Wax Paper Watershed Exploration

5th Grade Science -Essential Standard 5.L.2

Understand the interdependence of plants and animals with their ecosystem.

Materials Needed: Roll of wax paper–Approximately 12" x 12" piece of wax paper per student
Water color markers (3 different colors per student)
Spray bottle with water for each student
Paper towels
Optional – Tray to protect work surface

Vocabulary

Adapt	Flood Plains	Pollution	River Basin
Divide	Habitat	Pollutant	Runoff
Drainage	Impervious	Pollution	Stormwater Management
Ecosystem	Surfaces	Pond	Stream
Environment	Infiltration	Precipitation	Tributary
Erosion	Landscape	Ridge	Watershed
Flooding	Litter	River	

*<u>Conservation Curiosity Question 1:</u> Think about the land in your neighborhood, your very own yard, or even the area around your school. This is called your **landscape**. What does the surface of the landscape look like? Is it all flat or does it have high points and low points?*

- Highpoints/peaks in the landscape are often called **ridges** or **divides.**
- Low or flat areas are often prone to **flooding** and called **flood plains**. These areas are often near a body of water such as a **river**.

Procedure:

1 – Lightly crumple wax paper into a ball.
2 – Smooth the wax paper back out, but not completely. Be sure to leave some raised wrinkles. This will serve as your **watershed**.
3 – Use water color markers of several different colors to color the highest points on your wax paper watershed. This should be where your wrinkles bend. Each color represents a different potential pollutant such as household trash/**litter**, used motor oil, excess fertilizer.

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Conservation Curiosity Question 2: *What is your hypothesis of what would happen if your wax paper was a real landscape and it rained? Remember…the different colors represent potential* ***pollutants****.*

4 – Make sure the nozzle on your spray bottle is set for spray and not a stream! Using your spray bottle filled with water, gently spray your wax paper watershed to create a nice gentle rain or light **precipitation**. Observe any **runoff** that you may see occurring.

Conservation Curiosity Question 3: *After just a few sprays what do you observe?*

5 – Continue to spray your wax paper watershed until you observe water flowing and colors mixing in the low points. This represents a longer rainstorm, not just a quick rain shower.

Conservation Curiosity Question 4: *Was this what you predicted in your hypothesis? How was it alike or different?*

Conservation Curiosity Question 5: *Did the "rain" have any impact on the colored areas of your wax paper landscape? Did they move through your watershed as runoff? If so, where did they end up? Where might this be in your local landscape?*

Conservation Curiosity Question 6: *The different colors you used represented pollutants such as litter, used motor oil, or excess fertilizer. How might these pollutants harm* ***aquatic ecosystems*** *and the organisms that live within them?*

Here is a great website to explore the impacts of mismanaged trash.
https://www.epa.gov/trash-free-waters/impacts-mismanaged-trash

Conservation Curiosity Question 7: *What can you do to help limit pollutants and be a solution for pollution in your own watershed?*

EPA: Reducing Waste: What You Can Do
https://www.epa.gov/recycle/reducing-waste-what-you-can-do#Tips%20for%20Home

Additional Resources

Keep Harnett Beautiful – Learn how you can become involved!
https://www.harnett.org/waste/keep-harnett-beautiful.asp

Harnett Soil and Water Conservation offers a variety of agriculture and conservation education related programming including classroom presentations, field days, contests, and now virtual field trips.
For more information contact: Lynn Lambert, Certified Environmental Educator
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My Watershed Solution to Pollution

Name:

What features are in my watershed landscape? Ex. Rivers, Creeks, Towns	What are some potential sources of pollutants that I may produce? Ex. Litter, Used Motor Oil, Outgrown Clothing or other things you no longer need
How can my "trash" or items I no longer need impact ecosystems if not disposed of properly?	What can I do to reduce my "trash" or other potential sources of pollution?

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