



# Ground Water Movement Activity

Grades 3 – 6

Students will demonstrate how easily water moves through different types of soil. Have several students represent water molecules and the remainder of the class represent rocks and soil.

## INTRODUCTION:

Groundwater must be able to move through underground materials at rates fast enough to supply useful amounts of water to collector wells. Water moves through different materials at different rates. The following activity demonstrates how different sizes of rock materials that make up an aquifer affect water movement.

## OBJECTIVES:

Students will:

- 1) Identify several sources of rock materials that make up an aquifer.
- 2) Discuss how water moves through gravel, sand, and clay.

## MATERIALS:

- At least 10 students
- Large, open area to conduct activity

## ACTIVITY #1:

### Water movement through gravel

Students represent gravel by holding arms outstretched, leaving a 5 to 10 inch space between their outstretched arms.

*(Water moves easily)*



## ACTIVITY #2:

### Water movement through sand

Students represent sand by extending arms, bending them at the elbows and touching their fingers to their waists. Locate in the center of the activity area, space them 5 inches apart.

*(Water moves with some difficulty, but reaches the other side)*



## ACTIVITY #3:

### Water movement through clay

Students represent clay by placing their arms straight down and stand approximately 3 inches apart.

*(Water may not be able to move through the clay at all)*



## INTERPRETIVE QUESTIONS:

- Which one of the materials (gravel, sand or clay) was the easiest for the water molecules to move through? (Answer: Gravel, then sand, then clay) Why? (Answer: Because there are larger spaces between the gravel particles.)
- If there were 3 rock units, one of gravel, one of sand, and one of clay, all containing the same quantity of water, in which would you drill a well? (Answer: Gravel. Water moves easier through gravel than sand or clay).

Adapted from *Get the Ground Water Picture*, National Project WET

