

Date: _____

Modeling Groundwater

Purpose: To learn what happens to some water after it falls on the ground, you will drip water on a model of the earth's layers.

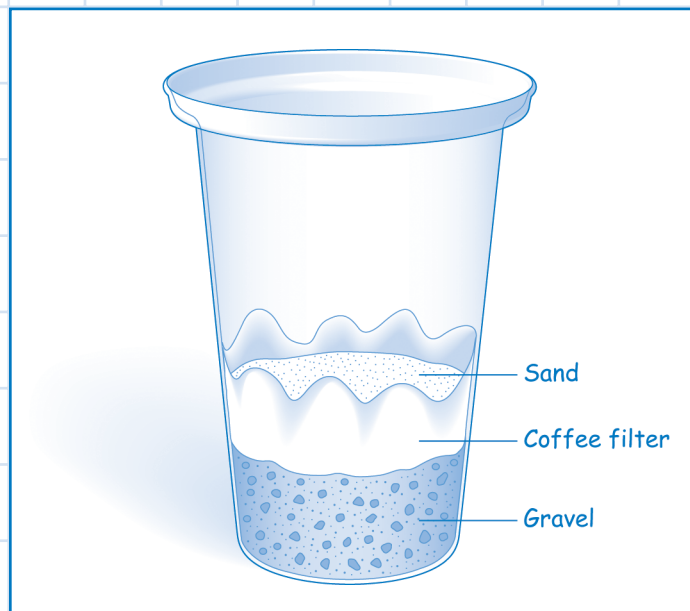
Investigative Question: What happens to water when it falls on the ground?

Materials:

- Plastic container
- Gravel
- Coffee filter
- Sand
- Water
- Eyedropper

Procedure:

1. Add 250 ml (1 cup) of gravel to the bottom of your plastic container. Smooth it out so it's flat on top.
2. Place the coffee filter on the gravel. Pour 125 ml ($\frac{1}{2}$ cup) of sand in the filter without spilling it on the layer of gravel.
3. On the next page, write your prediction about what will happen to the water when you add it to your model.
4. Use the eyedropper to add drops of water to your model. Stop after using about half of the water in the small cup.
5. Observe where the water goes and how it moves. Record your observations on the next page.
6. Use the eyedropper to add the rest of the water to your model.
7. Place the model in a safe location where it will not be disturbed until your final observations.



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Prediction and First Observation

Prediction: What will happen to the water when you add it to the model?

Observation 1: Draw or describe what happened when you added about half of the water to the model:

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Final Observations

Materials: Groundwater model

Procedure:

1. Record your observations in the space provided below, and answer the questions on the next page.
2. Put your groundwater model in a warm, dry place. (Near a sunny window or a heater would work well.) You will use it again in another science class.

Observation 2: Observe where the water is in the model. Carefully pick up the model and tip it slightly to see how the water moves. Draw or describe what happened after you added the rest of the water to the model:

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Conclusion

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1. Based on your experience using the model, what can happen to a drop of water after it falls on the ground?
2. Explain how your model demonstrates what happens to groundwater in real life.
 - How does water get underground?
 - Where is water stored underground?
3. How have your ideas about what happens to a drop of water changed since you started learning more about groundwater?