Name ________________________________

WATER MOVES THROUGH SOIL

Water pollution is a big problem. Since 50% of our water supply in New Jersey comes from groundwater, we must work hard to keep it clean. As rainwater soaks down (percolates) through the soil, it can pick up harmful chemicals and other pollutants. These pollutants can get into underground well water, making it unsafe to use. The pollution might begin with garbage in a sinkhole. It can come from farm chemicals dumped on the ground. Whatever the cause, the pollution can soak down into the groundwater which supplies our wells. The activity below shows how this can happen.

GETTING READY:

1. Clean the 3 one-pound coffee cans used in Stopping Runaway Runoff.
2. Prepare each can as follows:
   a. Place 3" of dirt in the can. Label the can "CONTROL"
   b. Place 3" of dirt in the can, add one teaspoon of red food coloring to the dirt and mix it in. Label the can "RED DYE"
   c. Place 3" of dirt in the can, add one teaspoon of vinegar to the dirt and mix it in. Label the can "VINEGAR"
3. Place each of the cans on the same three jars used in Stopping Runaway Runoff experiment.

WHAT TO DO:

1. Measure out 3 cups of water
2. Dip a piece of litmus paper into the water. Record the results on the chart below.
3. Pour one cup of water into each of the three cans.
4. Look at the water which collects in the jars. Record the results on the chart.
5. Dip a piece of litmus paper into the water in each glass. Record the results on the chart.

WATER MOVES THROUGH SOIL RECORD CHART			
	CAN # 1 "CONTROL"	CAN #2 "RED DYE"	CAN #3 "VINEGAR"
Color of litmus paper in pure water			
Condition of water in glass			
Color of litmus paper in water after percolation			

WHAT DID YOU LEARN?

1. Did the water change in any way after percolating through the "CONTROL" can? Why? Why not?
2. If the water looks different after percolation, is it polluted? Why? Why Not?
3. If the water looks clean, is it safe to drink? Why? Why not?