Surface lab

Name_____

Date_____Per____

The Chesapeake Bay Watershed is comprised of six states with a variety of land types. Today you will observe how the land use type affects the water quality in the Chesapeake Bay

Predictions: I think the _____ will absorb the **MOST**.

I think the _____ will absorb the **LEAST**.

Variables: What is the **INDEPENDENT** variable? _____

What is the **DEPENDENT** variable? _____

What are the **CONTROLS**? _____

Materials

Styrofoam cup of one surface material
(soil, sand, rocks, grass, wood chips)

beaker **thumbtack**

stopwatch **graduated cylinder**

Procedures

1. Use a thumbtack to punch 2 holes (directly next to each other) in the bottom of your cups. Make sure the holes are the same size for each cup.
2. Fill the cup with 100 mL of the first material.
3. Place the cup over the graduated cylinder.
4. Pour 100 mL of water into the cup of material. Start the stopwatch when you pour the water in the cup.
5. Measure and record the amount of water dripping from your cup **every minute** for 5 minutes.
6. After the 5 minutes are up, remove the cup of material from above the graduated cylinder.
7. Measure and record the total amount of water that dripped into the graduated cylinder. Calculate how much water the material was able to absorb.
8. Repeat steps 2-7 for each material.
9. Clean up your lab station.

REMEMBER – when you empty materials, please empty them into the correct bucket (on the floor at each station). Also, please rinse your cup out in the water bucket…NOT at the fresh water stations.

Material	1 min mL	2 min mL	3 min mL	4 min mL	5 min mL	**A.** Total amount of water in graduated cylinder	**B.** Amount of water the material absorbed: 100 mL - A
soil							
sand							
rocks							
wood chips							
grass							
no material (empty cup)							

USE YOUR DATA to answer the following questions!!

1. Which material absorbed the MOST water? How do you know?

_____

_____

2. Which material absorbed the LEAST water? How do you know?

_____

_____

3. Was your prediction RIGHT or WRONG? _____

4. What material would be the **MOST** beneficial (helpful) in preventing water pollution into the Chesapeake Bay? Why?

_____

_____

_____

_____

5. What material would be the **LEAST** beneficial (helpful) in preventing water pollution into the Chesapeake Bay? Why?

_____

_____

_____

_____

6. What type of land surface would you recommend to have near streams and rivers that flow into the Chesapeake Bay? Why?

_____

_____

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