



ORGANIZING THEME/TOPIC

FOCUS STANDARDS & SKILLS

<p>Unit 1: Weather Patterns and Predictions</p> <p>Bring Science Alive! Unit 3: Weather and Climate Lessons 1 - 5</p> <p>Suggested Time Frame: 39 days</p>	<p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> Analyzing and Interpreting Data - Represent data in tables and various graphical displays to reveal patterns that indicate relationships. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> ESS2.D: Weather and Climate - Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> Patterns - Patterns of change can be used to make predictions.
<p>Unit 2: Climates of the World</p> <p>Bring Science Alive! Unit 3: Weather and Climate Lessons 6</p> <p>Suggested Time Frame: 6 days</p>	<p>3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> Obtaining, Evaluating, and Communicating Information - Obtain and combine information from books and other reliable media to explain phenomena. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> ESS2.D: Weather and Climate - Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> Patterns - Patterns of change can be used to make predictions.
<p>Unit 3: Weather Related Hazards</p> <p>Bring Science Alive! Unit 3: Weather and Climate Lessons 7-8</p> <p>Suggested Time Frame: 13 days</p>	<p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> Engaging in Argument from Evidence - Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> ESS3.B: Natural Hazards - A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> Cause and Effect - Cause and effect relationships are routinely identified, tested, and used to explain change.

<p>Unit 4: Balanced and Unbalanced Forces</p> <p>Bring Science Alive! Unit 2: Forces and Motion Lessons 1 - 2</p> <p>Suggested Time Frame: 13 days</p>	<p>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.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Planning and Carrying Out Investigations - Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • PS2.A: Forces and Motion - Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. • PS2.B: Types of Interactions - Objects in contact exert forces on each other. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Cause and Effect - Cause and effect relationships are routinely identified.
<p>Unit 5: Predicting Motions</p> <p>Bring Science Alive! Unit 2: Forces and Motion Lesson 3</p> <p>Suggested Time Frame: 7 days</p>	<p>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.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Planning and Carrying Out Investigations - Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of phenomenon or test a design solution. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • PS2.A: Forces and Motion - The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Patterns - Patterns of change can be used to make predictions.

Unit 6: Magnetism and Electricity

Bring Science Alive!
Unit 2: Forces and Motion
Lessons 4- 5

Suggested Time Frame: 14 days

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-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.

Science and Engineering Practice

- **Asking Questions and Defining Problems** - Ask questions that can be investigated based on patterns such as cause and effect relationships.
- **Asking Questions and Defining Problems** - Define a simple problem that can be solved through the development of a new or improved object or tool.

Disciplinary Core Idea

- **PS2.B: Types of Interactions** - Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other.

Crosscutting Concept

- **Cause and Effect** - Cause and effect relationships are routinely identified, tested and used to explain change.
- **Interdependence of Science, Engineering and Technology** - Scientific discoveries about the natural world can often lead to new and improved technologies, which are developed through the engineering design process.

Unit 7: Survival of Organisms

Bring Science Alive!

Unit 1: Environments and Living Things
Lessons 1 - 4

3-LS2-1. Construct an argument that some animals **form groups that help** members survive.

Science and Engineering Practice

- **Engaging in Argument from Evidence** - Construct an argument with evidence, data, and/or a model

Disciplinary Core Idea

- **LS2.D: Social Interactions and Group Behavior** - Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size.

Crosscutting Concept

- **Cause and Effect** - Cause and effect relationships are routinely identified and used to explain change.

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.**

Science and Engineering Practice

- **Engaging in Argument from Evidence** - Construct an argument with evidence.

Disciplinary Core Idea

- **LS4.C: Adaptation** - For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.

Crosscutting Concept

- **Cause and Effect** - Cause and effect relationships are routinely identified and used to explain change.

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.

Science and Engineering Practice

- **Engaging in Argument from Evidence** - Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem.

Disciplinary Core Idea

- **LS4.D: Biodiversity and Humans** - Populations live in a variety of habitats, and change in those habitats affects the organisms living there.
- **LS2.C: Ecosystem Dynamics, Functioning, and Resilience** - When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die.

Crosscutting Concept

- **Systems and System Models** - A system can be described in terms of its components and their interactions.

Suggested Time Frame: 28 days

<p>Unit 8: Fossils</p> <p>Bring Science Alive! Unit 1: Environments and Living Things Lessons 5-6</p> <p>Suggested Time Frame: 15 days</p>	<p>3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Analyzing and Interpreting Data - Analyze and interpret data to make sense of phenomena using logical reasoning. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • LS4.A: Evidence of Common Ancestry and Diversity - Some kinds of plants and animals that once lived on Earth are no longer found anywhere. • LS4.A: Evidence of Common Ancestry and Diversity - Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Scale, Proportion, and Quantity - Observable phenomena exist from very short to very long time periods.
<p>Unit 9: Inheritance and Variation of Traits</p> <p>Bring Science Alive! Unit 4: Life Cycles and Traits Lessons 1 - 3</p> <p>Suggested Time Frame: 16 days</p>	<p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Analyzing and Interpreting Data - Analyze and interpret data to make sense of phenomena using logical reasoning. • Constructing Explanations and Designing Solutions - Use evidence to support an explanation. <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • LS3.A: Inheritance of Traits - Many characteristics of organisms are inherited from their parents. • LS3.A: Inheritance of Traits - Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. • LS3.B: Variation of Traits - Different organisms vary in how they look and function because they have different inherited information. • LS3.A: Inheritance of Traits - The environment also affects the traits that an organism develops. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Patterns - Similarities and differences in patterns can be used to sort and classify natural phenomena. • Cause and Effect - Cause and effect relationships are routinely identified and used to explain change.

<p>Unit 10: Natural Selection</p> <p>Bring Science Alive! Unit 4: Life Cycles and Traits Lesson 4</p> <p>Suggested Time Frame: 6 days</p>	<p>3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Constructing Explanations and Designing Solutions - Use evidence to construct an explanation <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • LS4.B: Natural Selection - Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Cause and Effect - Cause and effect relationships are routinely identified and used to explain change.
<p>Unit 11: Life Cycles</p> <p>Bring Science Alive! Unit 4: Life Cycles and Traits Lessons 5-7</p> <p>Suggested Time Frame: 22 days</p>	<p>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.</p> <p>Science and Engineering Practice</p> <ul style="list-style-type: none"> • Developing and Using Models - Develop models to describe phenomena <p>Disciplinary Core Idea</p> <ul style="list-style-type: none"> • LS1.B: Growth and Development of Organisms - Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. <p>Crosscutting Concept</p> <ul style="list-style-type: none"> • Patterns - Patterns of change can be used to make predictions.