

Field Study Trip Lessons

Rainbow Wheel: PreK-K

Students will learn about the colors of all rainbows through song, as well as the difference between primary and secondary colors by finger-painting their own rainbow wheel!

NGSS: 2PS1-1, 2PS1-3

Little Pig Engineering: PreK-1st

Students will learn about engineering principles through the familiar story of the Three Little Pigs. Filled with music and hands-on building time, this activity will have your students squealing with delight!

NGSS: K-PS2-1, K-PS2-2, K-2nd -ETS1 1-3

Feely Socks: K-1st

Students will learn about the important role played by all five of their senses: taste, sight, smell, hearing, and especially touch. By hiding various objects deep within long ‘feely socks’, students must focus upon only their sense of touch to draw a picture of what they think is in each one before the big reveal at the end of the activity!

NGSS: NGSS: 2-PS1-1

Imaginimals: K-2nd

Students will learn about the system used by scientists to classify living things by comparing it to classification systems they already use in their everyday lives. Beginning with the similarities and differences between familiar stuffed animals, the activity ends with the classification of silly WOW Imaginimals (imaginary animals) based upon the similar and different traits the students observe!

NGSS: Second Grade Science Standard 1g

Magical Magnets: K-3rd

Students will learn about the ‘magical’ invisible force that surrounds magnets first by testing a variety of objects to determine what kinds of materials are magnetic, then making objects move without even touching them!

NGSS: K-2-ETS1-1, 3-PS2-3, 3-PS2-4

Potato Head Genetics: 1st-3rd

Students will learn how the offspring of all living things inherit traits from parent organisms through the reproductive process. Students will use Potato Head toys to create ‘tater tot’ offspring based upon the observable traits of the parents, including an exploration of why siblings often look both similar and different from each other!

NGSS: Second Grade Science Standard 2.a

Fill the Bill: 2nd-4th

Students will learn how all living things have adaptations to help them survive in their habitats by focusing on the interesting variation in bird beaks. Students will be challenged to gather food from four different adaptation stations using a variety of tools that mimic bird beaks, but not all of them are well-adapted to the habitat.

NGSS: 2-LS4-1, 3-LS4-3

Singing Spoons: 3rd-4th

Students will learn about the connection between sound and vibrating material, including the way sound travels all around through those vibrations. In particular, students will explore the pitches of sound with tuning forks and sound travel with ‘singing’ spoons!

NGSS: Second Grade Science Standard 1g

Scientific Measurement: 2nd-6th

Students will practice measuring volume, mass, and temperature like a real scientist. Each common household material that gets measured will be mixed together for a chemical reaction - elephant toothpaste! It is called elephant toothpaste because a lot of foam is created and when it squeezes out of the flask it looks like toothpaste.

NGSS: K-2-ETS1-1, 5-PS1-1, 5-PS1-2, 5-PS1-4, MS-PS1-2

Marshmallow Towers: 3rd-6th

Students will be challenged to create the tallest, strongest tower possible! Using mini-marshmallows and pieces of dried spaghetti, they will design their towers, create a prototype, test them, make changes, and test again. They will understand concepts like gravity, force, torque, and the design process.

NGSS: 3-PS2-2, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, MS-ETS1-1, MS-ETS1-2

WaddleBots: 4th-6th

Students will learn about the autonomous aspect of all robots and the various ways in which they are used in society. After a short lesson on simple circuits, students will use the knowledge to create a WaddleBot that they can redesign to cause different kinds of autonomous behavior.

NGSS: 4-PS3-4, 3-5-ETS1-1, 3-5-ETS1-2

WOW Pellets: 3rd-6th

Students will learn about the structure and function of their own digestive system by comparing and contrasting a human system with an owl's. After finding out why owls regurgitate pellets of indigestible material and what scientists can learn from them, students will dissect their own owl pellet to determine what was in that owl's meal!

NGSS: 3-LS2-1, 4-PS3-, 5-PS3-1

Converting Electricity: 4th-5th

Students will learn about the physics of current electricity and the circuits that allow it to flow. While exploring ways to illuminate a light bulb using a variety of parts, students will discover what the necessary components of a circuit are as well as the difference between series and parallel circuits.

NGSS: 4-PS3-1, 4-PS3-2, 4-PS3-4

Mystery Boxes: 4th-6th

Students learn about the use of models in scientific discovery by making an educated guess about what is inside a mystery box. By applying the same skills and processes used by scientists - observation, hypothesizing, experimentation, peer review, argumentation - students will experience how the scientific method can be used to make discoveries about parts of the universe we can't observe directly!

NGSS: 6th grade standard 7, MS-ESS2-4

Microworld: 5th-6th

Students will learn about the optics of microscopy to experience how scientists get a closer look at the world unseen by the naked eye. By using microscopes to observe a variety of items on prepared slides, students will explore the basic structure, function, and proper handling of microscopes.

NGSS: MS-LS1-2