Groundwater and Runoff Data Sheet

South Carolina Aquarium

Day 1 – Porosity

1. Draw a diagram of the jar of marbles after pouring in 250 ml of water. Label the following:

- Zone of saturation
- Zone of aeration
- Water table

2. How much water did it take to saturate the marbles?

3. What is the porosity?

Sediment Type	Predictions (porous or nonporous)	Saturation (amount in ml)	Porosity (%)
Clay			
Sand			
Gravel			

4. Were your predictions correct? Explain.

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Day 2 - Permeability

Sediment Type	Time for 100 ml to Saturate
Clay	
Sand	
Gravel	

1. What do the results in the table tell you about the permeability of the three different sediment types?

2. What are your predictions for the porosity and permeability of the Piedmont region of South Carolina knowing that the major sediment type is clay? How does this affect the amount of water that becomes groundwater and runoff?

3. What are your predictions for the porosity and permeability of the Sandhills region of South Carolina knowing that the major sediment type is sand? How does this affect the amount of water that becomes groundwater and runoff?