Name _____ Date _____

Why is soil important to water quality?

Part 1: Create a Soil Filter

Why is it important to have permeable surfaces? During this lab experiment, you will find out why. Using the materials supplied by your teacher, design an experiment that investigates these questions:

"Which soil sample cleans the water the most?"

"Through which soil sample does water move the fastest?"

Step 1: Create a filter set-up

Decide how you want to create a filter-by using paper cups or by using plastic bottles. Draw or describe your set-up below.

Step 2: Decide on soil composition

What type of soil will you use? Will you use more than one type? A combination? Make sure you have a control. Create a diagram below showing what and how much soil you will place in each of your filters.

Step 3: Water

What kind of water sample will you use? How much water will you use? How many times will you repeat your experiment? How will you determine if your filter worked? Describe your set-up below.

_____
_____
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Step 4: Experiment!

Conduct your experiment after your teacher approves your experimental set-up. Make sure that you write down observations and results in your lab notebook.

Step 5: Discussion

Answer the following questions:

1. Through which filter did the water move the fastest? Why?
2. Which filter cleaned the water the most? Why?
3. What substances can soil filter?
4. Why are pervious surfaces important? How does this experiment explain why 'spring water' is considered pure?