

## GROUNDWATER

**Groundwater** is water located under the surface of the ground. This water is stored in an underground body of porous sand, gravel, and fractured rock called an **aquifer**. Aquifer layers are usually separated from each other by a **nonporous** layer of clay or chalk called a **confining layer**. Most people in Mississippi receive their drinking water from groundwater aquifers. Usually groundwater is pumped out of the ground through a well pipe and is stored in a community water tower or household storage tank. From there it travels through pipes to homes, businesses, and industries. Farmers use groundwater to **irrigate** their crops, or to fill catfish ponds.



## THE PERCOLATOR

The earth is continually **filtering** or **percolating** water through its many layers of sand, gravel, rock, and clay. As the water slowly seeps through these layers, water is cleaned much like a **filtration** system on a fish tank. In this activity, you will filter unclean water through layers of earth and observe how the layers **purify** or clean the water.

**You Will Need:**

pebbles	top soil	duct tape
coarse sand	fine sand	bucket
an air-tight plastic lid	plastic cup	scissors
coffee can, both ends open		ruler
a piece of window screen to fit the lid of the can		

**Instructions:**

- Carefully cut a square hole in the middle of the plastic lid.
- Cut a round piece of the screen to fit the lid.
- Tape the screen to the inside of the lid.
- Fasten the lid to the bottom of the can.
- Add one inch of pebbles to the can.
- Add coarse sand on top of the pebbles until the can is half full.
- Add fine sand on top of the coarse sand until the can is 3/4 full.
- Mix two tablespoons of soil into a cup of water.
- Holding the can over a bucket, slowly pour the water into the can.
- Observe the slow percolation process. Notice the clean water.