

Kindergarten NGSS/Benchmark Alignment

Life Science



K-Life Science1 (K-LS1) From Molecules to Organisms: Structures and Processes

Benchmark Unit 3 Life Science: Plants and Animals Have Needs

NGSS Standard

Benchmark

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

Benchmark Essential Question
Why do living things have different needs?

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)</p>	<p>Organization for Matter and Energy Flow in Organisms All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)</p>	<p>Patterns Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)</p>	<p>NOT ADDRESSED</p>	<p>Whole Group Text:</p> <ul style="list-style-type: none"> • What Do Chimps Need p.14 (My Shared Reading) • Lessons from Mama Bear pp.24-25 (Mentor Read-Aloud) • Grow, Pumpkin, Grow! pp. 26-27 (Mentor Read-Aloud) • Plants in a Greenhouse p.16 (My Shared Reading) • What Do Plants Need? (Content Connections) • What Do Emperor Penguins Need? p.18 (My Shared Reading) • What Do Animals Need? (Content Connections) • 	<p>NOT ADDRESSED</p>

Kindergarten Life Science (cont'd)

NGSS Standard			Benchmark Unit 3 Life Science: Plants and Animals Have Needs		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)	Organization for Matter and Energy Flow in Organisms All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)	Patterns Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)	NOT ADDRESSED	<ul style="list-style-type: none"> What Do Animals Eat? p.19 (My Shared Reading) Small Group Text: <ul style="list-style-type: none"> The Pond A Plant Has Parts Plants Grow Unit Opener Video: Plants and Animals Have Needs Content Across Disciplines Inquiry Projects (ADDITIONAL RESOURCES tab): Class Play: "Help the Animal", Plan a Pet Menu, Grow Carrot Tops	NOT ADDRESSED

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CA FOSS: *Animals Two By Two* Investigations 1 and 4

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data	Organization for Matter and Energy Flow in Organisms	Patterns
Investigation 1 Part 3 Focus Question (Step 7) <ul style="list-style-type: none"> What do goldfish do? What do goldfish do when something new is added to the aquarium? 	Investigation 4 Part 4 Focus Question (include with Step 8) What do red worms, isopods and land snails need to live?	Investigation 1 Part 4 Focus Question (Step 8) <ul style="list-style-type: none"> What do all fish have? How do fish differ from one another?



Kindergarten NGSS/Benchmark Alignment

Earth and Space Sciences



K- Earth and Space Sciences2 (K-ESS2) Earth's Systems
 K- Earth and Space Sciences3 (K-ESS3) Earth and Human Activity
 Engineering, Technology, and Applications of Science Engineering Design-1
 (ETS1) Engineering Design



Benchmark Unit 8 Earth Science: Weather and Seasons

NGSS Standard

K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.

Benchmark

Benchmark Essential Question
 How do our lives change with the seasons?

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1)	Weather and Climate Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)	Patterns Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1)	<u>NOT ADDRESSED</u>	Whole Group Text: <ul style="list-style-type: none"> ● The Four Seasons of the Year p.18 (My Shared Reading) ● Weather and the Seasons (Content Connections) Small Group Text: <ul style="list-style-type: none"> ● A Week of Weather ● Let's Look Outside ● My Weather Log ● The Seasons Unit Opener Video: Weather and Seasons	<u>NOT ADDRESSED</u>



Kindergarten Earth and Space Sciences (cont'd)

NGSS Standard			Benchmark Unit 8 Earth Science: Weather and Seasons		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1)	Weather and Climate Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)	Patterns Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1)	<u>NOT ADDRESSED</u>	Content Across Disciplines Inquiry Projects (ADDITIONAL RESOURCES tab): Make a Weather Calendar, Learn about Weather Patterns. These projects contain the content but lack the practices of active investigation. All weather data is obtained through charts and reading.	<u>NOT ADDRESSED</u>

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CA FOSS: Trees Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data	Weather and Climate	Patterns
Investigation 3 Part 9 Focus Question (Step 6) <ul style="list-style-type: none"> • How did your tree change in the spring? • How did your tree change in the fall? • How did your tree change in the winter? • How are some trees different from others? 	Investigation 3 Part 3 Focus Question (include in Step 5) How do trees change through the seasons?	Investigation 3 Part 7 Focus Question (include in Step 2) How is a spring twig different from a winter twig?



Kindergarten Earth and Space Sciences (cont'd)

NGSS Standard	Benchmark Unit 8 Earth Science: Weather and Seasons
K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	<u>NOT ADDRESSED</u> Multisensory observations, developing/using models, planning/carrying out investigations. More asking questions and child generated questions, analyzing data from various sources and experiences, creating arguments from evidence and experiences, connections to mathematics and computational thinking, constructing explanations.

