From the Mountains to the Estuary: From the Schoolyard to the Bay

Meaningful Watershed Experiences for Grade 6 Students

Created by:

Prince William County Public Schools
Providing A World-Class Education

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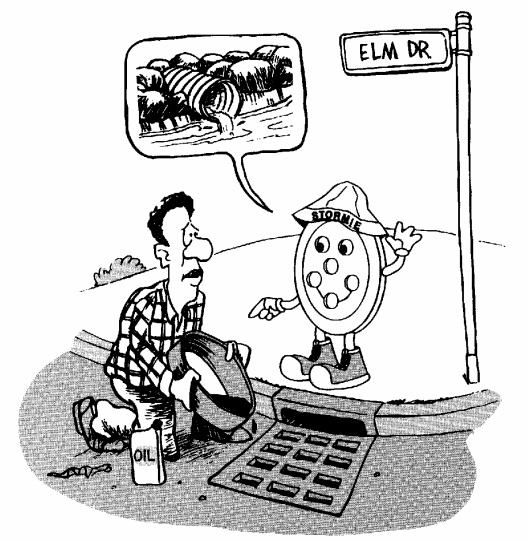
Schoolyard Mapping Activity

Stormwater Scavenger Hunt



Overview

Where does the stormwater that rains down on your school ultimately end up? Students will complete a map of their schoolyard that identifies rainwater run-off or drainage patterns, types of nonpoint pollution sources, and the ultimate destination for rainwater run-off from the schoolyard.

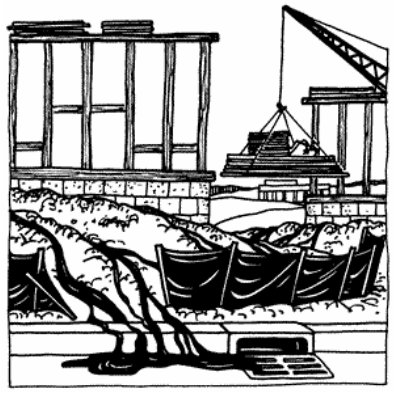
Students will learn the definition of a watershed and will be able to recognize that rainwater run-off in a watershed relates to downstream water quality. The students will describe ways that stormwater run-off could be reduced to protect watersheds and downstream water quality.

Materials Needed

- School map
- Clipboards
- Map icon worksheet with of stormwater items locate and plot on map
- Pencil
- Master stormwater map for teacher use

Setting the Stage

Stormwater runoff (rain, melting snow and ice) is the dirty water that drains off roofs, roads, sidewalks and parking lots and other hard surfaces. Some stormwater soaks into the ground or flows directly into streams. A large amount of the runoff travels into storm sewers that empty directly into local streams. Prince William County stormwater and the pollutants it carries (oil, sediment, fertilizer, dog poop, trash etc…) travels through local watersheds and ultimately ends up in the Potomac River and the Chesapeake Bay. When new buildings, neighborhoods and schools are built, they must have a plan for where their stormwater will flow before the county will allow them to begin construction. During construction, the developer must put up silt fences, berms and other best management practices (BMPs) to protect all local waterways from erosion and sediment they generate on site.



Stormwater runoff pollution is one of the greatest threats to water quality in the United States.

Acquisition of Learning

1. Divide the students into cooperative groups. Each group gets a clipboard with map and the map icon worksheet and pencil.
2. While standing outside facing the school, have students examine the map of the school and orient themselves in the schoolyard. Ask them to find their classroom on the map and mark it with a © icon.

3. Ask them “What is a watershed?” The definition should include that a watershed is an area of land from which rainwater or snowmelt drains into a particular stream, river, or lake, and that the highest points of land around the waterbody form the boundaries for a watershed. Students should be aware that watersheds might be as large as an entire river basin or as small as their schoolyard drainage area.
4. When confident that they know what a watershed is and where they are in relation to the map, explain that they will be mapping the school’s watershed to determine where stormwater(snowmelt) that lands on the schoolgrounds will travel.
5. Send the groups off to different areas of the school to complete the worksheet and their map.

Closure

1. What is a watershed?

2. What type of pollutants are carried by the stormwater that runs through your school grounds?

3. What could you do to help keep different pollutants from washing into storm sewers and local streams?

4. Has stormwater created any eroded areas in your schoolyard? If so describe where they are located?

5. Where does the sediment that washes off the eroded areas travel? Why might this be a problem in local streams or in the Bay?

6. After mapping your schoolyard did you have to add to or change the path your thought water flowed from the roof and off your school grounds? If yes, what did you discover?

7. What ways could you slow the flow of stormwater on your school grounds or in your neighborhood, preventing it from entering local streams?

Student Page

Stormwater Scavenger Hunt Map
Icon Worksheet

1. Look up at the roof of the main building and describe the shape and slope of the roof. (*Example: it's pointed at the top …. its flat on one side.)*

2. Look carefully at the roof. When it rains, where does the rainwater go that falls on the roof? List the path of stormwater as far as you can see past your school yard. *Roof* →

3. Create an icon of your choice to represent the following items on your map that you locate on or around buildings or in your schoolyard. All items may/may not be found in your schoolyard. Print the icon on your map to indicate where you found the following items:

Map Icon	Items
	Downspouts Total#_____
	Storm sewers
	Highest point on the school lot
	Lowest point on the school lot
	Natural vegetated buffers around parking lots
	Stream or depressions where water pools
	Wet spots
	Impervious surfaces
	Vegetated surfaces
	Eroded area
	Steep slope
	Discharge point (pipe emptying into a stream)
	Direction that water flows from the parking lot(s)
	Direction that water flows away from the school buildings
	Pollution source *(oil, trash, fertilizer, sediment…)*