

INV. 5 ACTIVITY—COMPARE SOILS

Focus Question: Do soils drain water at the same rate?

Materials:

2–3 Soil samples, collected from different parts of your yard or sidewalk strip
2–3 Containers to store and label soil samples (such as baggies, paper cups, plastic containers)

- Transparent tape
- Coffee filters
- Larger cups or jars to collect water drainage
- Measuring cup and water



Suggested Procedure:

1. Collect soils of different colors and textures. Collect them from different areas of a yard, sidewalk strip etc.
2. Test the texture and composition of the different soils by rubbing them between their fingers or rolling the soil into a ribbon between the palms of their hands. What does the soil feel like and look like? Determine if the soil feels like sand, silt, loam, or clay.
3. In your notebook, make a chart with four columns
 - description
 - location
 - soil sample
 - water drainage time.

Write a description of each soil, record the location where you found it, and attach small soil sample of each soil to the chart using the transparent tape.

4. Design your system to determine drainage time. You need to use the same amount of soil and the same amount of water in all your trials. Time how long it takes to drip through the soil and into a catch container.

For example, you could put a measured amount of soil ($\frac{1}{4}$ cup) in a coffee filter and place the filter with soil on top of a jar. Pour $\frac{1}{2}$ cup of water over the soil. Time how long it takes for the water to drip through the soil and filter and record your results. You might want to measure the amount of water that came thorough the filter.

5. Respond to the focus question: **Do soils drain water at the same rate?**
Describe your ideas in your notebook

Engage with online activity—Virtual Investigation

To access the Online Activity, login to FOSSweb with the user name and password provided by your teacher. Click on the Water and Climate Module, and go to the Online Activities. Click on **Water Retention of Soils**.

INV. 5 ACTIVITY—RESEARCH YOUR LOCAL WATER

Find out about your local water supply.

- Where does it come from?
- Where is it stored?
- How is the water treated?

Interview family members or friends and ask them what they know about where your water in your house comes from.

Can you go online to your local water utility website? Share what you learn in your notebook and with your family members.

Read four articles in *FOSS Science Resources: Water and Climate eBook*

To access the interactive eBook, login to FOSSweb with the user name and password provided by your teacher. Click on the Water and Climate Module, and go to the Media Library. Click on the eBook.

Read these articles

- **“Water A Vital Resource”**
- **“Water Coming into Our Homes”**
- **“Water Leaving Our Homes”**
- **“City Runoff”**

Share what you learned from your research with a family member.