

# Correlation to the Oregon Science Standards

## Amplify Science

## Kindergarten

<b>K.PS2: Motion and Stability: Forces and Interactions</b>	
OR Performance Expectation	Amplify Science Units
<p><b>K.PS2.1</b> Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying out Investigations</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.2</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 6.3</a> (DCI, CCC)</li> </ul>
<p><b>K.PS2.2</b> Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 5.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 6.3</a> (DCI, CCC)</li> </ul>
<b>K.PS3: Energy</b>	
OR Performance Expectation	Amplify Science Units
<p><b>K.PS3.1</b> Make observations to determine the effect of sunlight on Earth’s surface.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying out Investigations</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Sunlight and Weather</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.1</a> (SEP, DCI)</li> </ul>
<p><b>K.PS3.2</b> Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.</p>	<p><b>Sunlight and Weather</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI, CCC)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI, CCC)</li> </ul>
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**K.LS1: From Molecules to Organisms: Structures and Processes**

OR Performance Expectation	Amplify Science Units
<p><b>K.LS1.1</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> From Molecules to Organisms: Structures and Processes</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b><i>Needs of Plants and Animals</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 3.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI)</li> </ul>

**K.ESS2: Earth Systems**

OR Performance Expectation	Amplify Science Units
<p><b>K.ESS2.1</b> Use and share observations of local weather conditions to describe patterns over time.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b><i>Sunlight and Weather</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI)</li> <li>• <a href="#">Lesson 1.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.2</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 5.1</a> (DCI)</li> </ul>

<p><b>K.ESS2.2</b> Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Needs of Plants and Animals</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (DCI, CCC)</li> </ul>
<p><b>K.ESS3: Earth and Human Activity</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>K.ESS3.1</b> Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Needs of Plants and Animals</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.5</a> (DCI)</li> <li>• <a href="#">Lesson 2.1</a> (SEP)</li> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> <li>• <a href="#">Lesson 4.4</a> (DCI, CCC)</li> </ul>
<p><b>K.ESS3.2</b> Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Sunlight and Weather</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.4</a> (CCC)</li> <li>• <a href="#">Lesson 5.1</a> (DCI)</li> <li>• <a href="#">Lesson 5.3</a> (DCI)</li> </ul> <p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.2</a> (CCC)</li> </ul>
<p><b>K.ESS3.3</b> Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Needs of Plants and Animals</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.2</a> (DCI)</li> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI)</li> </ul> <p><b>Sunlight and Weather</b></p>

		<ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.4</a> (CCC)</li> </ul>
<b>K.ETS1: Engineering Design</b>		
OR Performance Expectation	Amplify Science Units	
<p><b>K.ETS1.1</b> Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 5.1</a> (DCI)</li> </ul>	
<p><b>K.ETS1.2</b> Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Engineering Design</li> <li>• <b>CCC</b> Structure and Function</li> </ul>	<p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.3</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI, CCC)</li> </ul>	
<p><b>K.ETS1.3</b> Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Pushes and Pulls</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (DCI)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP)</li> <li>• <a href="#">Lesson 4.3</a> (DCI)</li> </ul>	

Grade 1

1.PS4: Waves and their Applications in Technologies for Information Transfer	
OR Performance Expectation	Amplify Science Units
<p><b>1.PS4.1</b> Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.1</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI, CCC)</li> </ul>
<p><b>1.PS4.2</b> Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 1.5</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.1</a> (CCC)</li> </ul>
<p><b>1.PS4.3</b> Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.2</a> (DCI, CCC)</li> </ul>
<p><b>1.PS4.4</b> Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.1</a> (CCC)</li> <li>• <a href="#">Lesson 2.4</a> (SEP)</li> <li>• <a href="#">Lesson 3.4</a> (SEP)</li> <li>• <a href="#">Lesson 4.5</a> (DCI)</li> </ul>
1.LS1: From Molecules to Organisms: Structure and Processes	