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CA FOSS: Trees Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Construct an argument with evidence to support a claim. (K-ESS2-2)	Biogeology Plants and animals can change their environment. (K-ESS2-2)	Systems and System Models Systems in the natural and designed world have parts that work together. (K-ESS2-2)
Investigation 3 Part 8 Focus Question (include in Step 3) <ul style="list-style-type: none"> How is bark from different trees the same? How is bark from different trees different? 	Investigation 3 Part 1 Focus Question (include in Step 4) <ul style="list-style-type: none"> What tree things did you find under the tree? What things did you find under the tree that were not from the tree? 	Investigation 3 Part 2 Focus Question (include in Step 6) What are some of the foods that come from trees?



Kindergarten Earth and Space Sciences (cont'd)

NGSS Standard	Benchmark Unit 8 Earth Science: Weather and Seasons
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.	<u>NOT ADDRESSED</u> Multisensory observations, developing/using models, planning/carrying out investigations. More asking questions and child generated questions, analyzing data from various sources and experiences, creating arguments from evidence and experiences, connections to mathematics and computational thinking, constructing explanations.

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Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Developing and Using Models Use a model to represent relationships in the natural world. (K-ESS3-1)	Natural Resources Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)	Systems and System Models Systems in the natural and designed world have parts that work together. (K-ESS3-1)
Investigation 1 Part 5 Focus Question (include in Step 4) Starting from the bottom and going up, what are the four main parts of a tree?	Investigation 1 Part 2 Focus Question (Step 8) What do trees need to live?	Investigation 1 Part 6 Focus Question (Step 4) What are the parts of trees?



Kindergarten Earth and Space Sciences (cont'd)

NGSS Standard			Benchmark Unit 8 Earth Science: Weather and Seasons		
K-ESS3-2. Ask questions to obtain information about the <i>purpose of weather forecasting to prepare for, and respond to severe weather.</i>			Benchmark Essential Question How do our lives change with the seasons?		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Disciplinary Core Ideas	Disciplinary Core Ideas	Crosscutting Concepts
Asking Questions and Defining Problems Ask questions based on observations to find more information about the designed world. (K-ESS3-2)	Natural Hazards Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)	Cause and Effect Events have causes that generate observable patterns. (K-ESS3-2)	<u>NOT ADDRESSED</u>	Whole Group Text: <ul style="list-style-type: none"> How is the Weather? p.14 (My Shared Reading) The Coolest Vacation pp.24-27 (Mentor Read-Aloud) Small Group Text: <ul style="list-style-type: none"> A Week of Weather Let's Look Outside My Weather Log The Seasons Content Across Disciplines Inquiry Projects (ADDITIONAL RESOURCES tab): Be a Weather Reporter	<u>NOT ADDRESSED</u>



Kindergarten Earth and Space Sciences (cont'd)

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CA FOSS: Trees Investigation 3

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Asking Questions and Defining Problems Ask questions based on observations to find more information about the designed world. (K-ESS3-2)	Natural Hazards Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)	Cause and Effect Events have causes that generate observable patterns. (K-ESS3-2)
Investigation 3 Part 6 Focus Questions (Step 7) <ul style="list-style-type: none"> • How do trees change in the winter? • Why are some trees called evergreen? 	Not addressed at this time	Investigation 3 Part 3 Focus Question (Step 8) <ul style="list-style-type: none"> • How does the weather change from day to day?

NGSS Standard	Benchmark Unit 8 Earth Science: Weather and Seasons
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 align="center"><u>NOT ADDRESSED</u></p> Multisensory observations, developing/using models, planning/carrying out investigations. More asking questions and child generated questions, analyzing data from various sources and experiences, creating arguments from evidence and experiences, connections to mathematics and computational thinking, constructing explanations.



Kindergarten Earth and Space Sciences (cont'd)

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CA FOSS: Trees Investigation 1 & 3

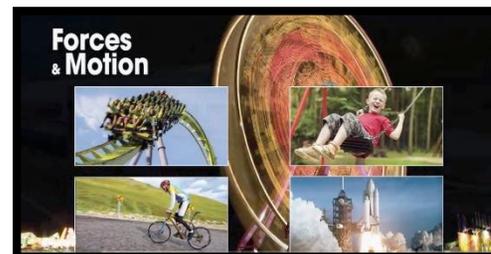
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Obtaining, Evaluating, and Communicating Information Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)	Human Impacts on Earth Systems Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)	Cause and Effect Events have causes that generate observable patterns. (K-ESS3-3)
Investigation 3 Parts 1 and 2 Focus Questions (Include in Step 6) <ul style="list-style-type: none"> • Why are trees important? • What are some of the foods that come from trees? 	Investigation 3 Part 3 Focus Questions (Step 7) <ul style="list-style-type: none"> • How are trees resources? • What do they provide for us? • What do they provide for animals? 	Investigation 1 Part 8 Focus Question (Step 8) How does the weather change from day to day?

