

# Mystery Science Alignment with the Idaho Science Standards



**Mystery Science is a hands-on curriculum that aligns with Idaho's Science Standards (2022).**

Mystery Science's units of study contain:

- Hands-on, easy-prep activities with EVERY lesson
- Engaging, real-world investigative phenomena
- Thoughtful discussions to build background knowledge
- Lesson & unit assessments to evaluate comprehension
- Curated, cross-curricular extensions

**Mystery Science also offers the Anchor Layer**, which enriches the unit with an anchor phenomenon, incorporates anchor connections after each lesson, & concludes the unit with a performance task.

Kindergarten	<b>Page 3</b>
--------------	---------------

<b>Life Science</b>	<b>Page 4</b>
---------------------	---------------

Animal Needs  
Plant Needs

<b>Earth &amp; Space Science</b>	<b>Page 6</b>
----------------------------------	---------------

Severe Weather  
Weather Patterns

<b>Physical Science</b>	<b>Page 8</b>
-------------------------	---------------

Sunlight & Warmth  
Pushes & Pulls

1st Grade	<b>Page 11</b>
-----------	----------------

<b>Life Science</b>	<b>Page 12</b>
---------------------	----------------

Animal Traits & Survival  
Plant Traits & Survival

<b>Earth &amp; Space Science</b>	<b>Page 14</b>
----------------------------------	----------------

Day Patterns  
Night Patterns

<b>Physical Science</b>	<b>Page 16</b>
-------------------------	----------------

Light, Sound, & Communication

2nd Grade	<b>Page 18</b>
-----------	----------------

<b>Life Science</b>	<b>Page 19</b>
---------------------	----------------

Animal Biodiversity & Habitats  
Plant Growth & Interactions

<b>Earth &amp; Space Science</b>	<b>Page 21</b>
----------------------------------	----------------

Erosion & Earth's Surface

<b>Physical Science</b>	<b>Page 23</b>
-------------------------	----------------

Material Properties  
States of Matter

3rd Grade	<b>Page 25</b>
-----------	----------------

<b>Life Science</b>	<b>Page 26</b>
---------------------	----------------

Life Cycles  
Heredity, Survival, & Selection

<b>Earth &amp; Space Science</b>	<b>Page 29</b>
----------------------------------	----------------

Weather & Climate

<b>Physical Science</b>	<b>Page 31</b>
-------------------------	----------------

Forces, Motion, & Magnets

4th Grade	<b>Page 33</b>
-----------	----------------

<b>Life Science</b>	<b>Page 34</b>
---------------------	----------------

Human Body, Vision, & The Brain  
Animal & Plant Adaptations

<b>Earth &amp; Space Science</b>	<b>Page 36</b>
----------------------------------	----------------

Earth's Features & Processes

<b>Physical Science</b>	<b>Page 37</b>
-------------------------	----------------

Sound, Waves, & Communication  
Energy & Energy Transfer  
Electricity, Light, & Heat

5th Grade	<b>Page 41</b>
-----------	----------------

<b>Life Science</b>	<b>Page 42</b>
---------------------	----------------

Fossils & Changing Environments  
Ecosystems & The Food Web

<b>Earth &amp; Space Science</b>	<b>Page 44</b>
----------------------------------	----------------

Water Cycle & Earth's Systems  
Earth & Space Patterns  
Stars & Planets

<b>Physical Science</b>	<b>Page 48</b>
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Chemical Reactions &  
Properties of Matter

### All Kindergarten Units • Units may be taught in any order



[Page 4 • Web Link](#)

#### Idaho Science Standards:

- K-LS-1.1
- K-ESS-1.2
- K-ESS-2.1

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



[Page 5 • Web Link](#)

#### Idaho Science Standards:

- K-LS-1.1
- K-ESS-1.2
- K-ESS-2.3

#### Unit Breakdown:

- 3 Lessons & Activities
- 2 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 6 • Web Link](#)

#### Idaho Science Standards:

- K-ESS-1.1
- K-ESS-2.2

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 7 • Web Link](#)

#### Idaho Science Standards:

- K-ESS-1.1
- K-ESS-1.2

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 8 • Web Link](#)

#### Idaho Science Standards:

- K-PS-2.1
- K-PS-2.2

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 9 • Web Link](#)

#### Idaho Science Standards:

- K-PS-1.1
- K-PS-1.2

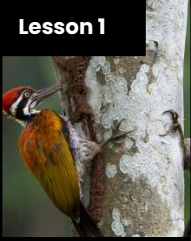
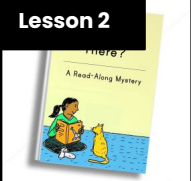

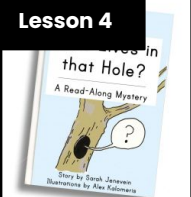
#### Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks

#### Anchor Layer Adds:





- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task

### Animal Needs (Animal Secrets)




	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Animal Needs: Food</b> Why do woodpeckers peck wood?	<b>K-LS-1.1</b> Use observations to describe how plants and animals are alike and different in terms of how they live and grow.  <b>K-ESS-1.2</b> With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.	Obtaining, Evaluating, and Communicating Information  Engaging in Argument from Evidence	<b>LS1.C.</b> Organization for Matter and Energy Flow in Organisms	Patterns
<b>Lesson 2</b> 	<b>Animal Needs: Shelter</b> Where do animals live?	<b>Foundational for K-ESS-2.1</b> Use a model to represent the relationship between the needs of different plants and animals and the places they live.	Obtaining, Evaluating, and Communicating Information	<b>ESS3.A.</b> Natural Resources	Patterns  Systems and System Models
<b>Lesson 3</b> 	<b>Animal Needs: Safety</b> How can you find animals in the woods?	<b>K-ESS-1.2</b> With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.	Obtaining, Evaluating, and Communicating Information  Engage in Argument from Evidence	<b>LS1.C.</b> Organization for Matter and Energy Flow in Organisms	Patterns
<b>Lesson 4</b> 	<b>Animals &amp; Changing the Environment</b> How do animals make their homes in the forest?	<b>Foundational for K-ESS-2.1</b> Use a model to represent the relationship between the needs of different plants and animals and the places they live.	Obtaining, Evaluating, and Communicating Information	<b>ESS2.E.</b> Biogeology	Systems and System Models



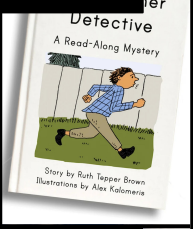


### Plant Needs (Plant Secrets)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Living &amp; Nonliving</b> Are plants alive?	<b>K-LS-1.1</b> Use observations to describe how plants and animals are alike and different in terms of how they live and grow.	Analyzing and Interpreting Data	<b>LS1.C:</b> Organization for Matter and Energy Flow in Organisms	Patterns
<b>Lesson 2</b> 	<b>Plant Needs: Water &amp; Light</b> How do plants and trees grow?	<b>K-ESS-1.2</b> With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.	Planning and Carrying Out Investigations Analyzing and Interpreting Data	<b>LS1.C:</b> Organization for Matter and Energy Flow in Organisms	Patterns Cause and Effect
<b>Lesson 3</b> 	 <b>Human Impacts on the Environment</b> Why would you want an old log in your backyard?	<b>K-ESS-2.3</b> Communicate ideas that would enable humans to interact in a beneficial way with the land, water, air, and/or other living things in the local environment.	Obtaining, Evaluating, and Communicating Information	<b>ESS3.C:</b> Human Impacts on Earth Systems	Cause and Effect

