

3rd Grade Science Curriculum

	Bundle Focus Essential Question	Skills
September-October	<p>Bundle 5: Using Magnetic Forces</p> <p>Guiding Questions:</p> <ul style="list-style-type: none"> • What are balanced and unbalanced forces? • Can magnets move objects? • What materials are magnetic? • What forces cause motion? • Can you predict where an object will go by the direction and strength of the force? 	<ul style="list-style-type: none"> • Design a contraption for a new exhibit that will feature a series of balanced, unbalanced, and magnetic forces in order to move an object. • Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. • Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. • Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. • Define a simple design problem that can be solved by applying scientific ideas about magnets. • Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. • 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. • 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.
October-December	<p>Bundle 4: Dealing with Hazardous Weather Worldwide</p> <p>Guiding Questions:</p> <ul style="list-style-type: none"> • What are the weather patterns in our area? • What is the climate in our area? • What type of weather-related disasters happen in our area? • How can the community reduce the impact of high-risk weather that occurs in our area? 	<ul style="list-style-type: none"> • Develop a presentation for the community on how to reduce the impact of the high-risk weather that could occur in their community. • Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. • Obtain and combine information to describe climates in different regions of the world. • Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. • Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. • 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. • 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.
December-January	<p>Bundle 1: Animal Development and Survival</p> <p>Guiding Questions:</p> <ul style="list-style-type: none"> • What is the life cycle of an animal? • What is the life cycle of a plant? • How does an animal get food and defend itself? 	<ul style="list-style-type: none"> • Research an animal and its environment in order to create a diorama showing the plant and animal life cycles and the benefits of the animal living in a group. • Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. • Construct an argument that some animals form groups that help members survive.

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February- April	<p>Bundle 2: Environments and the Traits of Organisms</p> <p>Guiding Questions:</p> <ul style="list-style-type: none"> ● What could humans do to destroy an animal’s habitat? ● What is the new habitat of the animal? ● What are the inherited traits of the animal that could help it survive in a new environment? ● What are the environmental (behavioral) traits of the animal that could help it survive in a new environment? 	<ul style="list-style-type: none"> ● Write and perform a play about an animal family’s struggle to survive in a new environment. ● 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. ● 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. ● Use evidence to support the explanation that traits can be influenced by the environment. ● 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. ● Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● 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.
April- June	<p>Bundle 3: Organisms Change over Time</p> <p>Guiding Questions:</p> <ul style="list-style-type: none"> ● How can you tell what the fossil looked like when it was living? ● What does the fossil tell you about what might have caused the fossil to die? ● What does the fossil tell you about the environment in which it lived? ● What characteristics did the fossil have that helped it when it was living? 	<ul style="list-style-type: none"> ● Learn about how fossils can identify what the animal looked like, where it lived, how its traits helped it survive, and what might have caused it to die. The student will then design a poster showing what the student learned about a specific fossil. ● Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. ● 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.