

Learn the Layers: Become a Dirt Expert

It's a rare kid who doesn't get a kick out of digging in a sandbox or dirt pile. There's something irresistible about taking a shovel, bucket and rake outside and messing around...but it also happens that there's a lot a young scientist can learn on the way. This activity will introduce your child to different types of soil and how it has settled over many years to form layers.

What You Need:

- Plastic pails and shovels
- Sand
- Clay
- Gravel
- Topsoil
- Large glass jar with a lid
- Water



What You Do:

1. Tell your child that today he is going to become a dirt expert. Then head outside in the yard with the plastic pails and shovels.
2. Look for different types and textures of soil: collect some sand, clay, gravel and topsoil. If all types are not available in your area, you could go on a field trip to an area that these different types of soil are more accessible, such as a park or nature trail. If all else fails, you can also visit a nursery and buy it!
3. Fill a large glass jar halfway with the different types of soil, arranging them in layers. Be sure to have your child observe each one carefully. What's the same? Different? Which one is light? Which is heavy?
4. Next, fill the jar with water and screw the lid on tightly.
5. Ask your child to predict or "hypothesize" what will happen when the jar is shaken. (The soil will get mixed up.)
6. After discussing why he thinks this might happen and what will happen to the layers, pass the jar to him and allow him to shake the jar and observe the murky contents.
7. Next, let the soil settle for about an hour.
8. After that time has passed, observe the jar and discuss what has happened to the soil. (It has settled back into layers.) Ask why this may have happened (some of the different types of soil are heavier than others, and sink to the bottom of the jar faster).

This activity won't help your child avoid getting dirty, but now you've got a budding geologist on your hands!