OR Performance Expectation	Amplify Science Units
<p><b>1.LS1.1</b> Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> From Molecules to Organisms: Structure and Processes</li> <li>• <b>CCC</b> Structure and Function</li> </ul>	<p><b>Animal and Plant Defenses</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 1.5</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.8</a> (SEP, DCI, CCC)</li> </ul>
<p><b>1.LS1.2</b> Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> From Molecules to Organisms: Structure and Processes</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Animal and Plant Defenses</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> </ul>
<b>1.LS3: Heredity: Inheritance and Variation of Traits</b>	
OR Performance Expectation	Amplify Science Units
<p><b>1.LS3.1</b> Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Heredity: Inheritance and Variation of Traits</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Animal and Plant Defenses</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (CCC)</li> <li>• <a href="#">Lesson 1.5</a> (SEP)</li> <li>• <a href="#">Lesson 3.1</a> (DCI)</li> <li>• <a href="#">Lesson 3.3</a> (DCI, CCC)</li> </ul>
<b>1.ESS1: Earth’s Place in the Universe</b>	
OR Performance Expectation	Amplify Science Units
<p><b>1.ESS1.1</b> Use observations of the sun, moon, and stars to describe patterns that can be predicted.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Earth’s Place in the Universe</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Spinning Earth</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 5.3</a> (SEP, DCI, CCC)</li> </ul>

<p><b>1.ESS1.2</b> Make observations at different times of year to relate the amount of daylight to the time of year.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Earth’s Place in the Universe</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Spinning Earth</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.2</a> (SEP, CCC)</li> <li>• <a href="#">Lesson 5.1</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 5.2</a> (SEP, DCI, CCC)</li> </ul>
<h2>1.ETS1: Engineering Design</h2>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>1.ETS1.1</b> Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP)</li> <li>• <a href="#">Lesson 1.5</a> (DCI)</li> <li>• <a href="#">Lesson 2.1</a> (DCI)</li> </ul>
<p><b>1.ETS1.2</b> Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Engineering Design</li> <li>• <b>CCC</b> Structure and Function</li> </ul>	<p><b>Animal and Plant Defenses</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.8</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, DCI, CCC)</li> </ul> <p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.6</a> (DCI)</li> </ul>
<p><b>1.ETS1.3</b> Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Light and Sound</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.5</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI)</li> </ul>



Grade 2

<b>2.PS1: Matter and Its Interactions</b>	
OR Performance Expectation	Amplify Science Units
<p><b>2.PS1.1</b> Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Matter and Its Interactions</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (DCI)</li> <li>• <a href="#">Lesson 1.3</a> (SEP)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> </ul>
<p><b>2.PS1.2</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Matter and Its Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (DCI)</li> <li>• <a href="#">Lesson 1.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.3</a> (CCC)</li> </ul>
<p><b>2.PS1.3</b> Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Matter and Its Interactions</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.7</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.1</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.2</a> (DCI, CCC)</li> </ul>
<p><b>2.PS1.4</b> Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Matter and Its Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (DCI)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 2.4</a> (SEP, DCI)</li> </ul>
<b>2.LS2: Ecosystems: Interactions, Energy, and Dynamics</b>	

OR Performance Expectation	Amplify Science Units
<p><b>2.LS2.1</b> Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Ecosystems: Interactions, Energy, and Dynamics</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Plant and Animal Relationships</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.6</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 1.7</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP)</li> </ul>
<p><b>2.LS2.2</b> Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Ecosystems: Interactions, Energy, and Dynamics</li> <li>• <b>CCC</b> Structure and Function</li> </ul>	<p><b>Plant and Animal Relationships</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.5</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, CCC)</li> </ul>

### 2.LS4: Biological Evolution: Unity and Diversity

OR Performance Expectation	Amplify Science Units
<p><b>2.LS4.1</b> Make observations of plants and animals to compare the diversity of life in different habitats.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Biological Evolution: Unity and Diversity</li> </ul>	<p><b>Plant and Animal Relationships</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI)</li> <li>• <a href="#">Lesson 1.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.1</a> (DCI)</li> </ul>

### 2.ESS1: Earth’s Place in the Universe

OR Performance Expectation	Amplify Science Units
<p><b>2.ESS1.1</b> Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Earth’s Place in the Universe</li> <li>• <b>CCC</b> Stability and Change</li> </ul>	<p><b>Changing Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.5</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.1</a> (DCI, CCC)</li> </ul>

<b>2.ESS2: Earth’s Systems</b>	
OR Performance Expectation	Amplify Science Units
<p><b>2.ESS2.1</b> Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Stability and Change</li> </ul>	<p><b>Changing Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.4</a> (DCI, CCC)</li> </ul> <p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.9</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.1</a> (SEP, DCI)</li> </ul>
<p><b>2.ESS2.2</b> Develop a model to represent the shapes and kinds of land and bodies of water in an area.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Changing Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (CCC)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> </ul>
<p><b>2.ESS2.3</b> Obtain information to identify where water is found on Earth and that it can be solid or liquid.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Changing Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.5</a> (CCC)</li> <li>• <a href="#">Lesson 2.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI)</li> </ul>

