

Putnam Soil and Water: 2nd Grade Programs

The following programs are designed for 2nd grade classes and align to state standards. All materials are provided and programs are free. To schedule a program email Bonnie Brooks at bonnie.brooks@putnamcountyohio.gov

Science - 2.PS.1: Forces change the motion of an object. 2.LS.1: The environment is a combination of the interactions between living and non-living components. Living things cause changes in the environments where they live. Both positive and negative Topic 2: 2.ESS.2: Water is present in the atmosphere. 2.LS.2: All organisms alive today result from their ancestors, some of which may be extinct. Not all kinds of organisms that lived in the past are represented by living organisms today.

Social Studies - Change over time can be shown with artifacts, maps, and photographs. Maps and their symbols, including cardinal directions, can be interpreted to answer questions about location of places.



1. Worm Bin: What living and non-living things are in a bin? Explore contents with a 1000 x magnifier and identify what they find. We will debrief what everyone found and talk about how worms change their environment. Students will bring home a coloring page.

2. Worm Bin II: The class will brainstorm everything we know about worms. We will then identify any missing pieces from what we brainstormed in regards to a worm's environment and health. Students will design, with a partner, a worm home that they can observe over the course of several weeks utilizing materials they can bring in from home. After researching and designing their home they will build it, populate it and collect data on it.

3. Soil Buddies: What living and non-living components allow plants to grow and produce food? Students will make a soil buddy to take home to grow and care for.



4. Enviroscape: 3D landscape model that shows how humans can positively and negatively affect the environment.

5. Augmented Reality Sandbox: Directions, compass rose, and spatial directions are practiced as student groups take turns creating maps in the sandbox. Dinosaurs, houses, trees and other props are utilized. Students will pick out a photo of the landscape that depicts their map and be given an opportunity to draw a 2D version of the map they made in the box or make landforms made out of kinetic sand.





6. Monarchs, Milkweed and Seeds: Learn all about this amazing insect and plant and then build a Monarch out of a human. The milkweed plants support over 500 species of organisms. We will disperse milkweed seeds and floss if we have them. Kids make a seed bomb with milkweed seeds to take home.

7. Fossils and Tracks: We will have a demonstration of how salts dissolve in water, look at some magnificent animals that lived millions of years ago and check out the fossils found that show them today. Students will make a mold of an animal in playdough and cast made from plaster-of-Paris. They will get to take their mold home.



8. Experiment with Ice Balloons: Fun, scientific Inquiry at its best. Student groups are formed. Groups choose what they would like to experiment with to see what kind of effect it has on the ice balloon. Students choose from a wide array of tools, some of which are temperature guns, different types of salts, food coloring, cookie cutters, and flashlights. Students freely make guesses, create hypothesis, test them, obtain results and share with the class. <https://www.exploratorium.edu/snacks/ice-balloons>

