

# APPROVED FACILITY SCHOOLS CURRICULUM GUIDE

**SUBJECT: Science**

**GRADE: 3**

<b>Strand/Concept</b>	<b>Student Friendly Learning Objective</b>	<b>Level of Thinking</b>	<b>Academic Vocabulary</b>
<b>Student Expectation</b>			
<b>TIMELINE: Quarter 1</b>			
<p><b>Earth Science: Earth's Systems</b></p> <p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. <b>I C M</b></p>	<p>I can graph weather patterns to make a prediction about weather during the different seasons.</p> <p>I can interpret a seasonal graph of the weather to understand how weather is different during different seasons.</p>	<p>Evaluation Analysis</p> <p>Analysis</p>	<p>Celsius Data Fahrenheit Graph Precipitation Table Temperature Weather</p>
<p><b>Earth Science: Earth's Systems</b></p> <p>3-ESS2-2. Obtain and combine information to describe climates in different regions of the world. <b>I C M</b></p>	<p>I can summarize information to describe climates in different regions of the world.</p>	<p>Analysis Synthesis</p>	<p>Anemometer Celsius Climate Data Fahrenheit Graphical display Precipitation Region temperature Table</p>
<p><b>Earth Science: Earth and Human Activity</b></p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. <b>I</b></p>	<p>I can make judgments of a design that reduces weather related hazards.</p>	<p>Evaluation</p>	<p>Barriers Blizzard Flood Lightning rods Natural hazards Wind resistant</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. <b>I</b></p>	<p>I can plan and do an experiment and evaluate its results.</p> <p>I can adjust my experiment to allow for limits on materials, time, or cost.</p>	<p>Synthesis</p> <p>Evaluation</p>	<p>Criteria Hypothesize Reflection Research Solutions</p>

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<p><b>Engineering Design</b></p> <p>3-5-ETS1-2. 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. I</p>	<p>I can plan different experiments to solve a problem.</p> <p>I can critique how effective each solution will be at solving a problem.</p>	<p>Analysis Synthesis</p> <p>Evaluation</p>	<p>Criteria Hypothesize Reflection Research Solutions</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-3. 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. I</p>	<p>I can design experiments with controlled variables.</p> <p>I can analyze models or prototypes for improvement based on failure points.</p>	<p>Analysis Synthesis</p> <p>Analysis Evaluation</p>	<p>Analysis Controlled variables Criteria Failure points Hypothesize Prototype Reflection Research Solutions</p>

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**RESOURCES AND NOTES FOR QUARTER 1:**

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<p><b>Physical Science Motion and Stability: Forces and Interactions</b></p> <p>3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. <b>I C M</b></p>	<p>I can plan and do an experiment to show the effects of balanced and unbalanced forces on an object.</p>	<p>Synthesis Analysis Evaluation</p>	<p>Balanced Direction Energy Force Friction Gravity Inertia Magnet Net force Pull Push Strength Unbalanced</p>
<p><b>Physical Science Motion and Stability: Forces and Interactions</b></p> <p>3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. <b>I C M</b></p>	<p>I can observe and measure an object's motion to predict patterns of future movement.</p>	<p>Application Synthesis</p>	<p>Balanced Direction Energy Force Friction Gravity Inertia Magnet Net force Patterns Pull Push Strength Unbalanced</p>

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<p><b>Physical Science Motion and Stability: Forces and Interactions</b></p> <p>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. I C M</p>	<p>I can ask questions to determine cause and effect relationships of electric forces on objects that are not touching.</p> <p>I can ask questions to determine cause and effect relationships of magnetic forces on objects that are not touching.</p>	<p>Analysis Evaluation</p> <p>Analysis Evaluation</p>	<p>Attract Cause and effect Direction Electric force Exerted Force field Magnetic force North pole Patterns Repel South pole</p>
<p><b>Physical Science Motion and Stability: Forces and Interactions</b></p> <p>3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets. I C M</p>	<p>I can design a solution for a problem that can be solved by applying scientific ideas about magnets.</p>	<p>Synthesis Evaluation</p>	<p>Attract Electric force Electromagnet Exerted Force field Magnetic force North pole Patterns Repel South pole</p>
<p><b>Earth Science: Earth and Human Activity</b></p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. C</p>	<p>I can make judgments of a design that reduces weather related hazards.</p>	<p>Evaluation</p>	<p>Barrier Blizzard Flood Lightning rod Natural hazard Wind resistant</p>

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<p><b>Engineering Design</b></p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. <b>C</b></p>	<p>I can plan and do an experiment and evaluate its results.</p> <p>I can adjust my experiment to allow for limits on materials, time, or cost.</p>	<p>Synthesis</p> <p>Evaluation</p>	<p>Criteria</p> <p>Hypothesize</p> <p>Reflection</p> <p>Research</p> <p>Solution</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-2. 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. <b>C</b></p>	<p>I can plan and compare different ways to solve a problem.</p> <p>I can critique solutions on how effective each will be at meeting the problem's criteria and constraints.</p>	<p>Analysis</p> <p>Application</p> <p>Evaluation</p>	<p>Criteria</p> <p>Hypothesize</p> <p>Reflection</p> <p>Research</p> <p>Solution</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-3. 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. <b>C</b></p>	<p>I can design experiments controlling variables.</p> <p>I can analyze models or prototypes for improvement based on failure points.</p>	<p>Synthesis</p> <p>Analysis</p>	<p>Analysis</p> <p>Controlled variable</p> <p>Criteria</p> <p>Failure point</p> <p>Hypothesize</p> <p>Prototype</p> <p>Reflection</p> <p>Research</p> <p>Solution</p>