<b>2.ETS1: Engineering Design</b>	
OR Performance Expectation	Amplify Science Units
<p><b>2.ETS1.1</b> Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Changing Landforms</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> </ul>
<p><b>2.ETS1.2</b> Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Engineering Design</li> <li>• <b>CCC</b> Structure and Function</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 2.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.1</a> (DCI)</li> </ul>
<p><b>2.ETS1.3</b> Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.2</a> (DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP, DCI)</li> </ul>

Grade 3

3.PS2: Motion and Stability: Forces and Interactions	
OR Performance Expectation	Amplify Science Units
<p><b>3.PS2.1</b> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Balancing Forces</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (DCI)</li> <li>• <a href="#">Lesson 5.1</a> (SEP, CCC)</li> </ul>
<p><b>3.PS2.2</b> Make observations and/or measurements of an object’s motion to provide evidence that a pattern can be used to predict future motion.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Balancing Forces</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 5.1</a> (SEP)</li> <li>• <a href="#">Lesson 5.3</a> (DCI)</li> </ul> <p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (SEP)</li> <li>• <a href="#">Lesson 3.5</a> (CCC)</li> </ul> <p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (CCC)</li> <li>• <a href="#">Lesson 3.3</a> (SEP)</li> </ul>
<p><b>3.PS2.3</b> Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Balancing Forces</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> <li>• <a href="#">Lesson 3.1</a> (SEP)</li> <li>• <a href="#">Lesson 5.3</a> (DCI)</li> </ul> <p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (SEP)</li> <li>• <a href="#">Lesson 3.4</a> (CCC)</li> </ul>

<p><b>3.PS2.4</b> Define a simple design problem that can be solved by applying scientific ideas about magnets.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interactions</li> </ul>	<p><b>Balancing Forces</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 5.3</a> (DCI)</li> <li>• <a href="#">Lesson 5.5</a> (SEP)</li> </ul>
<p><b>3.LS1: From Molecules to Organisms: Structures and Processes</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>3.LS1.1</b> Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> From Molecules to Organisms: Structures and Processes</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.1</a> (DCI)</li> <li>• <a href="#">Lesson 1.3</a> (CCC)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> </ul>
<p><b>3.LS2: Ecosystems: Interactions, Energy, and Dynamics</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>3.LS2.1</b> Construct an argument that some animals form groups that help members survive.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Ecosystems: Interactions, Energy, and Dynamics</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.1</a> (DCI)</li> <li>• <a href="#">Lesson 3.2</a> (DCI)</li> <li>• <a href="#">Lesson 3.1</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (CCC)</li> </ul>
<p><b>3.LS3: Heredity: Inheritance and Variation of Traits</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>3.LS3.1</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.</p>	<p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.5</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Heredity: Inheritance and Variation of Traits</li> <li>• <b>CCC</b> Patterns</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (SEP, DCI)</li> </ul>
<p><b>3.LS3.2</b> Use evidence to support the explanation that traits can be influenced by the environment.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Heredity: Inheritance and Variation of Traits</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b><i>Inheritance and Traits</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.4</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.6</a> (SEP, DCI)</li> </ul>

<b>3.LS4: Biological Evolution: Unity and Diversity</b>	
OR Performance Expectation	Amplify Science Units
<p><b>3.LS4.1</b> Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Biological Evolution: Unity and Diversity</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b><i>Environments and Survival</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI)</li> <li>• <a href="#">Lesson 2.5</a> (SEP)</li> <li>• <a href="#">Lesson 3.3</a> (CCC)</li> </ul>
<p><b>3.LS4.2</b> 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> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Biological Evolution: Unity and Diversity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b><i>Environments and Survival</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (DCI)</li> <li>• <a href="#">Lesson 2.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (CCC)</li> <li>• <a href="#">Lesson 3.4</a> (SEP)</li> </ul> <p><b><i>Inheritance and Traits</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.6</a> (SEP)</li> <li>• <a href="#">Lesson 3.4</a> (CCC)</li> </ul>
<p><b>3.LS4.3</b> 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</p>	<p><b><i>Environments and Survival</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (DCI)</li> <li>• <a href="#">Lesson 1.4</a> (DCI)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Biological Evolution: Unity and Diversity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (DCI)</li> </ul> <p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (CCC)</li> </ul> <p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (SEP)</li> </ul>
<p><b>3.LS4.4</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 that live there may change.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Biological Evolution: Unity and Diversity</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Environments and Survival</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.1</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.3</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP)</li> </ul>