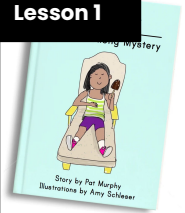


### Severe Weather (Wild Weather)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Severe Weather &amp; Preparation</b> How can you get ready for a big storm?	<b>K-ESS-2.2</b> Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, local weather.	Obtaining, Evaluating, and Communicating Information	<b>ESS3.B:</b> Natural Hazards  <b>ESS2.D:</b> Weather and Climate	Cause and Effect
<b>Lesson 2</b> 	<b>Wind &amp; Storms</b> Have you ever watched a storm?	<b>K-ESS-1.1</b> Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Asking Questions and Defining Problems  Obtaining, Evaluating, and Communicating Information	<b>ESS3.B:</b> Natural Hazards  <b>ESS2.D:</b> Weather and Climate	Cause and Effect
<b>Lesson 3</b> 	<b>Weather Conditions</b> How many different kinds of weather are there?	<b>K-ESS-1.1</b> Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Analyzing and Interpreting Data	<b>ESS2.D:</b> Weather and Climate	Patterns


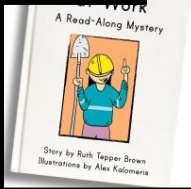


### Weather Patterns (Circle of Seasons)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Daily Weather Patterns</b>  How do you know what to wear for the weather?	<b>K-ESS-1.1</b> Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Analyzing and Interpreting Data  Obtaining, Evaluating, and Communicating Information  Asking Questions and Defining Problems	<b>ESS2.D:</b> Weather and Climate	Patterns
<b>Lesson 2</b> 	<b>Seasonal Weather Patterns</b>  What will the weather be like on your birthday?	<b>K-ESS-1.1</b> Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Obtaining, Evaluating, and Communicating Information  Engaging in Argument from Evidence	<b>ESS2.D:</b> Weather and Climate	Patterns  Systems and System Models
<b>Lesson 3</b> 	<b>Animals Changing their Environment</b>  Why do birds lay eggs in the spring?	<b>K-ESS-1.2</b> With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.  <b>K-ESS-1.1</b> Use and share observations of local weather conditions to describe variations in patterns throughout the year.	Developing and Using Models	<b>ESS2.D:</b> Weather and Climate  <b>ESS2.E:</b> Biogeology	Structure and Function

### Sunlight & Warmth (Sunny Skies)


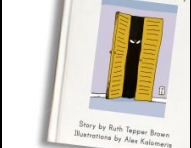
	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Sunlight, Heat, &amp; Earth's Surface</b>  How could you walk barefoot across hot pavement without burning your feet?	<b>K-PS-2.1</b> Make observations to determine the effect the Sun's energy on Earth's surface.  <b>K-PS-2.2</b> Design and build a structure that will reduce the warming effect of the Sun's energy on a material.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions	<b>PS3.B:</b> Conservation of Energy and Energy Transfer  <b>ETS1.A:</b> Defining and Delimiting an Engineering Problem	Cause and Effect  Structure and Function
<b>Lesson 2</b> 	<b>Sunlight, Warming, &amp; Engineering</b>  How could you warm up a frozen playground?	<b>K-PS-2.1</b> Make observations to determine the effect the Sun's energy on Earth's surface.  <b>K-PS-2.2</b> Design and build a structure that will reduce the warming effect of the Sun's energy on a material.*	Asking Questions and Defining Problems  Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS3.B:</b> Conservation of Energy and Energy Transfer  <b>ETS1.A:</b> Defining and Delimiting an Engineering Problem  <b>ETS1.C:</b> Optimizing the Design Solution	Cause and Effect
<b>Lesson 3</b> 	<b>Sunlight &amp; Warmth</b>  Why does it get cold in winter?	<b>K-PS-2.1</b> Make observations to determine the effect the Sun's energy on Earth's surface.	Planning and Carrying Out Investigations	<b>PS3.B:</b> Conservation of Energy and Energy Transfer	Cause and Effect

### Pushes & Pulls (Force Olympics) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Pushes &amp; Pulls</b>  What's the biggest excavator?	<b>Foundational for K-PS-1.1</b> With guidance and support, plan and conduct an investigation to compare the effects of different strengths or different directions of pulls on the motion of an object.	Constructing Explanations and Designing Solutions	<b>PS2.A:</b> Forces and Motion  <b>PS2.B:</b> Types of Interactions  <b>PS3.C:</b> Relationship Between Energy and Forces	Cause and Effect
<b>Lesson 2</b> 	<b>Pushes, Pulls, &amp; "Work Words"</b>  Why do builders need so many big machines?	<b>Foundational for K-PS-1.1</b> With guidance and support, plan and conduct an investigation to compare the effects of different strengths or different directions of pulls on the motion of an object.	Obtaining, Evaluating, and Communicating Information	<b>PS2.A:</b> Forces and Motion  <b>PS2.B:</b> Types of Interactions  <b>PS3.C:</b> Relationship Between Energy and Forces	Cause and Effect
<b>Lesson 3</b> 	<b>Motion, Speed, &amp; Strength</b>  How can you knock down a wall made of concrete?	<b>K-PS-1.1</b> With guidance and support, plan and conduct an investigation to compare the effects of different strengths or different directions of pulls on the motion of an object.	Planning and Carrying Out Investigations  Developing and Using Models	<b>PS2.A:</b> Forces and Motion  <b>PS2.B:</b> Types of Interactions  <b>PS3.C:</b> Relationship Between Energy and Forces	Cause and Effect
<b>Lesson 4</b> 	<b>Speed &amp; Direction of Force</b>  How can you knock down the most bowling pins?	<b>Foundational for K-PS-1.1</b> With guidance and support, plan and conduct an investigation to compare the effects of different strengths or different directions of pulls on the motion of an object.	Planning and Carrying Out Investigations	<b>PS2.A:</b> Forces and Motion	Cause and Effect

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### Pushes & Pulls (Force Olympics) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 5</b> 	<b>Direction of Motion &amp; Engineering</b>  How can we protect a mountain town from falling rocks?	<b>K-PS-1.2</b> With guidance and support, analyze data to determine if a design solution works as intended to change the motion of an object with a push or a pull.	Developing and Using Models  Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS2.A:</b> Forces and Motion  <b>ETS1.A:</b> Defining Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Cause and Effect
<b>Lesson 6</b> 	<b>Forces &amp; Engineering</b>  How could you invent a trap?	<b>Foundational for K-PS-1.2</b> With guidance and support, analyze data to determine if a design solution works as intended to change the motion of an object with a push or a pull. as needed to solve a given problem.	Constructing Explanations and Designing Solutions	<b>ETS1.B:</b> Developing Possible Solutions	Structure and Function



### All 1st Grade Units • Units may be taught in any order



[Page 12 • Web Link](#)

#### Idaho Science Standards:

- 1-LS-1.1
- 1-LS-1.2
- 1-LS-2.1

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



[Page 13 • Web Link](#)

#### Idaho Science Standards:

- 1-LS-1.1
- 1-LS-2.1

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 14 • Web Link](#)

#### Idaho Science Standards:

- 1-ESS-1.1
- 1-ESS-1.2

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



[Page 15 • Web Link](#)

#### Idaho Science Standards:

- 1-ESS-1.1

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



[Page 16 • Web Link](#)

#### Idaho Science Standards:

- 1-PS-1.1
- 1-PS-1.2
- 1-PS-1.3
- 1-PS-1.4



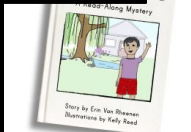



#### Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks



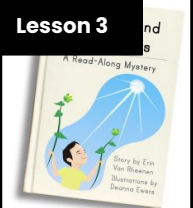
#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task

