

Project Lead the Way Curriculum Map

K	1st	2nd
Weeks 6,-8-Sept. Healthy Habits Students develop an understanding of healthy habits and learn how food affects growth, gross motor skills (muscles), the heart, teeth, and eyes. They discover career connections as they learn about wellness checkups at the pediatrician, dentist, and optometrist. Students investigate how germs are spread and explore healthy habits to prevent the spread of germs. Using the knowledge and skills they've gained from the activities and project, students create a multimedia product to share what they've learned with others. LK1A	Weeks 4-6-Aug/Sept Structure and Function: Exploring Design Students discover the design process and how engineers influence their lives. They explore the elements of structure and function by identifying products around them designed by engineers and asking questions engineers might ask. They are introduced to a design problem through a story in which Angelina wants to design a paintbrush. Students apply their knowledge from the module to design their own paintbrushes. Computer Science	Weeks 2-4-Aug Properties of Matter Students investigate and classify different kinds of materials by their observable properties, including color and texture. They learn about states of matter and properties of materials including insulators and conductors. In the design problem, Angelina, Mylo, and Suzi, are challenged to keep ice pops cold during a soccer game – without a cooler. Students apply their knowledge and skills to determine the best material to solve this design problem and then evaluate how their designs might be improved. P25
Weeks 13-15-Nov Living and Non-Living Things Students explore characteristics of living and nonliving things. By examining habitats, students develop an understanding of what living things need in order to survive. They use the design process to sketch, build, and test an animal's shelter, then reflect on their design. LK1A	Weeks 11-13-Oct/Nov Animals and Algorithms Students explore the nature of computers and the ways humans control and use technology. Starting with an unplugged activity, students learn about the sequential nature of computer programs. Students are inspired by a story in which Angelina, Mylo, and Suzi make videos to teach preschoolers about animals in their habitats. Then, students work in small	Weeks 9-11-Oct Animal Adaptations Students explore animal adaptations for protection, camouflage, food obtainment, and locomotion. Students learn what it means for an organism to be adapted to its environment and how different adaptations can be categorized. Students are introduced to the design challenge when Suzi announces she is visiting the Sahara and needs to get prepared for her trip.

	groups to design and program a simple digital animation about an animal in its habitat. Computer Science	Students are challenged to design the ideal shoe for travelers to wear in extreme environments, applying what they have learned and looking to plant and animal adaptations to guide their designs. L24
Weeks 20-22- Jan Matter: Floating and Sinking Students develop an understanding of matter by examining solids and liquids through hands-on activities. They explore floating and sinking as they predict and observe what effect liquids have on different materials. Using the design process, students rely on their knowledge and skills of matter to sketch, build, test, and reflect on a design they have created that will float on water and keep items within the design dry. PK5A	Weeks 18-10-Dec/Jan Animated Storytelling Students explore the sequential nature of computer programs through hands-on activities, both with and without a computer. They examine key aspects of storytelling and devise how to transition a narrative from page to screen. Students discover the design problem through a story about Angelina, Mylo, and Suzi, who wish they could find a way to create a story with characters who move and interact with each other. Combining fundamental principles of computer science with story-building skills, students develop animations that showcase characters, settings, actions, and events from short stories of their own creation. Computer Science	Weeks 16-18-Nov/Dec Living Things: Needs and Impacts Students investigate the needs of living things. During an outdoor walk, students look for plants and animals and consider how their needs are met in their natural environment. Then, they explore how living things impact the natural environment. They participate in a simulation to observe how an animal impacts the natural environment to meet its needs. Students then explore human needs and wants and how humans impact the natural environment, both positively and negatively. In an exercise to reduce waste, students use the design process to build a new game or toy out of reusable materials. L23A
Weeks 27-29-March Sunlight and Weather Students learn about the Sun's warming effect on Earth. They	Weeks 25-27-Feb/March Light and Sound Students investigate the properties of light and sound, including vibration	Weeks 23-25-Nov/Dec Grids and Games Students investigate numerical relationships while learning about the

investigate how the Sun affects different Earth materials, which leads to how the Sun affects our weather. Students learn how to describe the weather to make observations and collect data. They use this data to describe patterns over time, which helps predict the weather. They view a local weather forecast to understand how the weather impacts their daily lives. Students practice how to dress for the day by dressing Angelina, Mylo, or Suzi based on a forecast. Then, they use the design process to design a structure that can reduce the Sun's warming effect. EK8	from sound waves and the effect of different materials on the path of a beam of light. After students develop an understanding of light and sound, they are challenged to solve a design problem Mylo, Suzi, and Angelina face. In the story, the characters are lost and must use only the materials in their backpack to communicate over a distance by using light and/or sound. Students use the design process to sketch, build, test, and reflect on a device that solves this design problem. P16	sequence and structure required in computer programs. Starting with computer-free activities and moving to tablet-based challenges, students apply addition and subtraction strategies to make characters move on a grid. Angelina presents the design problem when she expresses her desire to design a game she can play on her tablet. Using skills and knowledge gained from these activities, students work together in groups to design and develop a game in which a player interacts with objects on a tablet screen. Computer Science
Weeks 24-26-May Spatial Sense and Coding Students develop spatial sense as they engage in activities that explore directional movement – over, under, through, and around. They begin to develop coding skills as they plan a path, create wearable code, and code an interactive robotic device. Using the engineering design process, students create code that will lead them to the location of a hidden item. Computer Science	Weeks 32-34-April/May Materials Science: Form and Function Students research the variety of ways animals disperse seeds and pollinate plants. They expand their understanding of properties of matter as they consider the form and function involved in seed dispersal and pollination. Students are introduced to the design problem when Angelina, Mylo, and Suzi are tasked with starting a wildflower garden on an expansive plot outside of their school. To solve the design problem, students apply their knowledge and skills to design, build, test, and reflect on a	Weeks 30-32-April Pushes and Pulls Students investigate pushes and pulls on the motion of an object and develop knowledge and skills related to forces of differing strengths and directions. Their explorations include pushes and pulls found in their everyday world, such as pushing a friend on a swing or pulling a wagon. In this module's design problem, Suzi needs to move rocks from her yard so she can install a swing set. Students work through the problem by applying what they learn about forces. P6

	device that mimics a way in which animals disperse seeds or pollinate plants. L143	
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