

## Soil as Evidence

If a person or animal tracks soil through a crime scene, how do you find the source? Color, texture, and contaminants change in soil from place to place, and at different depths. Examiners must have a collection of labeled samples for comparison. Use these instructions to collect your own set!

## Supplies

- Instruction Sheet (this page)
- Soil Analysis Collection Sheet (next page)
- Examination sheet of plain paper
- Clear glass of water
- Disposable spoon or gardening trowel
- Liquid glue, glue stick or double-side tape
- Pen or pencil
- Ruler
- Magnifying glass (optional)

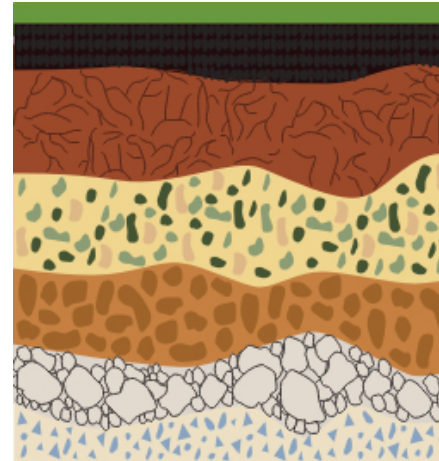


Image via [edrawsoft.com/template-soil-layers.html](http://edrawsoft.com/template-soil-layers.html)

## Directions

1. Find a spot to dig a small hole – with permission!
2. Prepare your testing equipment: fill the glass with water from the sink or hose. Write your name, location, date and time you start at the top of your collection sheet.
3. Carefully pull up any grass in an area about the size of your hand. We'll put it back later.
4. Scrape a small amount of soil from the roots of the grass or surface of the soil with your spoon or trowel. This is your first layer.
5. Feel the soil between your fingers. Is it wet or dry? Cool or warm? Does it feel grainy? Soft? Sticky? Lumpy? Write down your observations on the top row of the collection sheet under PHYSICAL.
6. Place some of the soil on your plain examination sheet and observe it. Use a magnifier if you have one. Is it dark or light? Gray or brown or black or red? Can you see any bugs or rocks or bits of plant? Write down your observations on the top row of the collection sheet under VISUAL.
7. Drop some of the soil into the water glass. Does it float? Sink? Both? Write down your observations on the top row under WATER.
8. Apply glue or double-sided tape to the top row of the collection sheet, under SAMPLE and press some of the first layer soil onto the collection sheet for future reference.
9. Prepare your testing equipment for the next layer: dump the water and soil from the clear glass and refill it with clean water. Wash any dirt off your hands and digging tool to prevent cross-contamination between your samples. Brush off your examination sheet or get a new piece of clean paper.
10. Dig down about 1 inch into the hole you've made to collect your next sample. Measure from the bottom of the hole to the bottom of the nearby roots or surface and write the depth of that layer under DEPTH.
11. Follow the same steps as above for each layer until your collection sheet is full.
12. When you're finished, put all the soil back into the hole you've dug and place any grass on top to re-grow. Pour the last glass of water over the grass.
13. You can make collection records for different locations or at different times of the year.
14. Share your results with friends or classmates and compare with their samples.

# Soil Analysis At-Home Activity for Students

## SOIL ANALYSIS COLLECTION SHEET

Name \_\_\_\_\_ Location \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

LAYER	DEPTH	PHYSICAL	VISUAL	WATER	SAMPLE
Surface 01	0				
02					
03					
04					
05					