### ✓ Animal Traits & Survival (Animal Superpowers)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Parent &amp; Offspring Traits</b>  How can you help a lost baby animal find its parents?	<b>1-LS-2.1</b> Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents.	Constructing Explanations and Designing Solutions	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits	Patterns
<b>Lesson 2</b> 	✨ New! ✨ <b>Offspring Trait Variation</b>  Can you predict what an animal's babies will look like?	<b>1-LS-2.1</b> Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents.	Constructing Explanations and Designing Solutions	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits	Patterns
<b>Lesson 3</b> 	 <b>Animal Behavior &amp; Offspring Survival</b>  Why do baby ducks follow their mother?	<b>Foundational for 1-LS-1.2</b> Obtain information to identify patterns of behavior in parents and offspring that help offspring survive.	Obtaining, Evaluating, and Communicating Information	<b>LS1.B:</b> Growth and Development of Organisms	Patterns
<b>Lesson 4</b> 	<b>Animal Structures &amp; Survival</b>  Why do birds have beaks?	<b>1-LS-2.1</b> Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents.	Developing and Using Models  Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>LS1.A:</b> Structure and Function	Patterns  Structure and function
<b>Lesson 5</b> 	<b>Camouflage &amp; Animal Survival</b>  Why are polar bears white?	<b>1-LS-1.1</b> Design and build 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.	Developing and Using Models  Planning and Carrying Out Investigations  Engaging in Argument from Evidence	<b>LS1.B:</b> Growth and Development of Organisms	Patterns  Structure and function

### Plant Traits & Survival (Plant Superpowers)


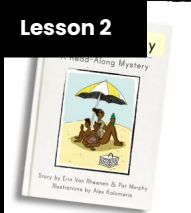

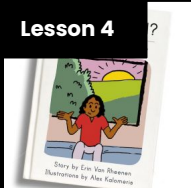
	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Plant Traits &amp; Offspring</b>  What will a baby plant look like when it grows up?	<b>1-LS-2.1</b> Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents.	Constructing Explanations and Designing Solutions	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits	Patterns
<b>Lesson 2</b> 	<b>Plant Survival &amp; Engineering</b>  Why don't trees blow down in the wind?	<b>1-LS-1.1</b> Design and build 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.	Developing and Using Models  Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>LS1.A:</b> Structure and Function  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Structure and function
<b>Lesson 3</b> 	<b>Plant Movement &amp; Survival</b>  What do sunflowers do when you're not looking?	<b>1-LS-1.1</b> Design and build 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.	Constructing Explanations and Designing Solutions	<b>LS1.A:</b> Structure and Function  <b>LS1.D:</b> Information Processing	Structure and function

#### Idaho Specific Standard:





**1-LS-1.3** Use classification supported by evidence to differentiate between living and non-living items.

This standard is covered in Kindergarten with the Mystery Science lesson ***Are plants alive?***





### Day Patterns (Sun & Shadows)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Sun, Shadows, &amp; Daily Patterns</b>  Could a statue's shadow move?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>ESS1.A:</b> The Universe and its Stars	Patterns
<b>Lesson 2</b> 	<b>Sun, Shadows, &amp; Daily Patterns</b>  What does your shadow do when you're not looking?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Analyzing and Interpreting Data	<b>ESS1.A:</b> The Universe and its Stars	Patterns
<b>Lesson 3</b> 	<b>Sun &amp; Daily Patterns</b>  How can the Sun help you if you're lost?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Developing and Using Models  Engaging in Argument from Evidence	<b>ESS1.A:</b> The Universe and its Stars	Patterns
<b>Lesson 4</b> 	<b>Daylight &amp; Seasonal Patterns</b>  Why do you have to go to bed early in the summer?	<b>1-ESS-1.2</b> Make observations at different times of year to relate the amount of daylight to the time of year.	Obtaining, Evaluating, and Communicating Information	<b>ESS1.B:</b> Earth and the Solar System	Patterns

### Night Patterns (Moon & Stars)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Moon Phases &amp; Patterns</b>  When can you see the full moon?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Analyzing and Interpreting Data	<b>ESS1.A:</b> The Universe and its Stars	Patterns
<b>Lesson 2</b> 	<b>Stars &amp; Daily Patterns</b>  Why do stars come out at night?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Developing and Using Models  Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>ESS1.A:</b> The Universe and its Stars	Patterns  Cause and Effect
<b>Lesson 3</b> 	 <b>Stars &amp; Seasonal Patterns</b>  How can stars help you if you get lost?	<b>1-ESS-1.1</b> Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Obtaining, Evaluating, and Communicating Information	<b>ESS1.A:</b> The Universe and its Stars	Patterns




### Light, Sound, & Communication (Lights & Sounds) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Sounds &amp; Vibrations</b> How do they make silly sounds in cartoons?	<b>1-PS-1.1</b> With guidance and support, plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	Constructing Explanations and Designing Solutions	<b>PS4.A:</b> Wave Properties	Cause and Effect
<b>Lesson 2</b> 	<b>Sounds &amp; Vibrations</b> Where do sounds come from?	<b>1-PS-1.1</b> With guidance and support, plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	Constructing Explanations and Designing Solutions	<b>PS4.A:</b> Wave Properties	Cause and Effect
<b>Lesson 3</b> 	<b>Light, Materials, Transparent &amp; Opaque</b> What if there were no windows?	<b>1-PS-1.3</b> With guidance and support, plan and conduct investigations to determine the effect of placing materials in the path of a beam of light.	Planning and Carrying Out Investigations Engaging in Argument from Evidence	<b>PS4.B:</b> Electromagnetic Radiation	Cause and Effect
<b>Lesson 4</b> 	<b>Light &amp; Illumination</b> Can you see in the dark?	<b>1-PS-1.2</b> With guidance and support, make observations to construct an evidence-based explanation that objects in darkness can be seen only when illuminated.	Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	<b>PS4.B:</b> Electromagnetic Radiation	Cause and Effect

Continued on next page



### Light, Sound, & Communication (Lights & Sounds) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 5</b> 	<b>Light, Communication, &amp; Engineering</b>  How could you send a secret message to someone far away?	<b>1-PS-1.4</b> Design and build a device that uses light or sound to communicate over a distance.	Constructing Explanations and Designing Solutions	<b>PS4.C:</b> Information Technologies and Instrumentation  <b>ETS1.B:</b> Developing Possible Solutions	Patterns
<b>Lesson 6</b> 	 <b>Lights, Sounds, &amp; Communication</b>  How do boats find their way in the fog?	<b>Foundational for 1-PS-1.4</b> Design and build a device that uses light or sound to communicate over a distance.	Obtaining, Evaluating, and Communicating Information	<b>PS4.C:</b> Information Technologies and Instrumentation	Patterns

### All 2nd Grade Units • Units may be taught in any order



[Page 19 • Web Link](#)

#### Idaho Science Standards:

- 2-LS-2.1

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



[Page 20 • Web Link](#)

#### Idaho Science Standards:

- 2-LS-1.1
- 2-LS-1.2

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



[Page 21 • Web Link](#)

#### Idaho Science Standards:

- 2-ESS-1.1
- 2-ESS-2.1
- 2-ESS-2.2
- 2-ESS-2.3

#### Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task



[Page 23 • Web Link](#)

#### Idaho Science Standards:

- 2-PS-1.1
- 2-PS-1.2
- 2-PS-1.3
- 2-PS-1.4

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



[Page 24 • Web Link](#)

#### Idaho Science Standards:

- 2-ESS-2.3
- 2-PS-1.3
- 2-PS-1.4


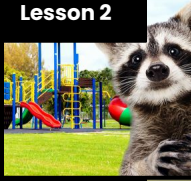


#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

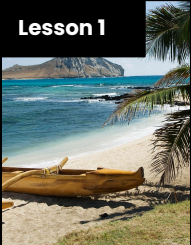



#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

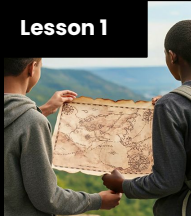




### Animal Biodiversity & Habitats (Animal Adventures)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Biodiversity &amp; Classification</b>  How many different kinds of animals are there?	<b>Foundational for 2-LS-2.1</b> Make observations of plants and animals to compare the diversity of life in different habitats.	Obtaining, Evaluating, and Communicating Information	<b>LS4.D:</b> Biodiversity and Humans	Patterns
<b>Lesson 2</b> 	<b>Habitat Diversity</b>  Why would a wild animal visit a playground?	<b>2-LS-2.1</b> Make observations of plants and animals to compare the diversity of life in different habitats.	Analyzing and Interpreting Data  Planning and Carrying Out Investigations	<b>LS4.D:</b> Biodiversity and Humans	Patterns
<b>Lesson 3</b> 	<b>Biodiversity, Habitats, &amp; Species</b>  Why do frogs say "ribbit"?	<b>2-LS-2.1</b> Make observations of plants and animals to compare the diversity of life in different habitats.	Analyzing and Interpreting Data  Engaging in Argument from Evidence	<b>LS4.D:</b> Biodiversity and Humans	Patterns
<b>Lesson 4</b> 	<b>Biodiversity &amp; Engineering</b>  How could you get more birds to visit a bird feeder?	<b>2-LS-2.1</b> Make observations of plants and animals to compare the diversity of life in different habitats.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions  Developing and Using Models	<b>LS4.D:</b> Biodiversity and Humans	Cause and Effect

