



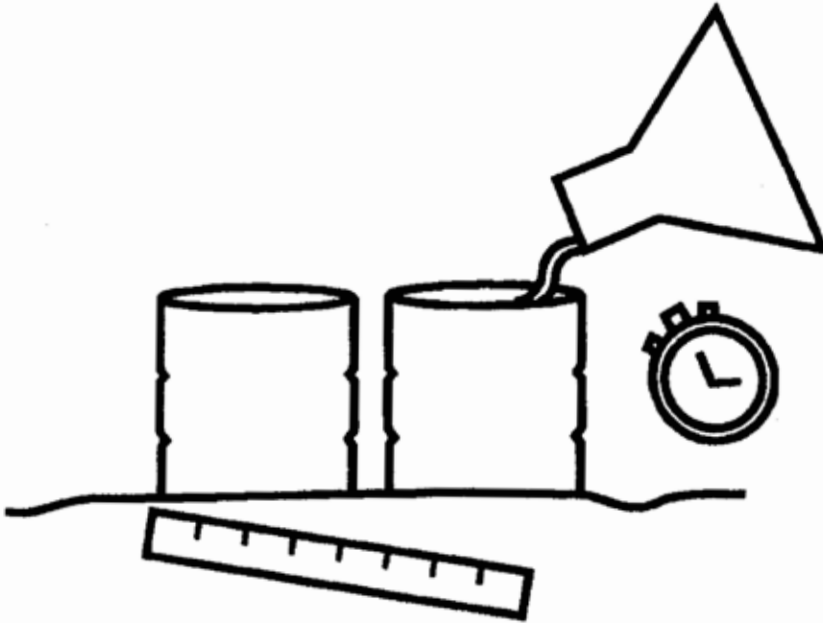
LEARNING CHALLENGES FROM:

BRIDGE to the BARRENS[®]

547 East Main Street, Riverhead NY, 11901
Phone: (631)369-3300 Email: info@pinebarrens.org

SOIL POROSITY

SOIL POROSITY



Grade Level:
3-8

Activity Level:
Interactive

Seasonality:
Fall, Spring, Summer

Time:
20 Min.

Group Size:
1 Class in Small Groups

Habitat:
Field, Woodlands

OVERVIEW

Students will compare the rate at which soils from different areas absorb water.

OBJECTIVE

Students will:

1. understand porosity
2. measure porosity of different soils
3. describe the role of porosity as related to precipitation and groundwater

MATERIALS

Coffee can with both ends open
Ruler or meter stick
Water
Stopwatch or watch
Worksheet
Pencils

PROCEDURE

Students should place the coffee can into the ground, so that just one inch is below the surface. The can should be in a vertical position so that the hole at one end is in the ground and the hole at the other end is facing up.



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SOIL POROSITY

SOIL POROSITY CONTINUED . . .

The students should now fill the can with water, making sure that none flows out from the sides.

After three minutes the students should measure how many inches or centimeters of water have percolated into the ground and record the results on the data sheet.

Record the total porosity time - how long it takes for all the water to percolate into the soil.

Repeat the procedure in a different area.

FOLLOW-UP and EVALUATION

Have students complete the questions on the chart for soil porosity.



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SOIL POROSITY

CHART FOR SOIL POROSITY

| | After 3 Minutes | Total Porosity Time |
|--------|-----------------|---------------------|
| Area 1 | | |
| Area 2 | | |

1. Which area had the fastest percolation? _____

2. What were the ground covers? _____

3. What does this tell you about the 2 areas of soil tested? _____

4. What happens to water after it is absorbed by the soil? _____