



Science and STEM (In-House) Field Trip Program Descriptors

2nd Grade

Science Lesson

What Really Matters? (S2P1)

Discover what really "matters" as we explore the physical properties of matter. Classify different objects according to their physical properties. Create structures from small pieces, disassemble them and then rearrange them to make a new and different structure.

STEM Lessons

Solar Oven (S2P1, MGSE2.MD.1, MGSE2.MD.7)

Experiment with reversible and irreversible changes in matter. Use the engineering design process to design and build a solar oven that people in developing nations can use to cook meals every day using solar energy.

A Push or Pull Will Do! (S2P2)

What is a force? Is it a push? Is it a pull? Learn all about forces as you push, pull, roll, slide and spin objects to discover the path of motion. Design a device to change the speed or direction of an object using the engineering design process. Observe how friction and gravity affect speed.

3rd Grade

Science Lessons

Heat It Up! (S3P1)

Students will identify various sources of heat energy. They will gather data using both Fahrenheit and Celsius scales to create tables and charts that show the effect of sunlight on various materials.

STEM Lessons

Solar Oven (S3P1, MGSE2.MD.1, MGSE2.MD.7)

Students will use everyday materials and the engineering design process to design and construct a solar oven that will increase/decrease the warming effects of sunlight on various ingredients. Discover real life STEM careers.

Solution Pollution (S3L2, MCC3.MD.2)

What is pollution? Can we stop it? Explore the effects that air, land, and water pollution have on plants and animals. Design and build a filtration device that volunteers could use to clean local drinking water that has been contaminated by pollutants.

4th Grade

Science Lessons

Water, Water Everywhere

Explore where we can find water on earth. Become a water molecule and travel through the water cycle. Construct a model using everyday materials to demonstrate the flow of energy in water as it changes state from solid to liquid to gas.

Simple Machines

What is work? How can we make work easier? Construct models of each of the 6 simple machines: lever, wheel and axel, pulley, screw, wedge, and inclined plane. Design a complex machine by putting together combinations of the 6 simple machines.

5th Grade

Science Lessons

Who are You Inside and Out (S5L2, S5L3,)

Become a cell biologist as we discover the differences in plant and animal cells. Construct an edible model to identify parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplast) and an animal cell (membrane, cytoplasm, and nucleus). Differentiate between instincts and learned behavior and inherited and acquired physical traits.

Physical and Chemical Changes (S5P1)

Investigate physical changes by manipulating, separating and mixing dry and liquid materials. Make a bag of ice cream and determine the type of change that was made. Demonstrate chemical changes by mixing acids and bases.

****Some programs may be adapted to different grade levels****