### Plant Growth & Interactions (Plant Adventures)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Seed Dispersal</b> How did a tree travel halfway around the world?	<b>Foundational for 2-LS-1.2</b> Develop a model that demonstrates how plants depend on animals for pollination or the dispersal of seeds.	Developing and Using Models Planning and Carrying Out Investigations	<b>LS2.A:</b> Interdependent Relationships in Ecosystems	Structure and Function
<b>Lesson 2</b> 	<b>Animal Seed Dispersal</b> Why do seeds have so many different shapes?	<b>2-LS-1.2</b> Develop a model that demonstrates how plants depend on animals for pollination or the dispersal of seeds.	Developing and Using Models	<b>LS2.A:</b> Interdependent Relationships in Ecosystems	Structure and Function
<b>Lesson 3</b> 	<b>Water, Sunlight, &amp; Plant Growth</b> Could a plant survive without light?	<b>2-LS-1.1</b> Plan and conduct an investigation to determine the impact of light and water on the growth of plants.	Planning and Carrying Out Investigations Analyzing and Interpreting Data	<b>LS2.A:</b> Interdependent Relationships in Ecosystems	Cause and Effect
<b>Lesson 4</b> 	<b>Plant Needs &amp; Habitats</b> How much water should you give a plant?	<b>2-LS-1.1</b> Plan and conduct an investigation to determine the impact of light and water on the growth of plants.	Planning and Carrying Out Investigations	<b>LS2.A:</b> Interdependent Relationships in Ecosystems	Cause and Effect


### Erosion & Earth's Surface (Work of Water) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<p>🌟 New! 🌟</p> <p><b>Mapping Landforms &amp; Bodies of Water</b></p> <p>Where's the best place to hide a treasure?</p>	<p><b>2-ESS-2.2</b> Develop a model to represent the shapes and kinds of land and bodies of water in an area.</p>	<p>Developing and Using Models</p>	<p><b>ESS2.B:</b> Plate Tectonics and Large-Scale System Interactions</p>	<p>Patterns</p>
<b>Lesson 2</b> 	<p><b>Mapping: Mountains &amp; Rivers</b></p> <p>If you floated down a river, where would you end up?</p>	<p><b>2-ESS-2.2</b> Develop a model to represent the shapes and kinds of land and bodies of water in an area.</p>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p><b>ESS2.B:</b> Plate Tectonics and Large-Scale System Interactions</p> <p><b>ESS2.C:</b> The Roles of Water in Erosion &amp; Earth's Surface</p>	<p>Patterns</p>
<b>Lesson 3</b> 	<p><b>Rocks, Sand, &amp; Erosion</b></p> <p>Why is there sand at the beach?</p>	<p><b>2-ESS-2.2</b> Develop a model to represent the shapes and kinds of land and bodies of water in an area.</p>	<p>Planning and Carrying Out Investigations</p> <p>Developing and Using Models</p>	<p><b>ESS2.B:</b> Plate Tectonics and Large-Scale System Interactions</p>	<p>Cause and Effect</p> <p>Stability and Change</p>
<b>Lesson 4</b> 	<p><b>Mapping &amp; Severe Weather</b></p> <p>Where do flash floods happen?</p>	<p><b>2-ESS-2.2</b> Develop a model to represent the shapes and kinds of land and bodies of water in an area.</p> <p><b>2-ESS-1.1</b> Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p>	<p>Developing and Using Models</p>	<p><b>ESS2.B:</b> Plate Tectonics and Large-Scale System Interactions</p>	<p>Patterns</p>
<b>Lesson 5</b> 	<p><b>Erosion, Earth's Surface, &amp; Landforms</b></p> <p>What's strong enough to make a canyon?</p>	<p><b>2-ESS-1.1</b> Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p>	<p>Planning and Carrying Out Investigations</p> <p>Constructing Explanations and Designing Solutions</p>	<p><b>ESS1.C:</b> The History of Planet Earth</p> <p><b>ESS2.A:</b> Earth Materials and Systems</p>	<p>Cause and Effect</p> <p>Stability and Change</p>

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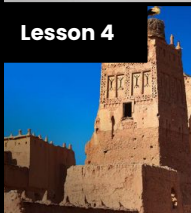
🌟 New Lesson

### Erosion & Earth's Surface (Work of Water) • Page 2 of 2




	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 6</b> 	<b>Erosion &amp; Engineering</b>  How can you stop a landslide?	<b>2-ESS-2.1</b> Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions	<b>ESS1.C:</b> The History of Planet Earth  <b>ESS2.A:</b> Earth Materials and Systems  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Stability and Change  Structure and Function



### ✓ Material Properties (Material Magic)

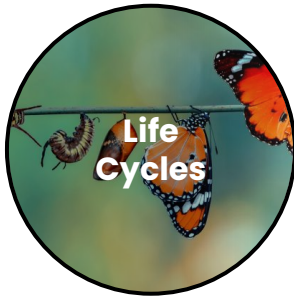
	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Material Properties &amp; Engineering</b>  Why do we wear clothes?	<b>2-PS-1.1</b> Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.  <b>2-PS-1.2</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Asking Questions and Defining Problems  Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS1.A:</b> Structure and Properties of Matter  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions	Patterns  Cause and Effect
<b>Lesson 2</b> 	<b>Classify Materials: Insulators &amp; Conductors</b>  Can you really fry an egg on a hot sidewalk?	<b>2-PS-1.2</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>PS1.A:</b> Structure and Properties of Matter	Patterns  Cause and Effect
<b>Lesson 3</b> 	<b>Material Building Blocks &amp; Engineering</b>  Could you build a house out of paper?	<b>2-PS-1.3</b> Make observations to construct an evidence-based argument that objects, when disassembled, may be used to create new objects using the same set of components.	Constructing Explanations and Designing Solutions  Developing and Using Models	<b>PS1.A:</b> Structure and Properties of Matter  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Energy and Matter  Cause and Effect
<b>Lesson 4</b> 	<b>Soil Properties</b>  How do you build a city out of mud?	<b>2-PS-1.1</b> Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.  <b>2-PS-1.2</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>PS1.A:</b> Structure and Properties of Matter	Patterns

### ★ States of Matter (States of Matter)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<p>★ New! ★</p> <p><b>Liquid Water &amp; Solid Ice</b></p> <p>Where do animals find the water they need?</p>	<p><b>2-ESS-2.3</b> Obtain information to identify where water is found on Earth and that it can be solid or liquid.</p>	<p>Obtaining, Evaluating, and Communicating Information</p>	<p><b>ESS2.C:</b> The Roles of Water in Earth's Surface Processes</p>	<p>Patterns</p>
<b>Lesson 2</b> 	<p>★ New! ★</p> <p><b>Reversible &amp; Irreversible Changes</b></p> <p>How is an ice cube like a crayon?</p>	<p><b>2-PS-1.4</b> Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p>	<p>Engaging in Argument from Evidence</p> <p>Planning and Carrying Out Investigations</p>	<p><b>PS1.B:</b> Chemical Reactions</p>	<p>Cause and Effect</p>
<b>Lesson 3</b> 	<p><b>Heating, Cooling, &amp; States of Matter</b></p> <p>Why are so many toys made out of plastic?</p>	<p><b>2-PS-1.2</b> Analyse data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</p> <p><b>2-PS-1.4</b> Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p><b>PS1.A:</b> Structure and Properties of Matter</p> <p><b>PS1.B:</b> Chemical Reactions</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>

