

# 3rd Grade Science



## Prioritized Standards and Instructional Units 2023-2024

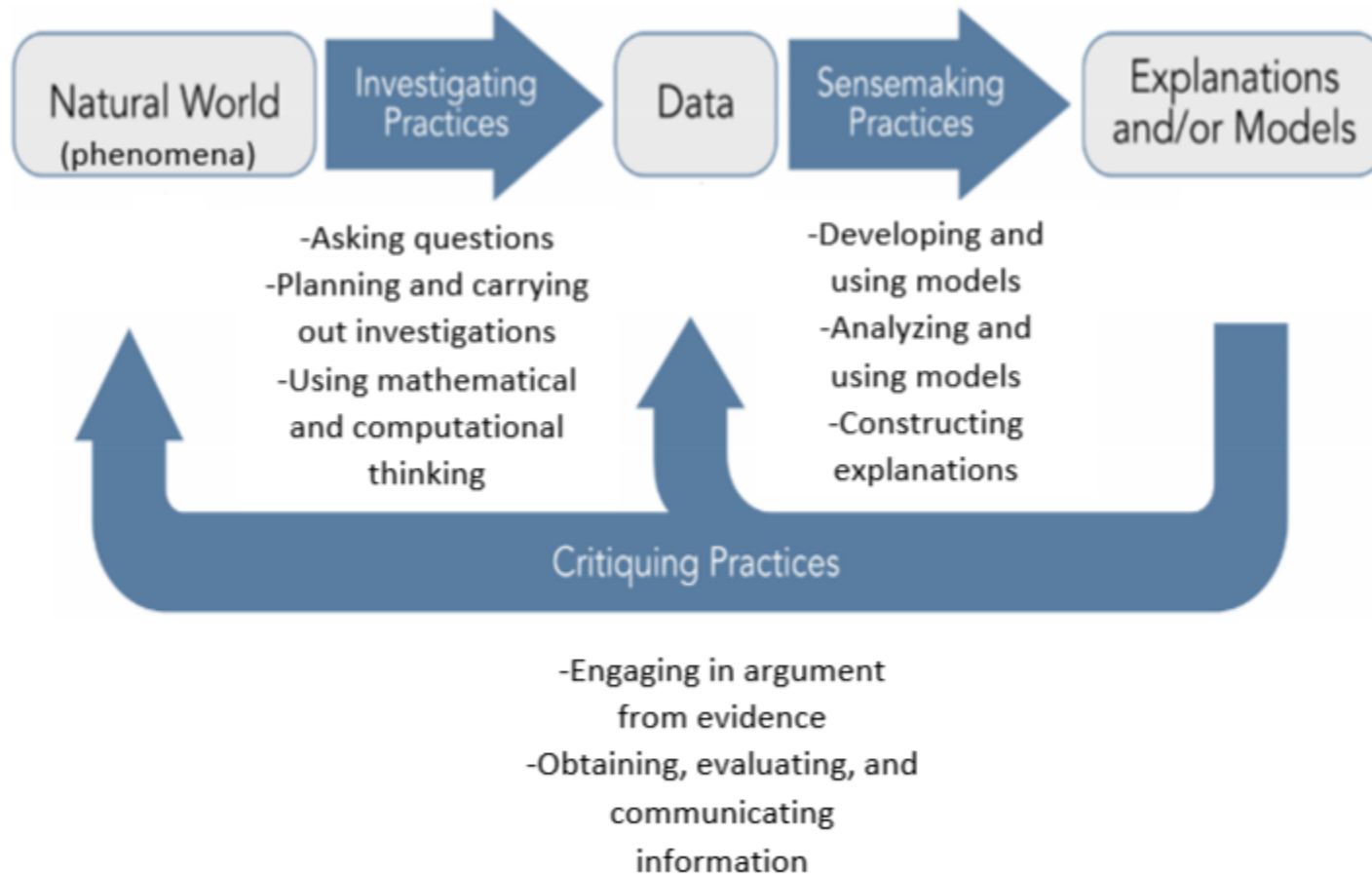
## 3rd Grade Science

<b>UNIT 1: Forces and Interactions</b> 25 Days	<b>UNIT 2: Weather and Climate</b> 25 Days
<p style="text-align: center;"><b><u>PRIORITY</u></b></p> <p style="text-align: center;"><b><u>Science and Engineering Practices</u></b></p> <p><b>Asking Questions and Defining Problems</b></p> <ul style="list-style-type: none"><li>• Ask questions that can be investigated based on patterns such as cause and effect relationships. (3-PS2-3)</li><li>• Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4)</li></ul> <p><b>Planning and Carrying Out Investigations</b></p> <ul style="list-style-type: none"><li>• Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-PS2-1)</li><li>• Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution. (3-PS2-2)</li></ul> <p style="text-align: center;"><b><u>SUPPORTING</u></b></p> <p style="text-align: center;"><b><u>Performance Expectations</u></b></p> <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> <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> <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> <p><b>3-PS2-4.</b> Define a simple design problem that can be solved by applying scientific ideas about magnets.</p>	<p style="text-align: center;"><b><u>PRIORITY</u></b></p> <p style="text-align: center;"><b><u>Science and Engineering Practices</u></b></p> <p><b>Analyzing and Interpreting Data</b></p> <ul style="list-style-type: none"><li>• Represent data in tables and various graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. (3-ESS2-1)</li></ul> <p><b>Engaging in Argument from Evidence</b></p> <ul style="list-style-type: none"><li>• Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-ESS3-1)</li></ul> <p style="text-align: center;"><b><u>SUPPORTING</u></b></p> <p style="text-align: center;"><b><u>Performance Expectations</u></b></p> <p><b>3-ESS2-1.</b> Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p><b>3-ESS2-2.</b> Obtain and combine information to describe climates in different regions of the world.</p> <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>

