



Liquid Labyrinth

Distance Learning Activity



adapted from "A-maze-ing Water" from Project WET

Introduction:

Have you ever wondered what happens to all the rainwater after a big storm? Have you ever seen flooding in your neighborhood or trash being washed away by the water? What happens to this water? Come, explore the effects of stormwater and the impact humans have on our watersheds.

Make sure to check out the guided activity video!

Materials:

- Cardboard
- Modeling clay
- Water
- Eye dropper/ pipette
- Wax paper, plastic wrap or aluminum foil
- Tape
- "Pollution" (pepper, food coloring, sprinkles, sugar, ect.)
- A bin to collect water in after it has gone through the maze

Key Words:

- **Stormwater**- water from a weather event (ex. rain, snow melt and ice melt)
- **Stormwater runoff**- water from a weather event that is not absorbed into the ground and instead flows over the ground
- **Groundwater**- stormwater that filters through the ground and collects in the soil and rocks
- **Impermeable surfaces**- a surface that water cannot pass through (ex. clay, pavement, roofs)
- **Pollution**- any harmful chemical or product that is not naturally occurring in an ecosystem (ex. trash, oil, fertilizers, pesticides)
- **Watershed**- area of land where surface runoff drains into a body of water
- **Point source pollution**- pollution discharged from an identifiable point (ex. pipe running into the river)
- **Nonpoint source pollution**- pollution from many different sources (ex. stormwater picking up pollution)

Background:

When rain falls some is absorbed into the soil and becomes **groundwater** or flows over the surface of the ground and becomes **stormwater runoff**. Stormwater runoff travels over **impermeable surfaces** like sidewalks, driveways or parking lots where it is likely to pick up **pollution**. The most common forms of pollution in urban areas include trash, oil, gasoline, pet waste, sediment, fertilizers and pesticides. This stormwater runoff will eventually flow into a storm drain and then into a body of water, like a river, lake or even the ocean.

**Don't forget to share your liquid labyrinth
with us on Twitter or Instagram!**



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The introduction of pollution to an aquatic ecosystem can cause a plethora of problems. Trash can entangle animals or make them sick if the trash is ingested. Pesticides, oil and gasoline can be toxic to plants and animals. Fertilizers and pet waste add extra nutrients to the water and can cause an algal bloom or an overgrowth of aquatic plants. Extra sediment, in run-off, can cause the water to become too cloudy and block out the sunlight required for aquatic plants to photosynthesize. Pollution can be either **point source** or **nonpoint source** pollution. Trash and pollutants that enter body of water in stormwater runoff are examples of non-point source pollution.

Resources:

Webpages: [Only Rain Down the Drain](#)
[City of Fort Pierce](#)
[USGS- Surface and Overland Water Runoff](#)

Videos: [Freddy the Fish](#)

Instructions:

Tape a piece of wax paper, plastic wrap or aluminum foil to your cardboard (it should cover all of the cardboard)

Use the modeling clay to create a maze with one entrance and one exit

The maze will be used like a handheld game, hold the cardboard and tilt it to move the water drop

Testing the Maze:

Put one drop of water at the start and run the drop of water through the maze by tilting the cardboard. Observe the water's path as you move it around the maze.

Repeat the process after adding pollution to your maze, sprinkle some pollution through the maze.

Challenges- who can pick up the least pollution? Who can pick up the most pollution?

Wrap-up:

- Describe the water drop at the end of the maze, what color is it?
- What did you pick up in your water drop?
- Was it challenging to avoid the pollution?
- What did you use to represent pollution?
- How would this activity be different if the water was absorbed into the ground?
- Is your maze an urban area or forest land? How much surface is covered by impermeable surfaces?
- Name 5 sources of pollution and where do they come from?
- How can you reduce pollution in your community?
 - Pick up trash, pick up pet waste, avoid pesticides and fertilizers,