★ New Unit or Lesson

### All 3rd Grade Units • Units may be taught in any order.



Page 26 • Web Link

#### Idaho Science Standards:

- 3-LS1.1
- 3-LS3.3

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



Page 27 • Web Link

#### Idaho Science Standards:

- 3-LS-2.1
- 3-LS-3.1
- 3-LS-3.2
- 3-LS-3.3

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



Page 29 • Web Link

#### Idaho Science Standards:

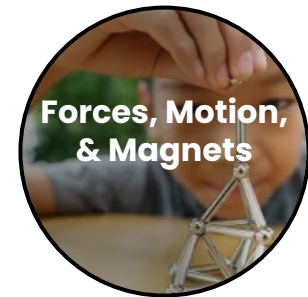
- 3-ESS-1.1
- 3-ESS-1.2
- 3-ESS-2.1

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



Page 31 • Web Link

#### Idaho Science Standards:

- 3-PS-1.1
- 3-PS-1.2
- 3-PS-1.3
- 3-PS-1.4



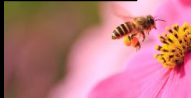


#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment


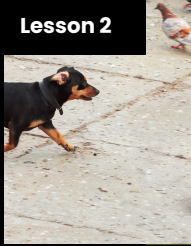

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

### Life Cycles (Circle of Life)



	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Animal Life Cycles</b> How is your life like an alligator's life?	<b>3-LS-1.1</b> Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Developing and Using Models	<b>LS1.B:</b> Growth and Development of Organisms	Patterns
<b>Lesson 2</b> 	<b>Environmental Change &amp; Engineering</b> What's the best way to get rid of mosquitoes?	<b>3-LS-3.3</b> Construct an argument with evidence that in a particular habitat some organisms survive well, some survive less well, and some cannot survive at all.	Obtaining, Evaluating, and Communicating Information  Constructing Explanations and Designing Solutions	<b>LS4.D</b> Biodiversity and Humans  <b>LS2.C:</b> Ecosystem Dynamics, Functioning, & Resilience  <b>ETS1.B:</b> Developing Possible Solutions	Cause and Effect  Systems and System Models
<b>Lesson 3</b> 	<b>Pollination &amp; Plant Reproduction</b> Why do plants grow flowers?	<b>3-LS-1.1</b> Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Developing and Using Models  Analyzing and Interpreting Data	<b>LS1.B:</b> Growth and Development of Organisms	Patterns  Structure and Function
<b>Lesson 4</b> 	<b>Fruit, Seeds, &amp; Plant Reproduction</b> Why do plants give us fruit?	<b>3-LS-1.1</b> Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Analyzing and Interpreting Data	<b>LS1.B:</b> Growth and Development of Organisms	Patterns  Structure and Function
<b>Lesson 5</b> 	<b>Plant Life Cycles</b> Why are there so many different kinds of flowers?	<b>3-LS-1.1</b> Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Developing and Using Models	<b>LS1.B:</b> Growth and Development of Organisms	Patterns

### Heredity, Survival, & Selection (Fates of Traits) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Traits &amp; Inheritance</b>  How do you identify a mysterious fruit?	<b>Foundational for 3-LS-3.1</b> 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.	Analyzing and Interpreting Data	<b>LS3.A:</b> Inheritance of Traits	Patterns
<b>Lesson 2</b> 	<b>Trait Variation, Inheritance, &amp; Artificial Selection</b>  What do dogs and pigeons have in common?	<b>3-LS-3.1</b> 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.	Analyzing and Interpreting Data	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits	Patterns
<b>Lesson 3</b> 	<b>Trait Variation, Survival, &amp; Natural Selection</b>  How could a lizard's toes help it survive?	<b>3-LS-3.1</b> 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.  <b>3-LS-3.3</b> Construct an argument with evidence that in a particular habitat some organisms survive well, some survive less well, and some cannot survive at all.	Constructing Explanations and Designing Solutions  Analyzing and Interpreting Data  Using Mathematics and Computational Thinking	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits  <b>LS4.C:</b> Adaptation	Cause and Effect  Patterns  Stability and Change




Continued on next page

### Heredity, Survival, & Selection (Fates of Traits) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 4</b> 	<b>Animal Groups &amp; Survival</b>  Why do dogs wag their tails?	<b>3-LS-2.1</b> Construct an argument that some animals form groups that help members survive.	Obtaining, Evaluating, and Communicating Information  Engaging in Argument from Evidence	<b>LS2.D:</b> Social Interactions and Group Behavior	Cause and Effect
<b>Lesson 5</b> 	<b>Traits &amp; Environmental Variation</b>  How long can people (and animals) survive in outer space?	<b>3-LS-3.2</b> Use evidence to support the explanation that traits can be influenced by the environment.	Constructing Explanations and Designing Solutions	<b>LS3.A:</b> Inheritance of Traits  <b>LS3.B:</b> Variation of Traits	Cause and Effect

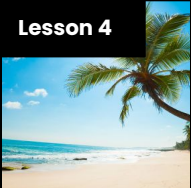



### Weather & Climate (Stormy Skies) • Page 1 of 2


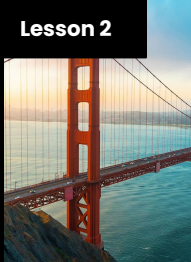

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Water Cycle &amp; States of Matter</b>  Where do clouds come from?	<b>Foundational for 3-ESS-1.1</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	Planning and Carrying Out Investigations  Developing and Using Models	<b>ESS2.D:</b> Weather and Climate	Structure and Function  Stability and Change
<b>Lesson 2</b> 	<b>Local Weather Patterns &amp; Weather Prediction</b>  How can we predict when it's going to storm?	<b>3-ESS-1.1</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	Analyzing and Interpreting Data	<b>ESS2.D:</b> Weather and Climate	Patterns
<b>Lesson 3</b> 	<b>Seasonal Weather Patterns</b>  Where's the best place to build a snow fort?	<b>3-ESS-1.1</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	Analyzing and Interpreting Data	<b>ESS2.D:</b> Weather and Climate	Patterns

Continued on next page

### Weather & Climate (Stormy Skies) • Page 2 of 2


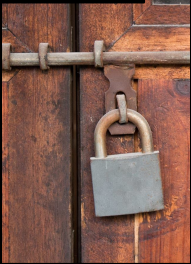
	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 4</b> 	<b>Climate &amp; Global Weather Patterns</b>  Why are some places always hot?	<b>3-ESS-1.2</b> Obtain and combine information to describe climates in different regions of the world.	Obtaining, Evaluating, and Communicating Information  Analyzing and Interpreting Data	<b>ESS2.D:</b> Weather and Climate	Patterns
<b>Lesson 5</b> 	<b>Natural Hazards &amp; Engineering</b>  How can you keep a house from blowing away in a windstorm?	<b>3-ESS-2.1</b> Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions  Analyzing and Interpreting Data	<b>ESS3.B:</b> Natural Hazards  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Cause and Effect

### Forces, Motion, & Magnets (Invisible Forces) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Balanced &amp; Unbalanced Forces</b>  How could you win a tug-of-war against a bunch of adults?	<b>3-PS-1.1</b> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS2.A:</b> Forces and Motion  <b>PS2.B:</b> Types of Interactions	Cause and Effect
<b>Lesson 2</b> 	<b>Balanced Forces &amp; Engineering</b>  What makes bridges so strong?	<b>Foundational for 3-PS-1.1</b> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions	<b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Structure and Function
<b>Lesson 3</b> 	<b>Patterns of Motion, Gravity, &amp; Friction</b>  How high can you swing on a flying trapeze?	<b>3-PS-1.2</b> Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	Developing and Using Models  Planning and Carrying Out Investigations	<b>PS2.A:</b> Forces and Motion	Patterns  Cause and Effect

