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<th>Strand/Concept</th>
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<tbody>
<tr>
<td><strong>Earth Science: Earth’s Systems</strong></td>
<td>I can graph weather patterns to make a prediction about weather during the different seasons. I can interpret a seasonal graph of the weather to understand how weather is different during different seasons.</td>
<td>Evaluation  Analysis</td>
<td>Evans, Fahrenheit, Graph, Precipitation, Table, Temperature, Weather</td>
</tr>
<tr>
<td><strong>Earth Science: Earth’s Systems</strong></td>
<td>I can summarize information to describe climates in different regions of the world. I can summarize information to describe climates in different regions of the world.</td>
<td>Analysis Synthesis</td>
<td>Anemometer, Celsius, Climate, Data, Fahrenheit, Graphical display, Precipitation, Region temperature, Table</td>
</tr>
<tr>
<td><strong>Earth Science: Earth and Human Activity</strong></td>
<td>I can make judgments of a design that reduces weather related hazards.</td>
<td>Evaluation</td>
<td>Barriers, Blizzard, Flood, Lightning rods, Natural hazards, Wind resistant</td>
</tr>
<tr>
<td><strong>Engineering Design</strong></td>
<td>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.</td>
<td>Synthesis Evaluation</td>
<td>Criteria, Hypothesize, Reflection, Research, Solutions</td>
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**TIMELINE:** Quarter 1

January, 2014
## APPROVED FACILITY SCHOOLS CURRICULUM GUIDE

### SUBJECT: Science  
### GRADE: 3

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<thead>
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<th>Strand/Concept</th>
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</table>
| **Engineering Design** | I can plan different experiments to solve a problem.  
I can critique how effective each solution will be at solving a problem.  
I can design experiments with controlled variables.  
I can analyze models or prototypes for improvement based on failure points. |

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<td>Synthesis</td>
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<td></td>
<td>Research</td>
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<td></td>
<td>Solutions</td>
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### RESOURCES AND NOTES FOR QUARTER 1:
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<tr>
<td>Physical Science Motion and Stability: Forces and Interactions</td>
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</tr>
<tr>
<td>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.</td>
<td>I can plan and do an experiment to show the effects of balanced and unbalanced forces on an object.</td>
<td>Synthesis, Analysis, Evaluation</td>
<td>Balanced, Direction, Energy, Force, Friction, Gravity, Inertia, Magnet, Net force, Pull, Push, Strength, Unbalanced</td>
</tr>
<tr>
<td>Physical Science Motion and Stability: Forces and Interactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>I can observe and measure an object’s motion to predict patterns of future movement.</td>
<td>Application, Synthesis</td>
<td>Balanced, Direction, Energy, Force, Friction, Gravity, Inertia, Magnet, Net force, Patterns, Pull, Push, Strength, Unbalanced</td>
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<tbody>
<tr>
<td>Physical Science Motion and Stability: Forces and Interactions</td>
<td>I can ask questions to determine cause and effect relationships of electric forces on objects that are not touching. I can ask questions to determine cause and effect relationships of magnetic forces on objects that are not touching.</td>
<td>Analysis</td>
<td>Attract, Cause and effect, Direction, Electric force, Exerted, Force field, Magnetic force, North pole, Patterns, Repel, South pole</td>
</tr>
<tr>
<td>Physical Science Motion and Stability: Forces and Interactions</td>
<td>I can design a solution for a problem that can be solved by applying scientific ideas about magnets.</td>
<td>Synthesis</td>
<td>Attract, Electric force, Electromagnet, Exerted, Force field, Magnetic force, North pole, Patterns, Repel, South pole</td>
</tr>
<tr>
<td>Earth Science: Earth and Human Activity</td>
<td>I can make judgments of a design that reduces weather related hazards.</td>
<td>Evaluation</td>
<td>Barrier, Blizzard, Flood, Lightning rod, Natural hazard, Wind resistant</td>
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<tr>
<td><strong>Engineering Design</strong></td>
<td>I can plan and do an experiment and evaluate its results.</td>
<td>Synthesis</td>
<td>Criteria</td>
</tr>
<tr>
<td>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. C</td>
<td>I can adjust my experiment to allow for limits on materials, time, or cost.</td>
<td>Evaluation</td>
<td>Hypothesize</td>
</tr>
<tr>
<td><strong>Engineering Design</strong></td>
<td>I can plan and compare different ways to solve a problem.</td>
<td>Analysis</td>
<td>Reflection</td>
</tr>
<tr>
<td>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. C</td>
<td>I can critique solutions on how effective each will be at meeting the problem’s criteria and constraints.</td>
<td>Application</td>
<td>Research</td>
</tr>
<tr>
<td><strong>Engineering Design</strong></td>
<td>I can design experiments controlling variables.</td>
<td>Synthesis</td>
<td>Solution</td>
</tr>
<tr>
<td>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. C</td>
<td>I can analyze models or prototypes for improvement based on failure points.</td>
<td>Analysis</td>
<td>Controlled variable</td>
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## RESOURCES AND NOTES FOR QUARTER 2:

