

Building Language Skills with The Seattle Times

October 8, 2015

Article: "Stormwater: What You Otter Know"

Thursday, October 1, 2015 in the e-Edition of The Seattle Times, special section pages D4-D7

Pre-Reading:

Before reading the article, read the title and look at the photographs. What do you already know about Stormwater? What do you think the arrows on the graphic on pages 4-5 are depicting?

Vocabulary:

As you read, look for the following vocabulary words that appear in today's article. Write down what you think the words mean based on the "context," or how the words are used in the sentence in which they appear. Next, look up the definitions in a dictionary and see how close your guess was for each word.

runoff

vegetation

decayed

pervious

percolated

wastewater

mucous

susceptible

diagnose

biodegradable

pesticides

invasive

impervious

downspouts

Comprehension:

1. What are the types of pollutants we can't see that stormwater runoff picks up?
2. Why is stormwater runoff in streams, lakes, or the Puget Sound so dangerous?
3. How has the landscape of the Puget Sound changed?
4. Where is water which flows over these hard surfaces routed to? What are the dangers of this path of stormwater runoff?
5. What does a stormwater system do?
6. Why are pollutants in untreated stormwater dangerous to both people and animals?
7. Where does the wastewater system carry water from?
8. What products should not be flushed down the toilet? Why?
9. Which parts of the Puget Sound *do* combine the two systems?
10. What are the dangers of combining the two systems such as in the above areas?
11. What is the most environmentally-friendly way for you and your family to wash your car?
12. How can you and a family member check your car for oil leaks?

Post-Reading:

Read the following passage from the article and discuss the following questions in a group:

“Some techniques used to catch rainwater can be as simple as planting a tree, directing roof downspouts away from impervious surfaces, or using compost and mulch to build healthy soil. Other options may require more planning and construction, such as a rain garden or green roof. A rain garden is a sunken, bowl-shaped garden designed to slow, filter and absorb stormwater runoff from roofs or pavement, keeping it from becoming harmful water pollution.”

Which of the above techniques to catch rainwater do you think would be the most effective? Why? In a group, using <http://www.12000raingardens.org/> as a resource, design a simple rain garden you can build at home. What features does a rain garden need to have in order for it to be effective?

Building Language Skills:

Read the following passage, and complete the activity below:

“Stewardship: Volunteers can help restore natural areas by planting native plants and removing invasive weeds.

Your job? Dig in! Look online for a volunteer opportunity near you. Have fun working outside with your friends and family to improve natural habitat and protect water quality.”

Search online and ask friends and family for a volunteer opportunity near you to improve your natural habitat and protect water quality. Record your volunteer experience in a journal. Reflect on its importance and share with a group. What else can you do for the environment which doesn't require a volunteer team but can be done every day on your own time?

Comprehension Question Answers:

1. Pollutants we can't see in the water including chemicals sprayed on lawns, bacteria from pet waste and chemicals leaked from cars and trucks are also picked up from stormwater.
2. Stormwater runoff is not treated so if it contains pollutants it can be dangerous.
3. The landscape has changed from one of forests to land which is more developed and made up of impervious surfaces.
4. The rainfall that lands on hard surfaces is routed into storm drains, pipes and ditches to prevent flooding. Most of that runoff is routed directly to local streams and lakes. The result is too much water flowing in a short amount of time, carrying pollutants that negatively affect the health of our streams, lakes and Puget Sound.
5. A stormwater system helps manage water outside of buildings.
6. Any pollutants picked up by rainwater flow into our shared waterways where they can damage habitat, harm fish and wildlife, and make water unsafe for people for fishing and swimming.
7. The wastewater system carries water from indoor sources like your sinks, toilets and showers to a wastewater treatment plant where it is treated before being released into Puget Sound.
8. The tissue to blow your nose and "flushable" products like wipes and scrubbers should be disposed of in the garbage so as to not clog pipes. Household hazardous waste should be taken to a special disposal event or facility where it can be disposed of properly.
9. In small portions of Seattle, Anacortes, Everett and Bremerton, the two systems are combined.
10. When a combined system gets overwhelmed with rainwater, the excess stormwater and wastewater is released directly into the environment without treatment. Always assume the water flowing into outdoor drains is not treated.
11. Encourage your family to take your car to a commercial car wash, which is required to filter the dirty water and send it to a wastewater treatment plant.
12. When the car is turned off but still warm — and safely parked — slide a big sheet of paper or cardboard underneath the engine area and leave it for an hour or overnight. If you see any spots when you pull it back out, visit fixcarleaks.org to diagnose the color of your drip and get tips for vehicle maintenance.