Continued on next page

### Forces, Motion, & Magnets (Invisible Forces) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 4</b> 	<b>Magnets &amp; Forces</b>  What can magnets do?	<b>3-PS-1.3</b> Ask questions to determine cause and effect relationships of static electricity or magnetic interactions and between two objects not in contact with each other.	Asking Questions and Defining Problems	<b>PS2.B:</b> Types of Interactions	Cause and Effect
<b>Lesson 5</b> 	<b>Magnets &amp; Engineering</b>  How can you unlock a door using a magnet?	<b>3-PS-1.4</b> Define a problem that can be solved by applying scientific ideas about magnets.	Asking Questions and Defining Problems  Constructing Explanations and Designing Solutions	<b>PS2.B:</b> Types of Interactions  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Cause and Effect

### All 4th Grade Units • Units may be taught in any order



**Human  
Body,  
Vision, &  
The Brain**

[Page 34](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-LS-1.1
- 4-LS-1.2
- 4-PS-2.2

#### Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



**Animal &  
Plant  
Adaptations**

[Page 35](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-LS-1.1
- 4-LS-1.2

#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



**Earth's  
Features &  
Processes**

[Page 36](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-ESS-1.1
- 4-ESS-2.1
- 4-ESS-2.2
- 4-ESS-3.2

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



**Sound,  
Waves, &  
Communication**

[Page 37](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-PS-2.1
- 4-PS-2.3

#### Unit Breakdown:

- 4 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



**Energy &  
Energy  
Transfer**

[Page 38](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-PS-1.1
- 4-PS-1.2
- 4-PS-1.3
- 4-PS-1.4

#### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



**Electricity,  
Light, &  
Heat**

[Page 40](#) • [Web Link](#)

#### Idaho Science Standards:

- 4-ESS-3.1
- 4-PS-1.2
- 4-PS-1.4





#### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment




#### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

### Human Body, Vision, & The Brain (Human Machine)






	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Muscles &amp; Skeleton</b>  Why do your biceps bulge?	<b>4-LS-1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Developing and Using Models  Constructing Explanations and Designing Solutions	<b>LS1.A:</b> Structure and Function	Systems and System Models  Cause and Effect
<b>Lesson 2</b> 	<b>Light, Eyes, &amp; Vision</b>  What do people who are blind see?	<b>4-PS-2.2</b> Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.  <b>4-LS-1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Developing and Using Models  Constructing Explanations and Designing Solutions	<b>LS1.A:</b> Structure and Function  <b>PS4.B:</b> Electromagnetic Radiation	Systems and System Models  Cause and Effect
<b>Lesson 3</b> 	<b>Structure &amp; Function of Eyes</b>  How can some animals see in the dark?	<b>4-PS-2.2</b> Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.  <b>4-LS-1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Planning and Carrying Out Investigations  Developing and Using Models  Constructing Explanations and Designing Solutions	<b>LS1.A:</b> Structure and Function  <b>PS4.B:</b> Electromagnetic Radiation	Systems and System Models  Cause and Effect
<b>Lesson 4</b> 	<b>Brain, Nerves, &amp; Information Processing</b>  How does your brain control your body?	<b>4-LS-1.2</b> Use a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>LS1.D:</b> Information Processing	Systems and System Models

### Animal & Plant Adaptations (Animal & Plant Adaptations)





	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Animal Adaptations</b> Why do some sea creatures look so strange?	<b>4-LS-1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Engaging in Argument from Evidence	<b>LS1.A:</b> Structure and Function	Systems and System Models
<b>Lesson 2</b> 	<b>Learned Behavior &amp; Instinct</b> Why would a sea turtle eat a plastic bag?	<b>4-LS-1.2</b> Use a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	Developing and Using Models Constructing Explanations and Designing Solutions	<b>LS1.D:</b> Information Processing	Systems and System Models
<b>Lesson 3</b> 	<b>Plant Adaptations</b> Why don't the same trees grow everywhere?	<b>4-LS-1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Engaging in Argument from Evidence Developing and Using Models	<b>LS1.A:</b> Structure and Function	Systems and System Models







### Earth's Features & Processes (Birth of Rocks)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Volcanoes &amp; Patterns of Earth's Features</b>  Could a volcano pop up where you live?	<b>4-ESS-2.2</b> Analyze and interpret data from maps to describe patterns of Earth's features.	Analyzing and Interpreting Data  Engaging in Argument from Evidence	<b>ESS2.B:</b> Plate Tectonics and Large-Scale System Interactions	Patterns
<b>Lesson 2</b> 	<b>Volcanoes &amp; Rock Cycle</b>  Why do some volcanoes explode?	<b>4-ESS-1.1</b> Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.	Constructing Explanations and Designing Solutions	<b>ESS1.C:</b> The History of Planet Earth	Cause and Effect
<b>Lesson 3</b> 	<b>Weathering &amp; Erosion</b>  Will a mountain last forever?	<b>4-ESS-2.1</b> Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>ESS2.A:</b> Earth Materials and Systems  <b>ESS2.E:</b> Biogeology	Cause and Effect
<b>Lesson 4</b> 	<b>Sedimentary Rock &amp; Fossils</b>  What did your town look like 100 million years ago?	<b>4-ESS-1.1</b> Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.	Constructing Explanations and Designing Solutions  Developing and Using Models	<b>ESS1.C:</b> The History of Planet Earth	Patterns
<b>Lesson 5</b> 	<b>Erosion, Natural Hazards, &amp; Engineering</b>  How could you survive a landslide?	<b>4-ESS-3.2</b> Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	Constructing Explanations and Designing Solutions	<b>ESS3.B:</b> Natural Hazards  <b>ETS1.B:</b> Designing Solutions to Engineering Problems	Cause and Effect

### Sound, Waves, & Communication (Waves of Sound)


	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Pattern Transfer &amp; Technology</b>  How do you send a secret code?	<b>4-PS-2.3</b> Generate and compare multiple solutions that use patterns to transfer information.	Constructing Explanations and Designing Solutions	<b>PS4.C:</b> Information Technologies and Instrumentation  <b>ETS1.C:</b> Optimizing the Design Solution	Patterns
<b>Lesson 2</b> 	<b>Sound, Vibration, &amp; Engineering</b>  How far can a whisper travel?	<b>Foundational for 4-PS-2.1</b> Develop a model of a simple mechanical wave to describe patterns of amplitude and wavelength and that waves can cause objects to move.	Developing and Using Models  Planning and Carrying Out Investigations	<b>PS4.A:</b> Wave Properties  <b>ETS1.B:</b> Developing Possible Solutions	Patterns
<b>Lesson 3</b> 	<b>Sound &amp; Vibrations</b>  What would happen if you screamed in outer space?	<b>Foundational for 4-PS-2.1</b> Develop a model of a simple mechanical wave to describe patterns of amplitude and wavelength and that waves can cause objects to move.	Developing and Using Models	<b>PS4.A:</b> Wave Properties	Patterns
<b>Lesson 4</b> 	<b>Sound Waves &amp; Wavelength</b>  Why are some sounds high and some sounds low?	<b>4-PS-2.1</b> Develop a model of a simple mechanical wave to describe patterns of amplitude and wavelength and that waves can cause objects to move.	Developing and Using Models	<b>PS4.A:</b> Wave Properties	Patterns