## 3rd Grade Science

<b>UNIT 3:</b> <b>Inheritance and Variation of Traits</b> 25 Days	<b>UNIT 4:</b> <b>Interdependent Relationships in Ecosystems</b> 25 Days
<p style="text-align: center;"><b><u>PRIORITY</u></b></p> <p style="text-align: center;"><b><u>Science and Engineering Practices</u></b></p> <p><b>Developing and Using Models</b></p> <ul style="list-style-type: none"><li>• Develop models to describe phenomena. (3-LS1-1)</li></ul> <p><b>Analyzing and Interpreting Data</b></p> <ul style="list-style-type: none"><li>• Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1)</li></ul> <p><b>Constructing Explanations and Designing Solutions</b></p> <ul style="list-style-type: none"><li>• Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2)</li><li>• Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2)</li></ul> <p style="text-align: center;"><b><u>SUPPORTING</u></b></p> <p style="text-align: center;"><b><u>Performance Expectations</u></b></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> <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>3-LS3-2.</b> Use evidence to support the explanation that traits can be influenced by the environment.</p> <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>	<p style="text-align: center;"><b><u>PRIORITY</u></b></p> <p style="text-align: center;"><b><u>Science and Engineering Practices</u></b></p> <p><b>Analyzing and Interpreting Data</b></p> <ul style="list-style-type: none"><li>• Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS4-1)</li></ul> <p><b>Engaging in Argument from Evidence</b></p> <ul style="list-style-type: none"><li>• Construct an argument with evidence, data, and/or a model. (3-LS2-1)</li><li>• Construct an argument with evidence. (3-LS4-3)</li><li>• Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-LS4-4)</li></ul> <p style="text-align: center;"><b><u>SUPPORTING</u></b></p> <p style="text-align: center;"><b><u>Performance Expectations</u></b></p> <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>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> <p><b>3-LS2-1.</b> Construct an argument that some animals form groups that help members survive.</p>