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**RESOURCES AND NOTES FOR QUARTER 2 :**

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<b>TIMELINE: Quarter 3</b>			
<p><b>Life Science From Molecules to Organisms: Structures and Processes</b></p> <p>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. <b>I C M</b></p>	<p>I can explain and create the patterns of an organism's life cycle.</p>	<p>Comprehension Application</p>	<p>Amphibian Animal life cycle Birth Death Development Germinate Growth Organism Photosynthesis Plant life cycle Reptile Seed coat Traits</p>
<p><b>Life Science Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms</b></p> <p>3-LS2-1. Construct an argument that some animals form groups that help members survive. <b>I C M</b></p>	<p>I can compose an argument about how being part of a group helps survival.</p>	<p>Synthesis</p>	<p>Community Defense Environment Group Social interactions Survival</p>
<p>3-LS3-1. Analyze and Interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. <b>I C M</b></p>	<p>I can make observations by looking at data to determine that living things inherit traits from their parents.</p> <p>I can make observations by looking at data to determine that groups of living things have similar traits.</p>	<p>Analysis Evaluation</p> <p>Analysis Evaluation</p>	<p>Heredity Inherit Offspring Similar Traits</p>



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<p><b>Heredity: Inheritance and Variation of Traits</b></p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. <b>I C M</b></p>	I can look at evidence and conclude that the environment can influence the growth of a living thing.	Analysis Evaluation	Change Different Environment Heredity Similar Traits
<p><b>Earth Science: Weather and Climate</b></p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. <b>C</b></p>	I can make judgments of a design that reduces weather related hazards.	Analysis Evaluation	Barriers Drought Flooding Lightning rod Natural hazard Tornado Wind resistant
<p><b>Engineering Design</b></p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. <b>C</b></p>	I can plan and do an experiment and evaluate its results. I can adjust my experiment to allow for limits on materials, time, or cost.	Synthesis Evaluation	Criteria Failure points Hypothesize Reflection Research Solution

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<p><b>Engineering Design</b></p> <p>3-5-ETS1-2. 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. <b>C</b></p>	<p>I can plan and produce many possible solutions to a problem while considering the criteria and constraints of the problem.</p> <p>I can critique solutions on how well each result will work.</p>	<p>Synthesis Evaluation</p> <p>Evaluation</p>	<p>Criteria Failure points Hypothesize Reflection Research Solution</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-3. 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. <b>C</b></p>	<p>I can design experiments controlling variables.</p> <p>I can analyze models or prototypes for improvement based on failure points.</p>	<p>Synthesis</p> <p>Analysis</p>	<p>Controlled variable Criteria Failure points Hypothesize Prototype Reflection Research Solution</p>

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**RESOURCES AND NOTES FOR QUARTER 3 :**

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<b>TIMELINE: Quarter 4</b>			
<b>Life Science: Biological Evolution: Unity and Diversity</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>I C M</b>	I can analyze data from fossils to provide evidence to identify their environment.	Analysis Synthesis	Environment Evidence Extinct organisms Marine fossils Plant fossils Relative age
<b>Life Science: Biological Evolution: Unity and Diversity</b>  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. <b>I C M</b>	I can use evidence to explain that the characteristics between individuals of the same animal provide advantages in surviving, finding mates and reproducing.	Application	Camouflage Defenses Evolution Offspring Predators Prey Reproduce Survival Traits
<b>Life Science: Biological Evolution: Unity and Diversity</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>I C M</b>	I can construct an argument that in any particular habitat, some kinds of organisms can survive better than others.	Application	Characteristics Habitat Migration Needs Survival
<b>Life Science: Biological Evolution: Unity and Diversity</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 live there may change. <b>I C M</b>	I can hypothesize how well a solution to a problem affects the plants and animals of a changing environment.	Synthesis	Characteristics Habitat Migration Needs Resilience Survival Temperature Transformed environment Water distribution

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<p><b>Engineering Design</b></p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. <b>M</b></p>	<p>I can plan and do an experiment and evaluate its results.</p> <p>I can adjust my experiment to allow for limits on materials, time, or cost.</p>	<p>Synthesis Evaluation</p> <p>Synthesis Evaluation</p>	<p>Criteria Failure points Hypothesize Reflection Research Solutions</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-2. 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. <b>M</b></p>	<p>I can plan multiple solutions to a problem considering the criteria and constraints of the problem.</p> <p>I can critique solutions on how well each result will work.</p>	<p>Analysis Evaluation</p> <p>Evaluation</p>	<p>Criteria Failure points Hypothesize Reflection Research Solutions</p>
<p><b>Engineering Design</b></p> <p>3-5-ETS1-3. 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. <b>M</b></p>	<p>I can design experiments controlling variables.</p> <p>I can analyze models or prototypes for improvement based on failure points.</p>	<p>Synthesis</p> <p>Analysis</p>	<p>Analysis Controlled variables Criteria Failure points Hypothesize Prototype Reflection Research Solution</p>
<p><b>Earth Science: Earth and Human Activity</b></p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. <b>M</b></p>	<p>I can make judgments of a design that reduces weather related hazards.</p>	<p>Evaluation</p>	<p>Barrier Flood Lightning rod Natural hazard Tornado Wind resistant</p>

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**RESOURCES AND NOTES FOR QUARTER 4 :**