### Energy & Energy Transfer (Energizing Everything) • Page 1 of 2




	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Speed &amp; Energy</b> How is your body similar to a car?	<b>4-PS-1.1</b> Use evidence to construct an explanation relating the speed of an object to the energy of that object.	Analyzing and Interpreting Data  Constructing Explanations and Designing Solutions	<b>PS3.A:</b> Definitions of Energy	Energy and Matter  Systems and System Models
<b>Lesson 2</b> 	<b>Gravitational Energy, Speed, &amp; Collisions</b> What makes roller coasters go so fast?	<b>4-PS-1.1</b> Use evidence to construct an explanation relating the speed of an object to the energy of that object.  <b>4-PS-1.3</b> Ask questions and predict outcomes about the changes in energy that occur when objects collide.	Developing and Using Models  Analyzing and Interpreting Data	<b>PS3.A:</b> Definitions of Energy  <b>PS3.B:</b> Conservation of Energy and Energy Transfer	Energy and Matter  Systems and System Models
<b>Lesson 3</b> 	<b>Collisions &amp; Energy Transfer</b> How can marbles save the world?	<b>4-PS-1.3</b> Ask questions and predict outcomes about the changes in energy that occur when objects collide.  <b>4-PS-1.2</b> Make observations to provide evidence that energy can be transferred by heat, sound, light, and electric currents.	Asking Questions and Defining Problems	<b>PS3.A:</b> Definitions of Energy  <b>PS3.B:</b> Conservation of Energy and Energy Transfer  <b>PS3.C:</b> Relationship Between Energy and Forces	Energy and Matter
<b>Lesson 4</b> 	<b>Energy Transfer &amp; Engineering</b> Could you knock down a building using only dominoes?	<b>4-PS-1.2</b> Make observations to provide evidence that energy can be transferred by heat, sound, light, and electric currents.	Developing and Using Models	<b>PS3.B:</b> Conservation of Energy and Energy Transfer  <b>PS3.C:</b> Relationship Between Energy and Forces  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems	Energy and Matter

Continued on next page

Energy & Energy Transfer (Energizing Everything) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<div>Lesson 5</div> <div></div>	<b>Energy Transfer &amp; Engineering</b>  Can you build a chain reaction machine?	<b>4-PS-1.4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	Developing and Using Models	<b>PS3.A:</b> Definitions of Energy  <b>PS3.C:</b> Relationship Between Energy and Forces  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Energy and Matter

### Electricity, Light, & Heat (Electricity, Light & Heat)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Renewable Energy &amp; Natural Resources</b>  What's the best way to light up a city?	<b>4-ESS-3.1</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	Obtaining, Evaluating, and Communicating Information  Using Mathematics and Computational Thinking	<b>ESS3.A:</b> Natural Resources	Energy and Matter  Cause and Effect
<b>Lesson 2</b> 	<b>Electrical Energy</b>  What if there were no electricity?	<b>4-PS-1.4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	Constructing Explanations and Designing Solutions  Developing and Using Models	<b>PS3.D:</b> Energy in Chemical Processes and Everyday Life  <b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Energy and Matter
<b>Lesson 3</b> 	<b>Heat Energy &amp; Energy Transfer</b>  How long did it take to travel across the country before cars and planes?	<b>4-PS-1.2</b> Make observations to provide evidence that energy can be transferred by heat, sound, light, and electric currents.  <b>4-PS-1.4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another	Planning and Carrying Out Investigations	<b>PS3.B:</b> Conservation of Energy and Energy Transfer  <b>PS3.D:</b> Energy in Chemical Processes and Everyday Life	Energy and Matter

### All 5th Grade Units • Units may be taught in any order



#### Fossils & Changing Environments

[Page 42](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-LS-2.1

##### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



#### Ecosystems & The Food Web

[Page 43](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-LS-1.1
- 5-LS-2.4
- 5-ESS-3.1
- 5-PS-3.1

##### Unit Breakdown:

- 7 Lessons & Activities
- 7 Lesson Assessments
- 7 Extension Blocks
- 1 Unit Assessment

##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 7 Anchor Connections
- 1 Performance Task



#### Water Cycle & Earth's Systems

[Page 45](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-ESS-2.1
- 5-ESS-2.2
- 5-LS-2.3
- 5-PS-1.2

##### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



#### Earth & Space Patterns

[Page 46](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-ESS-1.2

##### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



#### Stars & Planets

[Page 47](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-ESS-1.1
- 5-PS-2.1

##### Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



#### Chemical Reactions & Properties of Matter

[Page 48](#) • [Web Link](#)

##### Idaho Science Standards:

- 5-PS-1.1
- 5-PS-1.2
- 5-PS-1.3
- 5-PS-1.4

##### Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment




##### Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



*This unit is found under 3rd grade on our site, but we recommend teaching these lessons in 5th grade if you are following Idaho Standards.*

### Fossils & Changing Environments (Animals Through Time)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Habitats, Fossils, &amp; Environments Over Time</b>  Where can you find whales in a desert?	<b>5-LS-2.1</b> Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	Analyzing and Interpreting Data	<b>LS4.A:</b> Evidence of Common Ancestry and Diversity	Scale, Proportion, and Quantity
<b>Lesson 2</b> 	<b>Fossil Evidence &amp; Dinosaurs</b>  How do we know what dinosaurs looked like?	<b>5-LS-2.1</b> Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	Analyzing and Interpreting Data  Engaging in Argument from Evidence	<b>LS4.A:</b> Evidence of Common Ancestry and Diversity	Structure and Function  Patterns
<b>Lesson 3</b> 	<b>Trace Fossil Evidence &amp; Animal Movement</b>  Can you outrun a dinosaur?	<b>5-LS-2.1</b> Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	Using Mathematics and Computational Thinking  Planning and Carrying Out Investigations	<b>LS4.A:</b> Evidence of Common Ancestry and Diversity	Patterns

*Idaho Specific Standard:*

**5-LS-2.2** Construct an argument with evidence for how variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

This standard is covered in 3rd Grade with the Mystery Science lesson **How could a lizard's toes help it survive?**





*Idaho Specific Standard:*

**5-LS-2.3** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals living there may change.

This standard is covered in 3rd Grade with the Mystery Science lesson **What's the best way to get rid of mosquitoes?**






### Ecosystems & The Food Web (Web of Life) • Page 1 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<p>🌟 New! 🌟</p> <p><b>Food Chains &amp; Matter Flow</b></p> <p>What if all the ants disappeared?</p>	<p><b>5-LS-2.4</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Developing and Using Models</p>	<p><b>LS2.A:</b> Interdependent Relationships in Ecosystems</p> <p><b>LS2.B:</b> Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Energy and Matter</p> <p>Systems and System Models</p>
<b>Lesson 2</b> 	<p>🌟 New! 🌟</p> <p><b>Plant Growth &amp; Matter</b></p> <p>How does a tiny seed become one of the heaviest trees on Earth?</p>	<p><b>5-LS-1.1</b> Support an argument that plants get what they need for growth chiefly from air, water, and energy from the Sun.</p> <p><b>Foundational for 5-LS-2.4</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Engaging in Argument from Evidence</p> <p>Constructing Explanations and Designing Solutions</p>	<p><b>LS1.C:</b> Organization for Matter and Energy Flow in Organisms</p> <p><b>LS2.B:</b> Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>
<b>Lesson 3</b> 	<p>🌟 New! 🌟</p> <p><b>Decomposers &amp; Matter Flow</b></p> <p>Where do fallen leaves go?</p>	<p><b>5-LS-2.4</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Developing and Using Models</p> <p>Analyzing and Interpreting Data</p> <p>Constructing Explanations and Designing Solutions</p>	<p><b>LS2.A:</b> Interdependent Relationships in Ecosystems</p> <p><b>LS2.B:</b> Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>
<b>Lesson 4</b> 	<p><b>Decomposers &amp; Soil Nutrients</b></p> <p>Do worms really eat dirt?</p>	<p><b>5-LS-2.4</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Planning and Carrying Out Investigations</p>	<p><b>LS2.A:</b> Interdependent Relationships in Ecosystems</p> <p><b>LS2.B:</b> Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Energy and Matter</p>