# Science and Engineering Practices Grouping



# Unit 1

## Unit/Core Idea: Forces and Interactions

Pacing: 25 days

Unit/Core Idea: Forces and Interactions	
Essential Question: How do equal and unequal forces on an object affect the object? How can magnets be used?	
<p><b>Supporting Questions:</b></p> <p>-How can one predict an object's continued motion, changes in motion, or stability?</p> <p>-What underlying forces explain the variety of interactions observed?</p> <p>-Why are some physical systems more stable than others?</p>	<p><b>Sample Phenomena:</b></p> <p>-Set up a small ramp and run a toy car down the ramp, Set up a ramp with carpet and run a toy car down the ramp-make observations</p> <p><b>-Force in motion videos</b> <a href="https://thewonderofscience.com/3ps23#phenomena">https://thewonderofscience.com/3ps23#phenomena</a> <a href="https://www.ngssphenomena.com/#/changing-forces/">https://www.ngssphenomena.com/#/changing-forces/</a></p> <p>-Bring in balloons and have students rub them on their (head, shirt, etc) and stick it to the whiteboard</p> <p><b>-Stability video</b> <a href="https://thewonderofscience.com/3ps21#phenomena">https://thewonderofscience.com/3ps21#phenomena</a></p>

Science and Engineering Practices (Priority)	Performance Expectations (Supporting)
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in grades 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"><li>Ask questions that can be investigated based on patterns such as cause and effect relationships. (3-PS2-3)</li><li>Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4)</li></ul> <p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"><li>Plan and conduct an investigation collaboratively to produce</li></ul>	<p><b>3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</b> [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.]</p> <p><b>3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.</b> [Clarification Statement: Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, and two children on a see-saw.]</p> <p><b>3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</b> [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic</p>

<p>data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-PS2-1)</p> <ul style="list-style-type: none"> <li>• Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution. (3-PS2-2)</li> </ul>	<p>force could include the force between two permanent magnets, the force between an electromagnet and steel paper clips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.]</p> <p><b>3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.*</b> [Clarification Statement: Examples of problems could include constructing a latch to keep a door shut and creating a device to keep two moving objects from touching each other.]</p>
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<p><b>Kentucky Academic Standards Connections</b></p>	<p><b>ELA/Literacy –</b>  RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-PS2-1),(3-PS2-3)  RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-PS2-3)  RI.3.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence). (3-PS2-3)  W.3.7 Conduct short research projects that build knowledge about a topic. (3-PS2-1),(3-PS2-2)  W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-PS2-1),(3-PS2-2)  SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. (3-PS2-3)</p> <p><b>Mathematics –</b>  MP.2 Reason abstractly and quantitatively. (3-PS2-1)  MP.5 Use appropriate tools strategically. (3-PS2-1)  3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-PS2-1)</p>
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# Unit 2

Unit/Core Idea: Weather and Climate

Pacing: 25 days

Unit/Core Idea: Weather and Climate	
<p><b>Essential Question: What is typical weather in different parts of the world and during different times of the year? How can the impact of weather-related hazards be reduced?</b></p>	
<p><b>Supporting Questions:</b></p> <p>-How do Earth's major systems interact?</p> <p>-How do the properties and movements of water shape Earth's surface and affect its systems?</p> <p>-What regulates weather and climate?</p> <p>-How do natural hazards affect individuals and societies?</p>	<p><b>Sample Phenomena:</b></p> <p><a href="https://static1.squarespace.com/static/59c3bad759cc68f757a465a3/t/5e7cd9778688330aad19a321/1585240440168/3-ESS2-1+Seasonal+Weather+%28Teacher+Version%29.pdf">https://static1.squarespace.com/static/59c3bad759cc68f757a465a3/t/5e7cd9778688330aad19a321/1585240440168/3-ESS2-1+Seasonal+Weather+%28Teacher+Version%29.pdf</a> Looking at seasonal weather</p> <p>-Show students a diagram of the water cycle - spark discussion</p> <p><a href="https://static1.squarespace.com/static/59c3bad759cc68f757a465a3/t/5f7b46f5b6fd0e23425e790c/1601914614689/3-ESS2-2+Climate+Patterns+%28Teacher+Version%29.pdf">https://static1.squarespace.com/static/59c3bad759cc68f757a465a3/t/5f7b46f5b6fd0e23425e790c/1601914614689/3-ESS2-2+Climate+Patterns+%28Teacher+Version%29.pdf</a> Climates from around the world</p> <p><a href="https://thewonderofscience.com/videos/2017/12/10/ess3b-natural-hazards">https://thewonderofscience.com/videos/2017/12/10/ess3b-natural-hazards</a>  <b>Watch 1:45 of video.</b></p>