NGSS Standard	Benchmark Unit 8 Earth Science: Weather and Seasons
ETS1.A: Defining and Delimiting an Engineering Problem Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)	<u>NOT ADDRESSED</u>
ETS1.B: Developing Possible Solutions Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary to K-ESS3-3)	<u>NOT ADDRESSED</u>



Kindergarten NGSS/Benchmark Alignment

Physical Science



K-Physical Science2 (K-PS2) Motion and Stability: Forces and Interactions
K-Physical Science3 (K-PS3) Energy

Benchmark Unit 10 Physical Science: Forces and Motion

NGSS Standard

Benchmark

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.

Benchmark Essential Question
What makes things move?

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations</p> <p>With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)</p>	<p>Forces and Motion</p> <ul style="list-style-type: none"> Pushes and pulls can have different strengths and directions. (K-PS2-1) Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1) 	<p>Cause and Effect</p> <p>Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1)</p>	<p>NOT ADDRESSED</p>	<p>Whole Group Text:</p> <ul style="list-style-type: none"> Forces (Content Connections) What Can a Magnet Do p.20 (My Shared Reading) <p>Small Group Text:</p> <ul style="list-style-type: none"> Magnets <p>Unit Opener Video: What Makes Things Move</p> <p>Content Across Disciplines Inquiry Projects (Additional Resources tab): Have a Balloon Race, Make an Alphabet Book About Motion</p>	<p>NOT ADDRESSED</p>

Kindergarten Physical Science Continued

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CA FOSS: *Wood and Paper Investigations 1 & 2*

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations	Forces and Motion	Cause and Effect
Investigation 1 Part 5 Focus Questions (Step 10) <ul style="list-style-type: none"> How did you test the wood? What did you find out? 	Investigation 2 Part 1 Focus Question (Step 9) How can you change the shape of wood?	Investigation 1 Part 4 Focus Question (Step 7) Why does adding paper clips make the wood sink?

NGSS Standard			Benchmark		
K-PS2-2. Analyze data to determine if a design solution works as intended to change the <i>speed or direction of an object with a push or a pull.</i>			Benchmark Essential Question What makes things move?		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2)	Forces and Motion <ul style="list-style-type: none"> Pushes and pulls can have different strengths and directions. (K-PS2-2) Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-2) 	Cause and Effect Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-2)	<u>NOT ADDRESSED</u>	Whole Group Text: <ul style="list-style-type: none"> How Many Ways Can You Move p.14 (My Shared Reading) Up in the Air pp.46-47 (Mentor Read-Aloud) What Makes a Soccer Ball Fly p.18 (My Shared Reading) Motion (Content Connections) Small Group Text: <ul style="list-style-type: none"> What is Slow? What is Fast? Content Across Disciplines Inquiry Projects (ADDITIONAL RESOURCES tab): Have a Balloon Race, Marble Investigation	<u>NOT ADDRESSED</u>



Kindergarten Physical Science Continued

The information below cites correlations to FOSS CA to address what is missing from the standard(s) listed in Benchmark. The complete Kindergarten NGSS standards can be found at: <https://tinyurl.com/KindergartenCANGSS>

FOSS CA: Wood and Paper

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data	Forces and Motion	Cause and Effect
Not available at this time	Not available at this time	Not available at this time

NGSS Standard	Benchmark
K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	<u>NOT ADDRESSED</u>

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CA FOSS: *Wood and Paper Investigation 3*

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)	Conservation of Energy and Energy Transfer Sunlight warms Earth's surface. (K-PS3-1)	Cause and Effect Events have causes that generate observable patterns. (K-PS3-1)
Investigation 3 Part 4 Focus Questions (Step 9) <ul style="list-style-type: none"> • Which papers stayed the same, and which changed? • How did they change? 	Investigation 3 Part 4 Focus Question (Step 7) What happened to the water?	Investigation 3 Part 4 Focus Questions (Step 9) <ul style="list-style-type: none"> • What happens when paper gets wet? • What happens when it dries? • Does it look the same?



Kindergarten Physical Science Continued

NGSS Standard	Benchmark Unit 10 Physical Science States of Matter
K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	<u>NOT ADDRESSED</u>

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CA FOSS: *Wood and Paper* Investigation 4

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Constructing Explanations and Designing Solutions Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)	Conservation of Energy and Energy Transfer Sunlight warms Earth’s surface. (K-PS3-2)	Cause and Effect Events have causes that generate observable patterns. (K-PS3-2)
Investigation 4 Part 1 Focus Question (Step 10) How did you get new paper from old paper?	Not available at this time	Investigation 4 Part 1 Focus Question: <ul style="list-style-type: none"> • How did is the paper you made different than the paper you started with? • How is it the same?

