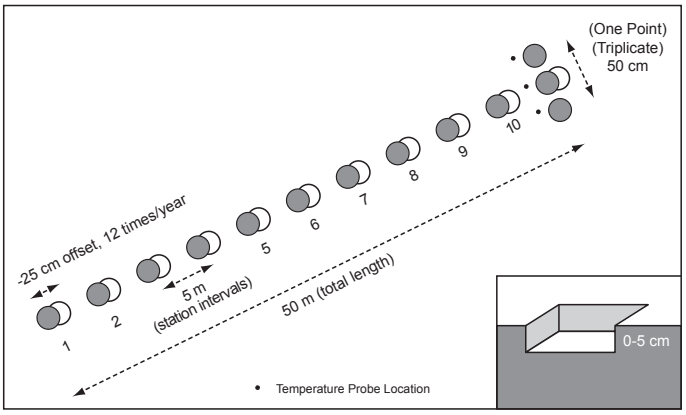
Transect Soil Moisture Protocol
Field Guide

Task

Collect soil moisture samples at a depth of 0-5 cm along a 50 meter transect.

What You Need

- ❑ *Soil Moisture Data Sheet – Transect Pattern*
- ❑ Trowels (1 per student group)
- ❑ 13 sample containers (sealable bags or cans) labeled with mass and a container number
- ❑ 50 meter tape or 50 meter rope marked every 5 meters
- ❑ Rulers marked in millimeters (1 per student group)
- ❑ Science Log
- ❑ Pen or pencil
- ❑ Compass



In the Field

1. Complete the top portion of the *Soil Moisture Data Sheet – Transect Pattern* including taking a compass reading along the transect line.
2. Stretch out the rope or measuring tape along the transect you will measure.
3. Locate your sampling point along the transect. Sample points should be every 5 meters along the transect, plus 2 extra samples taken at one end of the transect within 25 cm of the end point. Sample points should be numbered starting with Sample 1 at the beginning of the transect.
4. Cut or pull away any grass or groundcover above your sample point.
5. Dig a hole 10-15 cm in diameter down to 5 cm. Leave this soil loose in the hole.
6. Remove from the loose soil any rocks larger than a pea (about 5 mm), large roots, worms, grubs, and other animals.
7. Use your trowel to fill a soil container with at least 100 g of the loose soil.
8. Immediately seal the container to hold in the moisture.
9. Record the container number, mass, and distance to the start point of the transect on the *Data Sheet* next to the appropriate Sample Number.
10. Continue to collect a sample at each sampling point along the transect. Remember to remove rocks, large roots, and animals. Seal each container and record the sample number and distance from the start point of the transect on the *Data Sheet*.

    Including the extra 2 samples taken near the end point, you should have 13 containers of soil taken from along your transect.
11. Dry samples according to the Gravimetric Soil Moisture Protocol Lab Guide.