

THIRD GRADE

Earth Science: earth's materials can be broken down and/or combined into different materials such as rocks, minerals, rock cycle, formation of soil and sand-- some of which are usable resources for human activity

Activity #1- GET DIRT-Y!

Objective: To observe different types of soils/dirt near your home while creating a nature craft in the process.

Supplies: clear jar, trowel/ small shovel (optional)

Procedure:

1. The first thing you want to do for this activity is spark some curiosity by asking some questions:
 - a. What's the difference between soil and dirt?
 - i. Soil is made up of organic matter (dead bugs, animals, plants)
 - ii. Dirt is made up of broken down rocks and has no organic matter.
 - b. Why is soil important?
 - i. Provides nutrients for plants! Which then give nutrients to animals that eat plants which gives energy to animals that eat those animals, and so on...
 - c. What lives in the soil? Do you expect to see any of those creatures in your own backyard?
2. Start digging! Go to one part of your backyard/front yard and dig down about 6 inches. Observe anything you find.
 - a. Are there roots for plants? How far down do they go?
 - b. Are there any insects or worms?
 - c. Are there layers of dirt and soil? Are they different colors?
 - d. What does the soil feel like?
3. Add some of the soil you found into your jar, creating a base layer.
4. Move to another area and repeat this process until your jar is full of different layers of dirt, soil, rocks, and plants. But NO bugs!

EXTENSION: leave room at the top of your jar to pour some water in. shake the jar lightly and allow it to sit for a day or two- come back and observe the jar. Did the soil settle into layers? Is it similar to how it was before?

Activity #2- Erosion Tables

Objective: to understand the basics of erosion using a homemade erosion table.

Supplies: Aluminum tray (the bigger the better), sand, small pebbles, soil, water, cups of different sizes

Procedure:

1. Begin by poking several small holes into one of the short sides of the aluminum tray.
2. Prop the other end of the aluminum tray up using a rock so there is a slight slope with the tray.
 - a. As you mess with this activity, you can change how steep the tray is to observe the differences.
3. Pour sand, small pebbles and soil into the tray. (Or you can do just one or the other!)
 - a. Spread the mixture evenly across the tray, leaving a small 1-2 inch gap at the top end of the tray.
4. **Optional Step:** create a village! Using play-dough, clay, rocks, or sticks- create a small city within your tray.
5. Begin with the smallest cup of water you have and pour it into the tray. Observe what happens.
6. Repeat with more water until you begin to see a small "river" flowing through the tray.
7. Keep repeating this process and change it up! Have fun with this, some examples of ways to expand on this are:
 - a. Create a river before pouring any water in to see if you can control the path of the water.
 - b. Try to create a village that is protected from getting washed away by the water.
 - c. Build dams along the 'river' and observe what happens.

** for more ideas on how to create an erosion table, simply search "Erosion tables" on google images**