

Standards Curriculum Map Bourbon County Schools

Level: Kindergarten

Grade and/or Course: Science

Updated/Created: May 2020

Unit 1: Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment- Life Science (ERNEST)

Days:	KAS:	Skills/Targets:	Vocabulary:	Activities/ Strategies:	Resources Used for Implementation of Science/Engineering Practices, Core Ideas and Crosscutting Concepts
1st Nine Weeks Days 1-40	<p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p> <p>K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals</p>	<p>I can identify living and nonliving things.</p> <p>I can describe what plants and animals need to survive.</p> <p>I can describe how plants and animals change their environments.</p> <p>I can compare the needs of plants and animals.</p> <p>I can describe an animal habitat.</p> <p>I can describe how to reduce the impact humans have on the</p>	<p>Living Nonliving Plant Animal Human Environment Habitat Basic Needs Survive Life Cycle Seed Root Stem Sprout Adaptation Nocturnal Wild</p>	<p>-Sort for living and nonliving things using pictures/objects -Label the parts of a plant. -Plant a flower from seed, observing each stage -Create a life cycle of a living thing -Match food to the animal that eats it</p>	<p>Mystery Science Unit: Plant and Animal Secrets https://mysteryscience.com/secret/plant-animal-needs Mystery Science Minilesson: Why do flowers bloom in spring? https://mysteryscience.com/minilessons/spring-flowers#slide-id-8722 Mystery Science Minilesson: Why do birds lay eggs in spring? https://mysteryscience.com/minilessons/birds-spring#slide-id-8400 Brain Pop Jr. Plants:</p>

	<p>(including humans) and the places they live.</p> <p>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.*</p>	<p>environment.</p>		<p>-Draw habitats including the plants and animals that live there</p> <p>--Place seeds growing in different environments (dark, light)</p>	<p>https://jr.brainpop.com/science/plants/ Brain Pop, Jr. Animals: https://jr.brainpop.com/science/animals/ Generation Genius: "Plants Need Water and Light" https://www.generationgenius.com/videolessons/plants-need-water-and-light-video-for-kids/ Generation Genius: Living Things Change Their Environment" https://www.generationgenius.com/videolessons/living-things-change-their-environment-video-for-kids/ Generation Genius: "Habitats" https://www.generationgenius.com/videolessons/habitats-video-for-kids/</p>
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HOT questions: Why do plants and animals (humans) need food? How do plants and animals get their food? How do animals create their homes? How do animals change their environments? How do plants change through the seasons? How do humans change their environment? How do plants change the environment?
Describe a habitat for a polar bear. Describe a habitat for a black bear? How are they different and why? How do animals survive in the desert?

Evidence of Literacy and Writing in Science: **RI.K.1** With prompting and support, ask and answer explicit questions about key concepts and details, and make logical inferences to construct meaning from the text. **R.I.K2** With prompting and support, orally recognize key details from a summary to demonstrate an understanding of the central idea of a text. **RI.K.6** With prompting and support, identify the author and illustrator of a text, and define the role of each in presenting the ideas or information in a text. **RI.K.7** With prompting and support, describe the relationship between visuals and the text. **RI.K.10** With prompting and support, flexibly use a variety of comprehension strategies (i.e. questioning, visualizing, inferencing, summarizing, using prior knowledge, determining

importance) to make sense of grade -level appropriate, complex literary/ informational texts. **C.K.2** Compose informative and/or explanatory texts, using a combination of drawing, dictating, writing and digital resources, to establish a topic and supply information about the topic. **C.K.4** With guidance and support from adults, explore a variety of digital resources to create and publish products, including in collaboration with peers. **C.K.5** With guidance and support, participate in shared research and writing projects. **C.K.6** With guidance and support, collect information from real-world experiences or provided sources to answer or generate questions.

Unit 2: Earth Science- Weather and Climate (SADLER)

Days:	KAS:	Skills/Targets:	Vocabulary:	Strategies/ Activities:	Resources Used for Implementation of Science/Engineering Practices, Core Ideas and Crosscutting Concepts
2nd Nine Weeks Days 41-85	<p>K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.</p> <p>K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting prepare for, and respond to, severe weather.*</p>	<p>I can describe the water cycle.</p> <p>I can identify seasons and the effect of the sun in each.</p> <p>I can describe different types of weather.</p> <p>I can analyze weather and climate patterns over a period of time.</p> <p>I can describe how to prepare for different weather conditions.</p>	Season Weather Storm Summer Winter Fall Spring Water Cycle Rain Snow Thunder Lightening Cloudy Tornado Hurricane Flood	<p>-Sequence the water cycle.</p> <p>-Identify pictures that match the different seasons.</p> <p>-Compare and contrast seasons.</p> <p>-Illustrate and write about a storm that you have been in.</p> <p>-Illustrate and write about the current weather conditions.</p> <p>-Track the weather over a period of time and write about it.</p>	<p>Mystery Science Unit: Weather Watching (6 different lessons) https://mysteryscience.com/watching/weather-seasons Generation Genius: Four Seasons and Day Length https://www.generationgenius.com/videolessons/four-seasons-video-for-kids/ Generation Genius: Introduction to Weather https://www.generationgenius.com/videolessons/introduction-to-weather-video-for-kids/ Brainpop Jr Videos: Weather https://jr.brainpop.com/search/?keyword=weather+</p>

HOT questions:

How does the sun change through the seasons? What are different types of weather that occur throughout the seasons? How can weather change over time? How can you prepare for different weather conditions? How can weather change during each season?

