

Dennis-Yarmouth Regional School District
Science Scope and Sequence
Grade 1

Unit Name	Unit Description / Overview	Stage 1: Desired Results Enduring Understandings - Students will understand that...	Essential Questions	Standards
Master Unit 1 Design from Nature	Grade 1 students compare the ways different animals and plants use their body parts and senses to do the things they need to do to grow and survive, including typical ways parents keep their young safe, so they will survive to adulthood. They notice that though there are differences between plants or animals of the same type, the similarities of behavior and appearance are what allow us to identify them as belonging to a group. Grade 1 students begin to understand the power of patterns to predict future events in the natural and designed world. This unit relates form and functions. After studying parts and their function, students will be asked to solve a problem being to improve an object or tool to work better.	All plants & animals have body parts. Each part helps them to get their basic needs and survive. Animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, search for, and take in food, water and air. Plants have different parts (roots, stems, leaves, flowers, fruits) that help them grow, survive and reproduce. Animal parents and their offspring use behaviors that help the offspring to survive. Individuals of the same kind of plant or animal can be similar but can also be different in many ways. A part is one piece of an object and function is what the object does or its purpose.	How can humans learn from the way plants and animals use their external parts to survive? How do animals use their external parts to survive? Why do animals have different types of feet? How do plants use their external parts to survive? What are some ways animals respond to their environment to survive, grow, and meet their needs? What are some ways plants respond to their environment to survive, grow, and meet their needs?	1.K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool. 1-LS1-1. Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant.
Master Unit 2 Parents and Their Offspring	In grade 1, students build on early experiences observing the world around them as they continue to make observations that are more quantitative in nature and help them identify why some changes occur. Students begin to learn to use these observations as evidence to support a claim through growing language skills. Students will compare the ways different animals and plants use their body parts and senses to do the things they need to do to grow and survive, including typical ways parents keep their young safe so they will survive to adulthood. They will notice that though that there are differences between plants or animals of the same type, the similarities of behavior and appearance are what allow us to identify them as belonging to a group.	Plants and animals show differences, even if they are the same kind. That plants and animals demonstrate behaviors or strategies that allow them to survive in their environment.	How do parent animals protect their young? What behaviors do offspring animals engage in to survive? Animals of the same species are similar but not exactly alike. How do we know that young animals look similar to but not exactly like their parents? Plants of the same type are similar but not exactly alike. How do we know?	1-LS1-2. Obtain information to compare ways in which the behavior of different animal parents and their offspring help the offspring to survive. 1-LS3-1. Use information from observations (first-hand and from media) to identify similarities and differences among individual plants or animals of the same kind.

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Master Unit 3 Patterns in the sky	This unit allows students to describe patterns of motion between the Sun, Moon, and the stars in relation to the Earth. From this understanding they can identify seasonal patterns from from sunrise and sunset data that will allow them to predict future patterns.	Due the movement of the Earth, that the Sun, Moon and Stars will have different locations in the sky during the day and night hours. Seasons have different patterns of change including changes in sunrise and sunset times, seasonal temperatures and rainfall or snowfall patterns, and seasonal changes in the environment.	Does the Sun move in the sky? Does the Moon move in the sky? Do the Stars move in the sky? Does the Earth move near the Sun, Moon and Stars? Why does the Sun go down (set) to go from daytime to night time? We have 4 Seasons here in New England. What makes them different?	1-ESS1-1. Use observations of the sun, moon, and stars to describe that each appears to rise in one part of the sky, appears to move across the sky, and appears to set. 1-ESS1-2. Analyze provided data to identify relationships among seasonal patterns of change, including relative sunrise and sunset time changes, seasonal temperature and rainfall or snowfall patterns, and seasonal changes to the environment.
Master Unit 4 Communicating with Light and Sound	During the study of sound and light waves, students will develop their science skills through inquiry, prediction, observation, exploration, discussion and recording. These lessons focus on students collaboratively problem solving, discovering and investigating to find answers and solutions. They will answer questions such as; What happens when materials vibrate? What objects can be used to communicate over a distance? Grade 1 students will investigate sound and light through various materials. They will describe patterns in how light passes through and sounds differ from different types of materials and use this to design and build a device to send a signal.	Sound can make matter vibrate and vibrating matter can make sound. Light can show different patterns when it relates to different objects. People use devices to send and receive information/communicate. Simple tests can be designed to gather evidence to support or refute student ideas about causes. Events have causes that generate observable patterns.	What causes something to make sound? What causes us to be able to see something in the dark? In what ways can the path of light be changed?	1.K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool. 1.K-2-ETS1-2. Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions. 1-PS4-1. Demonstrate that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-3. Conduct an investigation to determine the effect of placing materials that allow light to pass through them, allow only some light through them, block all the light, or redirect light when put in the path of a beam of light. 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to send a signal over a distance.