### 3.ESS2: Earth’s Systems

OR Performance Expectation	Amplify Science Units
<p><b>3.ESS2.1</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.2</a> (DCI)</li> </ul>
<p><b>3.ESS2.2</b> Obtain and combine information to describe climates in different regions of the world.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.2</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 3.5</a> (SEP, DCI, CCC)</li> </ul>

### 3.ESS3: Earth and Human Activity



OR Performance Expectation	Amplify Science Units
<p><b>3.ESS3.1</b> Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.2</a> (DCI)</li> <li>• <a href="#">Lesson 4.3</a> (DCI)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI)</li> </ul> <p><b>Inheritance and Traits</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (CCC)</li> </ul>

### 3.ETS1: Engineering Design

OR Performance Expectation	Amplify Science Units
<p><b>3.ETS1.1</b> Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Environments and Survival</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.7</a> (SEP)</li> <li>• <a href="#">Lesson 4.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.5</a> (DCI)</li> </ul> <p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI)</li> </ul>
<p><b>3.ETS1.2</b> Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Environments and Survival</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.1</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI)</li> </ul> <p><b>Weather and Climate</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.3</a> (SEP, DCI)</li> </ul>
<p><b>3.ETS1.3</b> Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype</p>	<p><b>Environments and Survival</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (SEP)</li> </ul>

that can be improved.

- **SEP** Planning and Carrying Out Investigations
- **DCI** Engineering Design

- [Lesson 4.1](#) (DCI)
- [Lesson 4.3](#) (DCI)

***Weather and Climate***

- [Lesson 4.3](#) (DCI)

Grade 4

<b>4.PS3: Energy</b>	
OR Performance Expectation	Amplify Science Units
<p><b>4.PS3.1</b> Use evidence to construct an explanation relating the speed of an object to the energy of that object.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (CCC)</li> </ul> <p><b>Vision and Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (SEP)</li> <li>• <a href="#">Lesson 3.5</a> (SEP)</li> </ul> <p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> </ul>
<p><b>4.PS3.2</b> Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.5</a> (DCI)</li> <li>• <a href="#">Lesson 2.4</a> (SEP)</li> <li>• <a href="#">Lesson 4.2</a> (DCI, CCC)</li> </ul> <p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (DCI)</li> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> </ul>
<p><b>4.PS3.3</b> Ask questions and predict outcomes about the changes in energy that occur when objects collide.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.4</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.6</a> (DCI)</li> </ul> <p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (SEP)</li> <li>• <a href="#">Lesson 4.2</a> (DCI, CCC)</li> </ul>

<p><b>4.PS3.4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP)</li> <li>• <a href="#">Lesson 4.2</a> (DCI, CCC)</li> </ul>
<p><b>4.PS4: Waves and their Applications in Technologies for Information Transfer</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>4.PS4.1</b> Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.5</a> (SEP)</li> <li>• <a href="#">Lesson 3.1</a> (DCI)</li> <li>• <a href="#">Lesson 3.6</a> (CCC)</li> </ul>
<p><b>4.PS4.2</b> Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Vision and Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (CCC)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 2.5</a> (SEP)</li> </ul>
<p><b>4.PS4.3</b> Generate and compare multiple solutions that use patterns to transfer information.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Waves and their Applications in Technologies for Information Transfer</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.2</a> (CCC)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> </ul> <p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.3</a> (CCC)</li> <li>• <a href="#">Lesson 4.1</a> (DCI)</li> </ul>

