

Name: _____

Where does Water Go?

Engage - Close your eyes ... Listen to this clip.

You are standing in the street? What happens to this water, where does it go?

Imagine instead you are standing in the park. What happens to the water here?
Where does it go?

Look at the picture below. What do you see? What might have caused this to happen?



Explore

Using the materials provided, investigate what happens to water under different conditions.

Reminders:

- **ALWAYS** pour water **INSIDE** your plastic container.
- **ALWAYS** Record your observations and the conditions in your tray.
- **You only get 1 bottle of water so use it wisely!**

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Experiment with the sponges.

Variable: The AMOUNT OF WATER IN THE SPONGE

What happens to water when poured onto the sponge?

Condition of the Sponge	What happens to the water?

Experiment with the sponge and the plastic wrap.

Variable: In one trial observe the water on the sponge.

In a second trial, observe the water when the sponge is covered in plastic wrap.

Conditions of the Sponge	What happens to the water?

Experiment with the paper towel and cardboard.

Variable: Raise and lower the cardboard to experiment with SLOPE.

What happens to the water when poured down the paper towel? Is it absorbed or does it runoff?

Position of the Cardboard	What happens to the water?

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Explain

Runoff:	What did runoff look like in your experiments? How did you know when it occurred?
Infiltration:	What did infiltration look like in your experiment? How did you know when it occurred?
Saturated/Unsaturated:	How did you create Saturated or Unsaturated conditions in your experiment? How are these conditions created in the real world?
Steep Slope / Shallow Slope	How did you change the slope during your experiment? Why did slope affect the amount of runoff or infiltration?
Permeable/Impermeable:	How did you create Permeable or Impermeable conditions in your experiment? How are these conditions created in the real world?

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Elaborate

Think back to a rainstorm within the **city**. Does more runoff or infiltration occur? Explain why.

Think back to a rainstorm within the **park**. Does more runoff or infiltration occur? Explain why.

After heavy rains, why does flooding occur in some rural (country) areas?

Do you think adding plants to an area would increase or decrease runoff? Why or why not?

Think back to the subway picture. How could city planners prevent this from happening?

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Exit Ticket

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1. Which condition would cause surface runoff to increase in a particular location?

- (1) covering a dirt road with pavement
- (2) reducing the gradient of a steep hill
- (3) planting grasses and shrubs on a hillside
- (4) having a decrease in the annual rainfall

2. Which set of conditions would produce the most runoff of precipitation?

- (1) gentle slope and permeable surface
- (2) gentle slope and impermeable surface
- (3) steep slope and permeable surface
- (4) steep slope and impermeable surface