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.	4-PS4-1 Catch the Wave - Describe wave patterns found in nature. - Describe differences in wave patterns in terms of their wavelength and amplitude.
			SC.5.N.1.6 Recognize and explain the difference between personal opinion/interpretation and verified observation.	4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide	4-PS3-3 When Objects Collide - Identify and give examples of instances of how motion energy is transferred through collisions. - Explain that some of the motion energy in a collision is transformed into sound and heat
		SC.5.N.2 The Characteristics of Science Knowledge	SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.	3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	3-5-ETS1-3 Plastic-Not So Fantastic - State why plastic packaging is an environmental problem. - Suggest some sustainable alternatives to plastic packaging. 5-ESS3-1 Water World

				<u>5-ESS3-1</u> Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	• Describe the relative amounts of salt water and freshwater found on Earth as well as the main sources of each. • Represent the actual amounts of Earth's salt water and freshwater in a graphical way.
			SC.5.N.2.2 Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.		Inquisitive does not currently have content for this benchmark.