<b>4.LS1: From Molecules to Organisms: Structures and Processes</b>	
OR Performance Expectation	Amplify Science Units
<p><b>4.LS1.1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> From Molecules to Organisms: Structures and Processes</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Earth's Features</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.6</a> (SEP)</li> <li>• <a href="#">Lesson 2.6</a> (SEP)</li> </ul> <p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (CCC)</li> <li>• <a href="#">Lesson 2.1</a> (CCC)</li> </ul> <p><b>Vision and Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (DCI)</li> <li>• <a href="#">Lesson 3.3</a> (DCI)</li> </ul>
<p><b>4.LS1.2</b> Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> From Molecules to Organisms: Structures and Processes</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (CCC)</li> <li>• <a href="#">Lesson 3.2</a> (CCC)</li> </ul> <p><b>Vision and Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI)</li> </ul>
<b>4.ESS1: Earth's Place in the Universe</b>	
OR Performance Expectation	Amplify Science Units
<p><b>4.ESS1.1</b> Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Earth's Place in the Universe</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Earth's Features</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.6</a> (DCI)</li> <li>• <a href="#">Lesson 3.2</a> (DCI)</li> </ul> <p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.6</a> (SEP, CCC)</li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="#">Lesson 4.4</a> (SEP, CCC)</li> </ul>
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### 4.ESS2: Earth’s Systems

OR Performance Expectation	Amplify Science Units
<p><b>4.ESS2.1</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.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Earth’s Features</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 4.4</a> (SEP, DCI, CCC)</li> </ul>
<p><b>4.ESS2.2</b> Analyze and interpret data from maps to describe patterns of Earth’s features.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>Earth’s Features</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.4</a> (DCI)</li> <li>• <a href="#">Lesson 4.2</a> (SEP)</li> <li>• <a href="#">Lesson 4.5</a> (SEP, DCI)</li> </ul> <p><b>Waves, Energy, and Information</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (CCC)</li> <li>• <a href="#">Lesson 2.6</a> (CCC)</li> </ul>

### 4.ESS3: Earth and Human Activity

OR Performance Expectation	Amplify Science Units
<p><b>4.ESS3.1</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.1</a></li> <li>• <a href="#">Lesson 3.3</a></li> <li>• <a href="#">Lesson 4.5</a></li> </ul>

<p><b>4.ESS3.2</b> Generate and compare multiple solutions to reduce the impacts of natural Earth processes and climate change have on humans.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Earth's Features</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.5</a> (SEP)</li> <li>• <a href="#">Lesson 4.2</a> (CCC)</li> </ul> <p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (SEP, CCC)</li> <li>• <a href="#">Lesson 3.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 4.5</a> (DCI)</li> </ul>
<p><b>4.ETS1: Engineering Design</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>4.ETS1.1</b> Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.4</a> (SEP)</li> <li>• <a href="#">Lesson 4.3</a> (DCI)</li> <li>• <a href="#">Lesson 4.5</a> (DCI)</li> </ul>
<p><b>4.ETS1.2</b> Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.5</a> (SEP, DCI)</li> </ul>
<p><b>4.ETS1.3</b> Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>Energy Conversions</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> <li>• <a href="#">Lesson 3.5</a> (DCI)</li> </ul> <p><b>Vision and Light</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 5.1</a> (SEP)</li> <li>• <a href="#">Lesson 5.2</a> (SEP)</li> </ul>

Grade 5

5.PS1: Matter and its Interactions	
OR Performance Expectation	Amplify Science Units
<p><b>5.PS1.1</b> Develop a model to describe that matter is made of particles too small to be seen.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Matter and its Interactions</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b>Modeling Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 1.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.2</a> (SEP, DCI)</li> </ul>
<p><b>5.PS1.2</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.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Using Mathematics and Computational Thinking</li> <li>• <b>DCI</b> Matter and its Interactions</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (DCI)</li> <li>• <a href="#">Lesson 3.2</a> (SEP, CCC)</li> <li>• <a href="#">Lesson 5.3</a> (DCI)</li> </ul> <p><b>Modeling Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (CCC)</li> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> </ul>
<p><b>5.PS1.3</b> Make observations and measurements to identify materials based on their properties.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Matter and its Interactions</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.1</a> (CCC)</li> <li>• <a href="#">Lesson 5.1</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 5.2</a> (SEP, DCI)</li> </ul> <p><b>Modeling Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 1.8</a> (DCI)</li> </ul>
<p><b>5.PS1.4</b> Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 5.2</a> (DCI)</li> <li>• <a href="#">Lesson 5.4</a> (SEP, DCI, CCC)</li> </ul>



