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 Earth's Place in the Universe	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 tonight 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 2 Waves & Their Applications	During the study of sound 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?	Sound can make matter vibrate and vibrating matter can make sound. 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 different sounds to be made? How do sounds affect objects? How do we communicate with sound?	1-PS4-1. Demonstrate that vibrating materials can make sound and that sound can make materials vibrate.
Master Unit 3 Molecules & Organisms Structures & Processes	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.	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 do animal parts and senses help them to survive? How do plant parts help them to grow and survive? How are plants and animals alike and different? How do animal parents and offspring behave to survive?	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. 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 4 Heredity	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.	Plants and animals show differences, even if they are the same kind.	Do animals of the same kind show some differences among them? Do animals of the same kind show similarities among them? Do plants of the same kind show similarities and differences as well?	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.
Master Unit 5 Light and Shadows	Students explore sources of light and how important it is to us. They investigate how shadows are made, focusing on how the shape and size of shadows can be changed. Inside explorations include investigating the formation of shadows and interaction of light with different materials. Outside shadow explorations engage students in manipulating shadows based on position and orientation. Students also begin to look at reflection using mirrors to redirect a light beam. In the final assessment, students apply their learning in a skit about the interaction of light and materials.	Some materials allow light to pass through them, others allow only some light through, others block all the light (and create a dark shadow on any surface beyond them-on the other side from the light source-where the light can't reach), and others redirect the light when put in the path of a beam of light. A shadow is made when an object blocks the path of a beam of light, and creates a dark shape on a surface on the other side of the object away from the light source (where the light can't reach). The shape and size of shadows change when the source of light moves and the object stays in the same place, or when the object moves and the source of light stays in the same place. Light can be redirected in different directions using a mirror. Designing an investigation is based on prior knowledge and practice. Light can be used to send a signal over a distance.	What happens when light shines on different types of materials? How are shadows made? How can the shape and size of shadows be changed? Can light and shadows be used to communicate?	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. W.1.8 With guidance and support from adults recall information from experiences or gather information from provided sources to answer a question. **PS** W.1.2 Write informative/explanatory texts that name a topic supply some facts about the topic and provide some sense of closure.