GRIMY GROUNDWATER

TITLE

GRIMY GROUNDWATER	Many communities obtain their drinking water from local underground sources called aquifers (layers of sand, rock and soil, where water collects). Local water agencies drill wells into aquifers and provide water for public use. Unfortunately, the groundwater can become contaminated by pollutants or harmful chemicals and/or organic materials that weren't properly disposed of by industry, property owners or agriculture. These chemicals can enter the soil and pollute the aquifer. Such contamination can pose a significant health threat and cause the water to be undrinkable.
You will need:	1. Packet of Kool-Aid or food coloring 2. Water, two plastic cups and a stir stick 3. Test tube or a vial with a cap 4. Sand 5. Pipette or eye dropper
Get Started:	1. Fill (to half) one plastic cup with tap water. Fill (to half) the second plastic cup with water that has one or two drops of food coloring (stir well with a plastic stir stick). 2. First fill the test tube ½ way full with sand

	3. Place 10 droplets of water in the vial via the pipette. This will represent rain or surface run-off. 4. Observe how the water percolates to the bottom of the vial beneath the sand. 5. Using the pipette, carefully drizzle 5 – 10 drops of water with food coloring into the tube observing how "polluted" run-off percolates underground and contaminates the aquifer.
What did you learn?	• Water percolates beneath the earth's surface • Water "transports" harmful contaminants into the groundwater • Various types of contaminants potentially get into the water supply. Possible contaminants: perchlorate (jet fuel), cleaning solvents (cleaners), insecticide/fertilizer, animal waste, improper disposal of oil, car batteries and paint Students can work in their community to prevent some of the pollution. Start a club to help solve the surface run-off pollution problem.