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</thead>
<tbody>
<tr>
<td>Life Science From Molecules to Organisms: Structures and Processes</td>
<td>I can explain and create the patterns of an organism’s life cycle.</td>
<td>Comprehension</td>
<td>Amphibian</td>
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<tr>
<td></td>
<td></td>
<td>Application</td>
<td>Animal life cycle</td>
</tr>
<tr>
<td>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. I C M</td>
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<td>Birth</td>
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<td>Development</td>
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<td>Growth</td>
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<td>Organism</td>
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<td>Photosynthesis</td>
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<td>Plant life cycle</td>
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<td>Reptile</td>
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<td>Seed coat</td>
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<td>Traits</td>
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<tr>
<td>Life Science Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms</td>
<td>I can compose an argument about how being part of a group helps survival.</td>
<td>Synthesis</td>
<td>Community</td>
</tr>
<tr>
<td>3-LS2-1. Construct an argument that some animals form groups that help members survive. I C M</td>
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<td>Defense</td>
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<td>Environment</td>
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<td>Group</td>
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<td>Social interactions</td>
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<td></td>
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<td>Survival</td>
</tr>
<tr>
<td>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. I C M</td>
<td>I can make observations by looking at data to determine that living things inherit traits from their parents.</td>
<td>Analysis</td>
<td>Heredity</td>
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<td>I can make observations by looking at data to determine that groups of living things have similar traits.</td>
<td>Evaluation</td>
<td>Inherit</td>
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<td>Offspring</td>
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<td>Similar</td>
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<td>Traits</td>
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<tr>
<td>Heredity: Inheritance and Variation of Traits</td>
<td>I can look at evidence and conclude that the environment can influence the growth of a living thing.</td>
<td>Analysis</td>
<td>Change</td>
</tr>
<tr>
<td>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</td>
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<td>Evaluation</td>
<td>Different</td>
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<td>Environment</td>
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<td>Similar</td>
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<td></td>
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<td>Traits</td>
</tr>
<tr>
<td>Earth Science: Weather and Climate</td>
<td>I can make judgments of a design that reduces weather related hazards.</td>
<td>Analysis</td>
<td>Barriers</td>
</tr>
<tr>
<td>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</td>
<td></td>
<td>Evaluation</td>
<td>Drought</td>
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<td>Flooding</td>
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<td>Lightning rod</td>
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<td>Natural hazard</td>
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<td>Tornado</td>
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<td></td>
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<td></td>
<td>Wind resistant</td>
</tr>
<tr>
<td>Engineering Design</td>
<td>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.</td>
<td>Synthesis</td>
<td>Criteria</td>
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<tr>
<td>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.</td>
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<td>Evaluation</td>
<td>Failure points</td>
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<td>Hypothesize</td>
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<td>Reflection</td>
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<tr>
<td><strong>Engineering Design</strong></td>
<td>I can plan and produce many possible solutions to a problem while considering the criteria and constraints of the problem. I can critique solutions on how well each result will work.</td>
<td>Synthesis, Evaluation</td>
<td>Criteria, Failure points, Hypothesize, Reflection, Research, Solution</td>
</tr>
<tr>
<td>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. C</td>
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<tr>
<td><strong>Engineering Design</strong></td>
<td>I can design experiments controlling variables. I can analyze models or prototypes for improvement based on failure points.</td>
<td>Synthesis, Analysis</td>
<td>Controlled variable, Criteria, Failure points, Hypothesize, Prototype, Reflection, Research, Solution</td>
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<tr>
<td>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. C</td>
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<tr>
<td><strong>Life Science: Biological Evolution: Unity and Diversity</strong></td>
<td><strong>3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. I C M</strong></td>
<td>I can analyze data from fossils to provide evidence to identify their environment.</td>
<td>Analysis</td>
</tr>
<tr>
<td><strong>Life Science: Biological Evolution: Unity and Diversity</strong></td>
<td><strong>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. I C M</strong></td>
<td>I can use evidence to explain that the characteristics between individuals of the same animal provide advantages in surviving, finding mates and reproducing.</td>
<td>Application</td>
</tr>
<tr>
<td><strong>Life Science: Biological Evolution: Unity and Diversity</strong></td>
<td><strong>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. I C M</strong></td>
<td>I can construct an argument that in any particular habitat, some kinds of organisms can survive better than others.</td>
<td>Application</td>
</tr>
<tr>
<td><strong>Life Science: Biological Evolution: Unity and Diversity</strong></td>
<td><strong>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. I C M</strong></td>
<td>I can hypothesize how well a solution to a problem affects the plants and animals of a changing environment.</td>
<td>Synthesis</td>
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<tr>
<td><strong>Engineering Design</strong></td>
<td>I can plan multiple solutions to a problem considering the criteria and constraints of the problem. I can critique solutions on how well each result will work.</td>
<td>Analysis Evaluation</td>
<td>Criteria Failure points Hypothesize Reflection Research Solutions</td>
</tr>
<tr>
<td>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.</td>
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<tr>
<td><strong>Engineering Design</strong></td>
<td>I can design experiments controlling variables. I can analyze models or prototypes for improvement based on failure points.</td>
<td>Synthesis Analysis</td>
<td>Analysis Controlled variables Criteria Failure points Hypothesize Prototype Reflection Research Solution</td>
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<tr>
<td>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.</td>
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<tr>
<td><strong>Earth Science: Earth and Human Activity</strong></td>
<td>I can make judgments of a design that reduces weather related hazards.</td>
<td>Evaluation</td>
<td>Barrier Flood Lightning rod Natural hazard Tornado Wind resistant</td>
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<tr>
<td>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</td>
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### RESOURCES AND NOTES FOR QUARTER 4:

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