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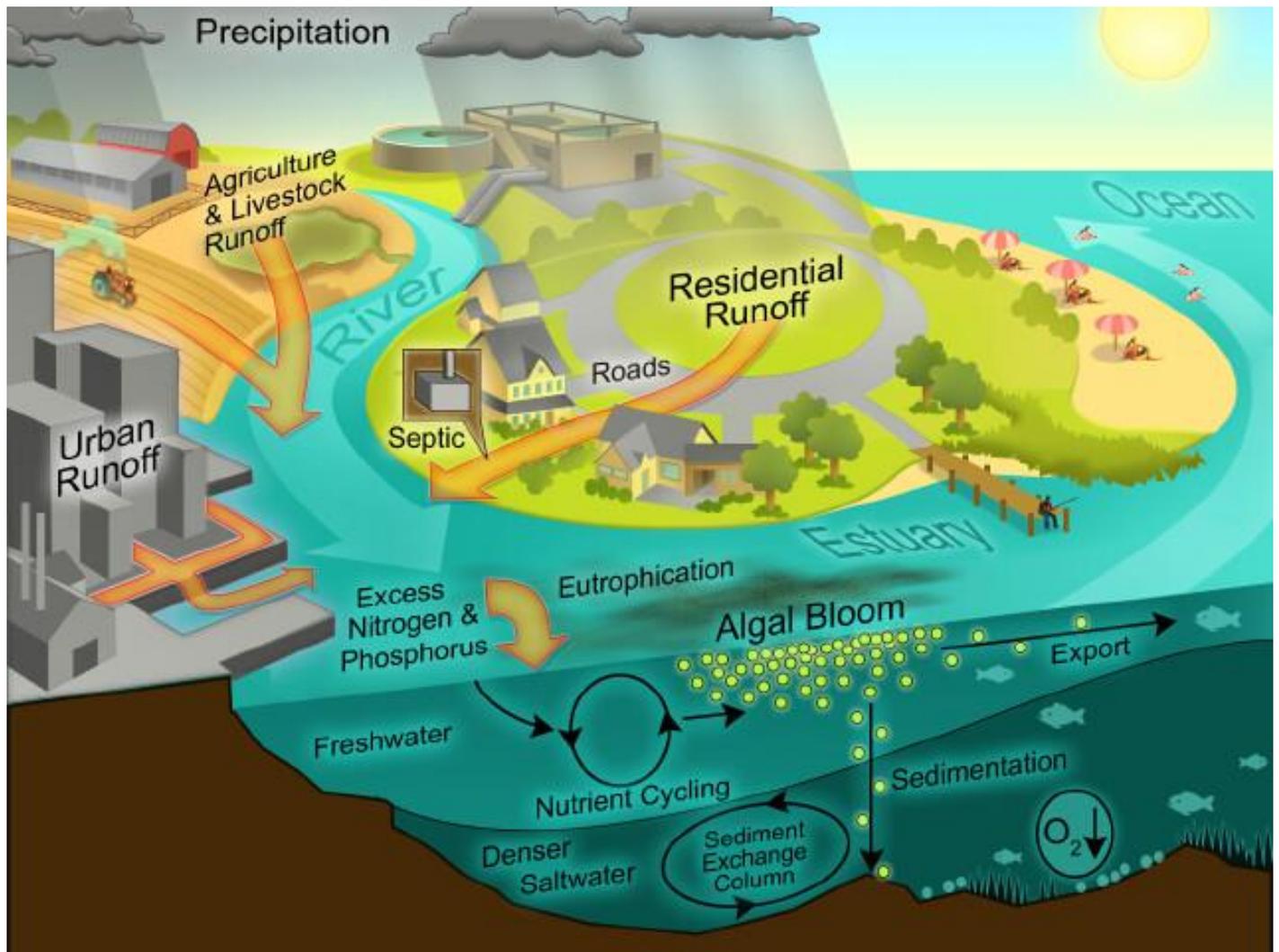
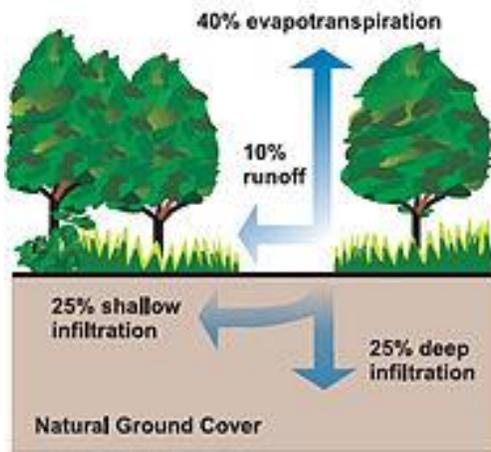
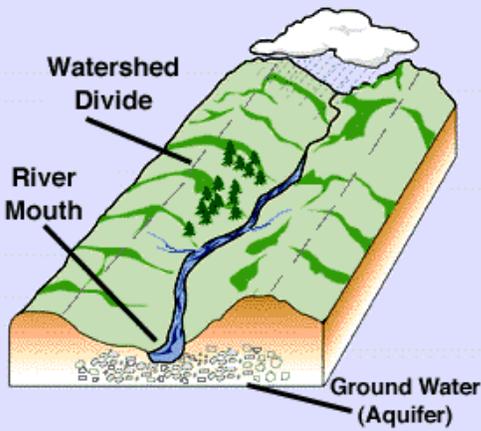


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A Watershed



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