Science and Engineering Practices (Priority)	Performance Expectations (Supporting)
<p><b>Analyzing and Interpreting Data</b>            Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <ul style="list-style-type: none"> <li>Represent data in tables and various graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. (3-ESS2-1)</li> </ul> <p><b>Engaging in Argument from Evidence</b>            Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by</p>	<p><b>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</b>            [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]</p> <p><b>3-ESS2-2. Obtain and combine information to describe climates in different regions of the world</b></p> <p><b>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*</b> [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]</p>

- peers by citing relevant evidence about the natural and designed world(s).
- Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-ESS3-1)

**Obtaining, Evaluating, and Communicating Information**

Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.

- Obtain and combine information from books and other reliable media to explain phenomena. (3- ESS2-2)

**Kentucky Academic Standards Connections**

**ELA/Literacy –**

- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-ESS2-2)
- RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic. (3-ESS2-2)
- W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-ESS3-1)
- W.3.7 Conduct short research projects that build knowledge about a topic. (3-ESS3-1)
- W.3.9 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-ESS2-2)

**Mathematics –**

- MP.2 Reason abstractly and quantitatively. (3-ESS2-1),(3-ESS2-2),(3-ESS3-1)
- MP.4 Model with mathematics. (3-ESS2-1),(3-ESS2-2), (3-ESS3-1)
- MP.5 Use appropriate tools strategically. (3-ESS2-1)
- 3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-ESS2-1)
- 3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in bar graphs. (3-ESS2-1)



# Unit 3

Unit/Core Idea: Inheritance and Variation of Traits

Pacing: 25 days

Unit/Core Idea: Inheritance and Variation of Traits Essential Question: How do organisms vary in their traits?	
<p><b>Supporting Questions:</b></p> <p>-How are the characteristics of one generation related to the previous generation?</p> <p>-Why do individuals of the same species vary in how they look, function, and behave?</p> <p>-How do organisms grow and develop?</p>	<p><b>Sample Phenomena:</b></p> <p>-Show student the slide of Sid the Science Kid and his parents (engage discussion on traits and characteristics) <a href="https://docs.google.com/document/d/1Dsl8QhYkyAGSmMlfU1LC9VScCrkuoGCO3Yjq8sy5g/edit">https://docs.google.com/document/d/1Dsl8QhYkyAGSmMlfU1LC9VScCrkuoGCO3Yjq8sy5g/edit</a></p> <p>-Twins- <a href="https://www.insideedition.com/10393-twin-teens-one-black-one-white-celebrate-their-differences">https://www.insideedition.com/10393-twin-teens-one-black-one-white-celebrate-their-differences</a></p> <p>-- Have students bring a picture of themselves and their families to discuss traits</p> <p>-<a href="https://www.youtube.com/watch?v=dIP8s2NpPqI">https://www.youtube.com/watch?v=dIP8s2NpPqI</a> Students watch this short video of types of dogs and discuss their looks.</p> <p>-<a href="https://www.marinhumane.org/wp-content/uploads/2017/06/Dog-Breed-Characteristics-Behavior.pdf">https://www.marinhumane.org/wp-content/uploads/2017/06/Dog-Breed-Characteristics-Behavior.pdf</a></p> <p>-<a href="https://mysteryscience.com/animals/mystery-4/trait-variation-inheritance-artificial-selection/30?code=Nzc2MTk5MA&amp;t=student&amp;chapter=all">https://mysteryscience.com/animals/mystery-4/trait-variation-inheritance-artificial-selection/30?code=Nzc2MTk5MA&amp;t=student&amp;chapter=all</a> Watch the first 30 seconds.</p>

Science and Engineering Practices (Priority)	Performance Expectations (Supporting)
<p><b>Developing and Using Models</b> Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"><li>Develop models to describe phenomena. (3-LS1-1)</li></ul> <p><b>Analyzing and Interpreting Data</b></p>	<p><b>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</b> [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction]</p> <p><b>3-LS3-1. Analyze and interpret data to provide evidence that plants and</b></p>

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1)

### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.

- Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2)
- Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2)

**animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.** [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]

**3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.** [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]

**3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.** [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]

### Kentucky Academic Standards Connections

#### ELA/Literacy –

RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS3-1),(3-LS3-2),(3-LS4-2)

RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1),(3-LS3-2),(3-LS4-2)

RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1),(3-LS3-2),(3-LS4-2)

RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)

W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1),(3-LS3-2),(3-LS4-2)

SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS3-1),(3-LS3-2),(3-LS4-2)

SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. (3-LS1-1)

#### Mathematics –

MP.2 Reason abstractly and quantitatively. (3-LS3-1),(3-LS3-2),(3-LS4-2)

MP.4 Model with mathematics. (3-LS1-1),(3-LS3-1),(3-LS3-2),(3-LS4-2)

3.NBT Number and Operations in Base Ten (3-LS1-1)

3.NF Number and Operations—Fractions (3-LS1-1)

3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-2)

3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS3-1),(3-LS3-2)

# Unit 4

## Unit/Core Idea: Interdependent Relationships in Ecosystems

Pacing: 25 days

Unit/Core Idea: Interdependent Relationships in Ecosystems	
Essential Question: How and why do organisms interact with their environment and what are the effects of these interactions?	
<p><b>Supporting Questions:</b></p> <p>-How does the environment influence populations of organisms over multiple generations?</p> <p>-What happens to ecosystems when the environment changes?</p> <p>-How do organisms interact in groups so as to benefit individuals?</p>	<p><b>Sample Phenomena:</b></p> <p>-<a href="https://mysteryscience.com/animals/mystery-1/habitats-fossils-environments-over-time/379?code=Nzc2MTk5MA&amp;t=student&amp;chapter=all">https://mysteryscience.com/animals/mystery-1/habitats-fossils-environments-over-time/379?code=Nzc2MTk5MA&amp;t=student&amp;chapter=all</a> Watch video until 2:08.</p> <p>-Looking at before and after pictures of Mount St. Helen to look at the environmental changes (connect this video to how it affected the plant life and animal life)</p> <p>-Group of elephants working together to protect young <a href="https://www.youtube.com/watch?v=INfjjgg3Hs">https://www.youtube.com/watch?v=INfjjgg3Hs</a></p>

Science and Engineering Practices (Priority)	Performance Expectations (Supporting)
<p><b>Analyzing and Interpreting Data</b> Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS4-1)</li> </ul> <p><b>Engaging in Argument from Evidence</b> Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed worlds.</p> <ul style="list-style-type: none"> <li>Construct an argument with evidence, data, and/or a model. (3-LS2-1)</li> <li>Construct an argument with evidence. (3-LS4-3)</li> </ul>	<p><b>3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</b> [Clarification Statement: Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.] [Assessment Boundary: Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.]</p> <p><b>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</b> [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]</p> <p><b>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that</b></p>

- Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-LS4-4)

**live there may change.\*** [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.]

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

**Kentucky Academic Standards Connections**

**ELA/Literacy –**

RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1),(3-LS4-1),(3-LS4-3),(3-LS4-4)

RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS4-1),(3-LS4-3),(3-LS4-4)

RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS2-1),(3-LS4-1),(3-LS4-3),(3-LS4-4)

W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1),(3-LS4-1),(3-LS4-3),(3-LS4-4)

W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS4-1),(3-LS4-3),(3-LS4-4)

W.3.9 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-LS4-1)

SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS4-3),(3-LS4-4)

**Mathematics –**

MP.2 Reason abstractly and quantitatively. (3-LS4-1),(3-LS4-4)

MP.4 Model with mathematics. (3-LS2-1),(3-LS4-1),(3-LS4-4)

MP.5 Use appropriate tools strategically. (3-LS4-1)

3.NBT Number and Operations in Base Ten (3-LS2-1)

3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-3)

3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS4-1)