

Geology 101

If you really want to get the dirt on soil, just go out and take a good hard look at it! Soil provides the perfect opportunity for your child to dig in to geology, and the lesson may go deeper than you think!

What You Need:

- Small metal garden trowel
- Soft ground

What You Do:

1. Take a walk with your child. If you're near a forest, river, or park, look for an area where the soil is exposed, like the side of a bank or a cliff. Can you see the different colors of earth? If you're in the city, look for a construction pit for a new building. The different layers are easy to see from the safety of the street.
2. Find a safe spot where your child can dig a small hole. Using a trowel, she should dig just below the top layer of soil. What does she find?
3. Digging a little deeper, your child should notice the soil starting to change colors.
4. How deep does she have to go for the soil to change colors again?



What Happened?

It may have surprised you to see that dirt comes in different colors. Just under the grass and twigs, the first layer was probably dark brown or black. This is the topsoil, a layer rich in nutrients deposited by earthworms and essential to plant life. The next layer may be a lighter brown color because of leaching, the removal of salts and minerals by water that has flowed through it. Below this may have been a reddish-brown layer, perhaps with tiny pebbles and gravel or larger rocks and stones. This is the subsoil. You probably didn't reach bedrock, the underlying rock layer.

Geologists are scientists who study rocks and soil. They can tell the age of the different layers of soil and rock and what the climate was like at the time each of them was formed!

Reprinted with permission from "Nifty Nature", the book that introduces the natural world to kids. From seeds and soil to insects and seasons, "Nifty Nature" makes learning about the environment an adventure.

By Shar Levine and Leslie Johnstone (Sterling Publishing Co., 2004).

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