

1st – 2nd Grade Year 1 Overview

Subject	Grade-Level Focus
Mathematics	Use numbers to quantify attributes of objects and patterns. Characterize the Four Processes to act out number stories. Draw straight and curved lines to form basic geometric shapes and drawings.
Science	Make observations to investigate patterns in space, the structure of living things, and our local environment.
English Language Arts	Use a combination of drawing, dictating, speaking, writing, and digital media to express ideas and imagination, craft stories, communicate meaning, and connect inner and outer worlds. Listen to, read, and retell/re-enact stories to foster kinship with the community and nature.
Social Studies	Explore stories, symbols, ideas, and perspectives to understand place, community, and our relationship to it. Explore our connection to the homeland.
Outdoor Education	Practice the 7 Leave No Trace Principles. Show understanding that all life is interconnected and must be treated with respect. Observe and describe aspects of the local environment that change on a daily, weekly, and seasonal basis.
Problem-Solving, Science, and Engineering Practices	Apply grade-level practices for solving problems, inquiry, and engineering solutions.
Year 1 NPS Project	Birds

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Unit Title	Unit Goal
Tools	<p><i>I can use tools and habits of character to create a Magnificent Thing.</i> Students explore tools and how they help us with our work by using different types of tools found in school and at home, completing challenges to help them determine the best tool for the job, exploring tools of the ancients, and inviting (and visiting) local community members and professionals to share tools of the trade and how habits of character help them complete their work.</p>
Sun, Moon, and Stars	<p><i>I can make observations and read texts to learn about patterns of the Sun, Moon, and Stars. I can compare cultural stories about the origins, motion, and patterns of the Sun, Moon, and Stars. I can participate in Science Talks to describe the motion and patterns of the Sun, Moon, and Stars. I can create art, stories, and scientific tools that demonstrate my knowledge.</i> Students explore and study patterns of objects in the sky with a primary focus on the sun and moon, and what creates day and night. Cultural narratives and stories are compared to explain the motion of the Earth and sun to explain these patterns. Students conduct science talks throughout the unit, culminating in a shared presentation for their Exhibition of Learning along with artifacts that they create along the way.</p>
Sound and Light	<p><i>I can plan and carry out investigations demonstrating patterns of sound and light. I can explain how sound, light, and waves are related. I can demonstrate how objects affect the path of light and sound.</i> Students explore patterns in the sky to identify objects in the sky as the source of light. Students identify and diagram the eye as the receiver of light, comparing the human eye to eyes of animals that see during the night. Students articulate how the eye tells a story of light to the brain, and so we are able to see. Students explore wave patterns to visualize the vibration patterns that light and sound make. Students experiment with light and sound in order to design, conduct, and revise their own sound and light experiment for the Exhibition of Learning.</p>
Animal Flight	<p><i>I can explore the forms that allow animals to fly and apply nature's design in my own creations (the art of biomimicry).</i> Students focus on the features of birds that enable flight through EL's Module "Birds' Amazing Bodies." Students dive into form as they compare the shape of bird wings to other animals and creatures that fly and glide. Students investigate human inventions that have allowed us to fly and imagine fantastical creations by observing Miyazaki's films that focus on flying machines and Leonardo DaVinci's drawings. The unit culminates with students applying the principles of biomimicry, inspired by Miyazaki and Davinci's creations, to design their own machine, research and improve an existing flying machine, or tell a story that includes magical creations.</p>

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Birds	<p><i>I can identify key features that all birds have in common. I can identify frequently sighted birds where I live. I can learn about birds using poetry, movement, observation, art, and research skills.</i></p> <p>In this expedition, students take a deep dive into specific features of birds (beyond bird wings studied in the previous expedition). This unit is both a continuation of the last unit and an introduction of animal biology (the focus of next unit). Students hone in on research skills and ways to learn by using those skills combined with observation and creativity. Students spend as much time outside as possible to observe local birds, studying their unique features and birdcalls, and exploring bird habitat.</p>
Animal Biology	<p><i>I can explore what it means to be an animal and how animals are different from plants. I can identify specific features that help animals survive and identify places that specific animals live.</i></p> <p>Students explore what it means to be an animal and why animals are different from plants. All life on earth is interconnected; animals have specific roles in our world and their life cycle is integral to the functioning of Earth systems. Students explore these relationships without becoming too specific on terminology or science – the goal is exploration and to articulate that all life is interconnected and bound by cycles. Animals are part of the whole ecosystem – moving from the whole to its parts (Earth – ecosystem – plants, animals (including humans), water, weather – features of animals). Students study classification to the degree that it makes sense to them, such as categorizing based on similarities. The unit culminates with students self-identifying as a specific type of animal scientist and giving a science talk as part of a group.</p>