

15-Minute Family STEAM Soil Testing

Supplies provided 3 plastic test tubes 6 pH strips magnifying glass Supplies Needed From Home backyard dirt empty glass jar

Here are a few questions to ask throughout your activity: What does the soil feel like? Does it remind you of anything? How are the potting soil and our back yard dirt different? Why do you think they're different? Do you think sand would be good to grow plants in? Why or why not? What do you think the samples will look like under the magnifying glass?

Soil Science: Experiment #1-- See how water affects the different materials --Fill one test tube 1/2 with sand, one 1/2 with potting soil & one 1/2 with backyard dirt then pour some water in each test tube.

--Even the pouring result will be different for each type. For the sand, the water should move right through and you should see air bubble up as it is displaced. The other two are packed a lot tighter, so the water needs to be stirred or shaken in.

--Talk about what you & your child observed how they are different.

Soil Science: Experiment #2--pH testing the different materials

--Take one strip and dip it into the sand & water test tube. The color should start to change instantly.

--Quickly match the colors against the color chart to obtain the pH.

--The number above the matching colors on the chart is you pH. The pH scale ranges from 1 (very acidic) to 14 (very basic), 7 is neutral.

--Repeat the procedure with the other two test tubes

--NOTE: If you don't see any color changes (or very little color change), the solution you are testing is neutral







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