<ul style="list-style-type: none"> <li>• <b>DCI</b> Matter and its Interactions</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Modeling Matter</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> </ul>
<p><b>5.PS2: Motion and Stability: Forces and Interaction</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>5.PS2.1</b> Support an argument that the gravitational force exerted by Earth on objects is directed down.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Motion and Stability: Forces and Interaction</li> <li>• <b>CCC</b> Cause and Effect</li> </ul>	<p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.8</a> (SEP)</li> <li>• <a href="#">Lesson 3.6</a> (SEP)</li> </ul> <p><b>Patterns of Earth and Sky</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.1</a> (CCC)</li> <li>• <a href="#">Lesson 2.4</a> (DCI)</li> <li>• <a href="#">Lesson 3.6</a> (DCI)</li> </ul>
<p><b>5.PS3: Energy</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>5.PS3.1</b> Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Energy</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.5</a> (SEP, DCI, CCC)</li> </ul>
<p><b>5.LS1: From Molecules to Organisms: Structures and Processes</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>

<p><b>5.LS1.1</b> Support an argument that plants get the materials they need for growth chiefly from air and water.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> From Molecules to Organisms: Structures and Processes</li> <li>• <b>CCC</b> Energy and Matter</li> </ul>	<p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 2.7</a> (SEP, DCI)</li> </ul>
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<p><b>5.LS2: Ecosystems: Interactions, Energy, and Dynamics</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><b>5.LS2.1</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Ecosystems: Interactions, Energy, and Dynamics</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.7</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.2</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (DCI, CCC)</li> </ul>

<p><b>5.ESS1: Earth’s Place in the Universe</b></p>	
<p>OR Performance Expectation</p>	<p>Amplify Science Units</p>
<p><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.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Engaging in Argument from Evidence</li> <li>• <b>DCI</b> Earth’s Place in the Universe</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b>Patterns of Earth and Sky</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (DCI, CCC)</li> <li>• <a href="#">Lesson 1.6</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 1.5</a> (DCI)</li> </ul>
<p><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.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Analyzing and Interpreting Data</li> <li>• <b>DCI</b> Earth’s Place in the Universe</li> </ul>	<p><b>Patterns of Earth and Sky</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.2</a> (DCI)</li> <li>• <a href="#">Lesson 2.3</a> (DCI)</li> <li>• <a href="#">Lesson 3.6</a> (DCI, CCC)</li> </ul>

<ul style="list-style-type: none"> <li>• <b>CCC</b> Patterns</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.3</a> (SEP)</li> <li>• <a href="#">Lesson 3.2</a> (SEP)</li> </ul>
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### 5.ESS2: Earth’s Systems

OR Performance Expectation	Amplify Science Units
<p><b>5.ESS2.1</b> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Developing and Using Models</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.3</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (DCI, CCC)</li> </ul>
<p><b>5.ESS2.2</b> Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Using Mathematics and Computational Thinking</li> <li>• <b>DCI</b> Earth’s Systems</li> <li>• <b>CCC</b> Scale, Proportion, and Quantity</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.1</a> (SEP, DCI, CCC)</li> <li>• <a href="#">Lesson 3.2</a> (SEP, CCC)</li> </ul> <p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.3</a> (CCC)</li> <li>• <a href="#">Lesson 2.1</a> (SEP, CCC)</li> </ul>

### 5.ESS3: Earth and Human Activity

OR Performance Expectation	Amplify Science Units
<p><b>5.ESS3.1</b> Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Obtaining, Evaluating, and Communicating Information</li> <li>• <b>DCI</b> Earth and Human Activity</li> <li>• <b>CCC</b> Systems and System Models</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 1.2</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.4</a> (CCC)</li> </ul> <p><b>Ecosystem Restoration</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.5</a> (SEP, DCI)</li> </ul>

		<ul style="list-style-type: none"> <li>• <a href="#">Lesson 3.5</a> (SEP, DCI)</li> </ul>
<b>5.ETS1: Engineering Design</b>		
OR Performance Expectation	Amplify Science Units	
<p><b>5.ETS1.1</b> Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Asking Questions and Defining Problems</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.7</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 2.8</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.4</a> (DCI)</li> </ul>	
<p><b>5.ETS1.2</b> Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Constructing Explanations and Designing Solutions</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.7</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.5</a> (SEP, DCI)</li> </ul>	
<p><b>5.ETS1.3</b> Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <ul style="list-style-type: none"> <li>• <b>SEP</b> Planning and Carrying Out Investigations</li> <li>• <b>DCI</b> Engineering Design</li> </ul>	<p><b>The Earth System</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Lesson 2.8</a> (DCI)</li> <li>• <a href="#">Lesson 3.4</a> (SEP, DCI)</li> <li>• <a href="#">Lesson 4.5</a> (SEP, DCI)</li> </ul>	