Continued on next page

🌟 New Lesson






### Ecosystems & The Food Web (Web of Life) • Page 2 of 2

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 5</b> 	<b>Ecosystems &amp; Matter Cycle</b>  Why do you have to clean a fish tank but not a pond?	<b>5-LS-2.4</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	Developing and Using Models	<b>LS2.A:</b> Interdependent Relationships in Ecosystems  <b>LS2.B:</b> Cycles of Matter and Energy Transfer in Ecosystems	Systems and System Models  Energy and Matter
<b>Lesson 6</b> 	<b>Protecting Environments</b>  How can we protect Earth's environments?	<b>5-ESS-3.1</b> Obtain and combine information about ways communities protect Earth's resources and environment using scientific ideas.	Obtaining, Evaluating, and Communicating Information	<b>ESS3.C:</b> Human Impacts on Earth Systems	Systems and System Models
<b>Lesson 7</b> 	<b>Food Webs &amp; Flow of Energy</b>  Why did the dinosaurs go extinct?	<b>5-PS-3.1</b> Use models to describe the energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun.	Developing and Using Models  Constructing Explanations and Designing Solutions	<b>PS3.D:</b> Energy in Chemical Processes and Everyday Life  <b>LS1.C:</b> Organization for Matter and Energy Flow in Organisms	Energy and Matter  Systems and System Models



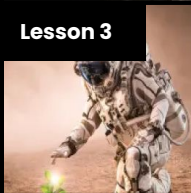
### Water Cycle & Earth's Systems (Watery Planet)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Hydrosphere &amp; Water Distribution</b>  How much water is in the world?	<b>5-ESS-2.2</b> Describe and graph the relative amounts of fresh and salt water in various reservoirs, to interpret and analyze the distribution of water on Earth.	Analyzing and Interpreting Data  Using Mathematics and Computational Thinking	<b>ESS2.C:</b> The Roles of Water in Earth's Surface Processes	Scale, Proportion, and Quantity
<b>Lesson 2</b> 	<b>Mixtures &amp; Solutions</b>  How much salt is in the ocean?	<b>5-PS-1.2</b> 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.	Developing and Using Models  Using Mathematics and Computational Thinking	<b>PS1.A:</b> Structure and Properties of Matter	Scale, Proportion, and Quantity
<b>Lesson 3</b> 	<b>Groundwater as a Natural Resource</b>  When you turn on the faucet, where does the water come from?	<b>5-ESS-2.2</b> Describe and graph the relative amounts of fresh and salt water in various reservoirs, to interpret and analyze the distribution of water on Earth.	Obtaining, Evaluating, and Communicating Information  Engaging in Argument from Evidence	<b>ESS2.C:</b> The Roles of Water in Earth's Surface Processes	Patterns
<b>Lesson 4</b> 	<b>Water Cycle</b>  Can we make it rain?	<b>5-ESS-2.1</b> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	Developing and Using Models  Planning and Carrying Out Investigations	<b>ESS2.A:</b> Earth Materials and Systems	Systems and System Models
<b>Lesson 5</b> 	<b>Natural Disasters &amp; Engineering</b>  How can you save a town from a hurricane?	<b>5-LS-2.3</b> Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals living there may change.	Asking Questions and Defining Problems  Obtaining, Evaluating, and Communicating Information  Using Mathematics and Computational Thinking	<b>ETS1.A:</b> Defining and Delimiting Engineering Problems  <b>ETS1.B:</b> Developing Possible Solutions  <b>ETS1.C:</b> Optimizing the Design Solution	Systems and System Models






### Earth & Space Patterns (Spaceship Earth)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Day, Night, &amp; Earth's Rotation</b>  How fast does the Earth spin?	<b>Foundational for 5-ESS1-2.</b> 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.	Developing and Using Models  Using Mathematics and Computational Thinking	<b>ESS1.B:</b> Earth and the Solar System	Patterns  Cause and Effect
<b>Lesson 2</b> 	<b>Earth's Rotation &amp; Daily Shadow Patterns</b>  Who set the first clock?	<b>5-ESS1-2.</b> 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.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>ESS1.B:</b> Earth and the Solar System	Patterns  Cause and Effect
<b>Lesson 3</b> 	<b>Seasonal Changes &amp; Shadow Length</b>  How can the Sun tell you the season?	<b>5-ESS1-2.</b> 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.	Analyzing and Interpreting Data  Engaging in Argument from Evidence	<b>ESS1.B:</b> Earth and the Solar System	Patterns  Cause and Effect
<b>Lesson 4</b> 	<b>Seasonal Patterns &amp; Earth's Orbit</b>  Why do the stars change with the seasons?	<b>5-ESS1-2.</b> 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.	Developing and Using Models  Constructing Explanations and Designing Solutions	<b>ESS1.B:</b> Earth and the Solar System	Patterns  Cause and Effect
<b>Lesson 5</b> 	<b>Moon Phases, Lunar Cycle</b>  Why does the Moon change shape?	<b>5-ESS1-2.</b> 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.	Developing and Using Models  Planning and Carrying Out Investigations	<b>ESS1.B:</b> Earth and the Solar System	Patterns  Cause and Effect

### Stars & Planets (Stars & Planets)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Solar System &amp; Sun Brightness</b>  How can the Sun help us explore other planets?	<b>5-ESS1-1.</b> Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	Developing and Using Models  Engaging in Argument from Evidence	<b>ESS1.A:</b> The Universe and its Stars	Scale, Proportion, and Quantity  Systems and System Models
<b>Lesson 2</b> 	<b>Gravity</b>  Why is gravity different on other planets?	<b>5-PS2-1.</b> Support an argument that the gravitational force exerted by Earth on objects is directed down.	Using Mathematics and Computational Thinking  Analyzing and Interpreting Data	<b>PS2.B:</b> Types of Interactions	Patterns  Cause and Effect
<b>Lesson 3</b> 	<b>Star Brightness &amp; Habitable Planets</b>  Could there be life on other planets?	<b>5-ESS1-1.</b> Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	Obtaining, Evaluating, and Communicating Information  Engaging in Argument from Evidence	<b>ESS1.A:</b> The Universe and its Stars	Scale, Proportion, and Quantity

### Chemical Reactions & Properties of Matter (Chemical Magic)

	Topic & Guiding Question	Idaho Science Standards (2022)	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<b>Lesson 1</b> 	<b>Conservation of Matter</b>  Are magic potions real?	<b>Foundational for 5-PS-1.1</b> Develop a model to describe that matter is made of particles too small to be seen.  <b>Foundational for 5-PS-1.2</b> 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.	Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS1.A:</b> Structure and Properties of Matter  <b>PS1.B:</b> Chemical Reactions	Cause and Effect  Scale, Proportion, and Quantity
<b>Lesson 2</b> 	<b>Dissolving &amp; Particulate Nature of Matter</b>  Could you transform something worthless into gold?	<b>5-PS-1.1</b> Develop a model to describe that matter is made of particles too small to be seen.  <b>5-PS-1.2</b> 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.	Planning and Carrying Out Investigations  Using Mathematics and Computational Thinking	<b>PS1.A:</b> Structure and Properties of Matter  <b>PS1.B:</b> Chemical Reactions	Energy and Matter  Scale, Proportion, and Quantity
<b>Lesson 3</b> 	<b>Properties of Matter: Acids</b>  What would happen if you drank a glass of acid?	<b>5-PS-1.3</b> Make observations and measurements to identify materials based on their properties.	Planning and Carrying Out Investigations  Analyzing and Interpreting Data	<b>PS1.A:</b> Structure and Properties of Matter	Cause and Effect
<b>Lesson 4</b> 	<b>Chemical Reactions</b>  What do fireworks, rubber, and Silly Putty have in common?	<b>5-PS1-4.</b> Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	Planning and Carrying Out Investigations  Constructing Explanations and Designing Solutions	<b>PS1.B:</b> Chemical Reactions	Cause and Effect
<b>Lesson 5</b> 	<b>Gases &amp; Particle Models</b>  Why do some things explode?	<b>5-PS-1.1</b> Develop a model to describe that matter is made of particles too small to be seen.	Planning and Carrying Out Investigations  Developing and Using Models	<b>PS1.A:</b> Structure and Properties of Matter	Scale, Proportion, and Quantity