Evidence of Literacy and Writing in Science:

RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-ESS3-2)

RI.K.2 With prompting and support, orally recognize key details from a summary to demonstrate an understanding of the central idea of a text.

RI.K.6 With prompting and support, identify the author and illustrator of a text, and define the role of each in presenting the ideas or information in a text.

RI.K.7 With prompting and support, describe the relationship between visuals and the text.

RI.K.10 With prompting and support, flexibly use a variety of comprehension strategies (i.e. questioning, visualizing, inferencing, summarizing, using prior knowledge, determining importance) to make sense of grade -level appropriate, complex literary/ informational texts.

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS3-1),(K-PS3-2),(KESS2-1)

SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-ESS3-2)

C.K.2 Compose informative and/or explanatory texts, using a combination of drawing, dictating, writing and digital resources, to establish a topic and supply information about the topic.

Unit 3: Physical Science- Sun (TATMAN)

Days:	KAS:	Skills/Targets:	Vocabulary:	Strategie/ Activities:	Resources Used for Implementation of Science/Engineering Practices, Core Ideas and Crosscutting Concepts
3rd Nine Weeks Days 86-128	<p>K-PS3-1. Make observations to determine the effect of sunlight on Earth’s surface.</p> <p>K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.*</p>	<p>I can describe what the sun does to the Earth’s surface.</p> <p>I can explain how shade affects the temperature.</p> <p>I can explain what surfaces heat up more than others.</p>	Sunlight Heat Shade Thermometer Temperature Melting	<p>-Take a walk outside on a sunny day and challenge them to find the warmest and coldest spots.</p> <p>-Design a shelter to keep a piece of chocolate from melting. Put one piece in shelter outside, while other piece is in the sun.</p> <p>-Compare how ice cubes melt in the sun vs shade.</p> <p>-Investigate which color is heated most by sunlight</p>	<p>Mystery Science “How could you warm up a frozen playground?” Mystery 5 “How could you walk across the pavement barefoot without burning your feet?” Mystery 6</p> <p>Generation Genius Sunlight Warms the Earth</p> <p>Brain Pop Jr Spring</p>

HOT questions: What are some materials that absorb heat the best? What kinds of shade are better than others? How can you prove that different materials heat up with sunlight? Where does the Earth get warmth from? What colors are best to wear on a hot, sunny day? Why will flowers not grow in the winter?

Evidence of Literacy and Writing in Science:

- RI.K.1** With prompting and support, ask and answer questions about key details in a text.
- RI.K.7** With prompting and support, describe the relationship between visuals and the text

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS3-1),(K-PS3-2),(KESS2-1)

Unit 4: Forces and Interactions- Push and Pull (KEARNS)

Days:	KAS:	Skills/Targets:	Vocabulary:	Strategies/ Activities:	Resources Used for Implementation of Science/Engineering Practices, Core Ideas and Crosscutting Concepts
<p>4th Nine Weeks</p> <p>Days 129-173</p>	<p>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.</p> <p>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.*</p>	<p>I can describe motion.</p> <p>I can compare the effects of different strengths and directions of pushes and pulls.</p> <p>I can explain how forces of different strengths affect motion.</p> <p>I can explain what happens when two objects touch or collide.</p> <p>I can explore how ramps make objects move.</p>	<p>Force Motion Size Direction Movement Strength Speed Push Pull Collide</p>	<p>-Sort pictures of objects that you can push or pull -Make a box wagon and observe what happens when you push or pull it. Add materials to the box to find out why the wagon is harder to push or pull. -Use a ball to demonstrate how pushing or pulling can change the speed or direction of its motion and can start or stop it. -Use a counter (chip) to bump into another chip, cardboard "tower" or book and</p>	<p>Mystery Science mystery-1/pushes-pulls mystery-2/pushes-pulls-work-words mystery-3/motion-speed-strength mystery-4/speed-direction-of-force</p> <p>Generation Genius Pushes-and-pulls</p> <p>Brainpop Jr https://jr.brainpop.com/science/forces/pushesandpulls/</p> <p>Mystery Science mystery-1/pushes-pulls mystery-2/pushes-pulls-work-words mystery-3/motion-speed-strength mystery-5/direction-of-motion-engineering mystery-6/forces-engineering</p>

				<p>investigate what happens when objects touch or collide.</p> <p>-Design a ramp using cardboard and a counter (chip)to explore how ramps make objects move.</p>	<p>Generation Genius Pushes & Pulls (Forces) Video For Kids Kindergarten, 1st & 2nd Grade</p>
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HOT questions: When do you use pushes and pulls on a playground? How do these impact movement? How will using a strong force and weak force affect the motion of an object? If you push a ball with strong force and then again with weak force what will happen? Why do you think that happened? Some objects can be pushed and pulled? Give examples of objects that can be pushed and pulled.

Evidence of Literacy and Writing in Science:

RI.K.1 - With prompting and support, ask and answer questions about key details in a text.

SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

W.K.7 - Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

Required Through Course Tasks (Provide the link for each task you administered): None for K-2