

**Dennis-Yarmouth Regional School District**  
**Science Scope and Sequence**  
**Grade 3**

Unit Name	Unit Description / Overview	Stage 1: Desired Results  Enduring Understandings - Students will understand that...	Essential Questions	Standards
<a href="#">Master Unit 1 Life Cycles</a>	This unit is designed to introduce students to the characteristics and life cycles of different types of organisms. Students will create graphic representations, provide evidence from data analysis of inherited traits of plants and animals. Students will distinguish those traits that are inherited from those traits that are affected by the environment.	Each species has a distinct life cycle which includes four stages: birth, growth, reproduction and death. (Note: Plant life cycles should focus on flowering plants.) All organisms reproduce; without reproduction that species will die off. Plants and animals have a variety of traits that are inherited from their parents. The environment can have direct effect on the characteristics of a plant or animal.	What is the life cycle of an animal? What is the life cycle of a plant?	3.3-5-ETS1-4(MA). Gather information using various informational resources on possible solutions to a design problem. Present different representations of a design solution.  3-LS1-1. Use simple graphical representations to show that different types of organisms have unique and diverse life cycles. Describe that all organisms have birth, growth, reproduction, and death in common but there are a variety of ways in which these happen.
<a href="#">Master Unit 2 Environments and the Traits of Organisms</a>	Grade 3 will be introduced to the topic of Heredity and will learn to recognize that offspring of organisms receive characteristics (traits) from the parents. Students will explore a specific animal's inherited traits, behavior, and habitat as well as ways the animal's environment can change.	Reproduction is essential to every kind of organism. Different organisms vary in how they look and function because they have different inherited information. The environment affects the traits that an organism develops. For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.	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?	3.3-5-ETS1-1. Define a simple design problem that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost that a potential solution must meet. 3.3-5-ETS1-2. Generate several possible solutions to a given design problem. Compare each solution based on how well each is likely to meet the criteria and constraints of the design problem.  3-LS3-1. Provide evidence, including through the analysis of data, that plants and animals have traits inherited from parents and that variation of these traits exist in a group of similar organisms. 3-LS3-2. Distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment. Give examples of characteristics of living organisms that are influenced by both inheritance and the environment. 3-LS4-3. Construct an argument with evidence that in a particular environment some organisms can survive well, some survive less well, and some cannot survive. 3-LS4-4. Analyze and interpret given data about changes in a habitat and describe how the changes may affect the ability of organisms that live in that habitat to survive and reproduce.

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<a href="#">Master Unit 3 Organisms Change over Time</a>	In life science, Grade 3 students investigate how the variations in characteristics among individuals with the same species may provide advantages to these individuals in their survival and reproduction , even if the habitat changes over time. Students will explore what fossils can tell us about how and where organisms lived, what traits they had to help them survive, and how they might have died.	Fossils give us information about the types of organisms that lived long ago. Fossils give us information about the types of environments in which organisms lived. Organisms had differences in characteristics to help them survive and reproduce. Fossils can give us information about why organisms might have died.	How can you tell what the fossil looked like when it was living? What does the fossil tell you about what might have caused it to die? What does the fossil tell you about the environment in which it lived? What characteristics does the fossil have that helped it when it was living?	3-LS4-1. Use fossils to describe types of organisms and their environments that existed long ago and compare those to living organisms and their environments. Recognize that most kinds of plants and animals that once lived on Earth are no longer found anywhere. 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals within the same species may provide advantages to these individuals in their survival and reproduction. 3-LS4-5(MA). Provide evidence to support a claim that the survival of a population is dependent upon reproduction.
<a href="#">Master Unit 4 Dealing with Hazardous Weather Worldwide</a>	This unit focuses on weather and climate at the third grade level. Students will learn that weather is the temperature,precipitation, air pressure, and wind speed and direction of a place at any given time. They will learn to differentiate between weather and climate, as they learn that climate is the pattern of weather in a place over a period of time. They will also learn about the different climate zones on the Earth, and man-made objects used to prevent weather-related problems. At the end of the unit, students will use their knowledge to analyze the efficiency of certain weather-related tools and make determinations about how they could be improved.	Weather occurs constantly, while climate is average weather conditions of an area taken over a long period of time. Scientists record weather patterns so they can make predictions about future weather and identify changes in climate. Natural hazards, such as floods, hurricanes, tornadoes, droughts, blizzards, and landslides, cannot be eliminated, but people can take steps to reduce their impacts.	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?	3-ESS2-1. Use graphs and tables of local weather data to describe and predict typical weather during a particular season in an area. 3-ESS2-2. Obtain and summarize information about the climate of different regions of the world to illustrate that typical weather conditions over a year vary by region. 3-ESS3-1. Evaluate the merit of a design solution that reduces the damage caused by weather. 3.3-5-ETS1-1. Define a simple design problem that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost that a potential solution must meet. 3.3-5-ETS1-2. Generate several possible solutions to a given design problem. Compare each solution based on how well each is likely to meet the criteria and constraints of the design problem.

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<a href="#">Master Unit 5 Using Magnetic Force</a>	<p>Students will gain knowledge of multiple forces, including friction, on an object. They will know that balanced forces do not change the motion of the object and unbalanced forces do change the motion of the object. Students will learn about the nature of the forces between two magnets based on their orientations and distance relative to each other.</p>	<p>A force is a push or pull on an object. Friction and gravity are two examples of forces. Balanced forces are separate forces on an object that together do not change the motion of the object. Unbalanced forces are separate forces on an object that change the motion of the object. Objects made of iron or steel are magnetic. Magnets can move magnetic objects without touching them. A force in any direction causes motion.</p>	<p>What are balanced and unbalanced forces? Can magnets move objects? What materials are magnetic? What forces cause motion?</p>	<p>3.MD.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.</p> <p>CCR.W.2 Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection organization and analysis of content.</p> <p>3.3-5-ETS1-1. Define a simple design problem that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost that a potential solution must meet.</p> <p>3.3-5-ETS1-2. Generate several possible solutions to a given design problem. Compare each solution based on how well each is likely to meet the criteria and constraints of the design problem.</p> <p>3-PS2-1. Provide evidence to explain the effect of multiple forces, including friction, on an object. Include balanced forces that do not change the motion of the object and unbalanced forces that do change the motion of the object.</p> <p>3-PS2-3. Conduct an investigation to determine the nature of the forces between two magnets based on their orientations and distance relative to each other.</p> <p>3-PS2-4. Define a simple design problem that can be solved by applying the use of the interactions between magnets.</p>