CHAPERONE/TEACHER

Scavenger Hunt
Discussion Question Guide

King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Have the students look around. As they find items ask them the guiding questions and have them think of answers. If time is available, ask follow up questions.

A: Clover

How does clover benefit the soil and the other plants around it?

ANSWER: Clover is a nitrogen fixing plant—meaning it takes nitrogen from the air around it and turns that nitrogen into nitrogen that can go into the soil. Most plants cannot use the nitrogen that is in the air around them, so when clover takes nitrogen from the air and puts it into the soil, the surrounding plants can get nitrogen from the soil. Nitrogen is a very important nutrient for plants, so without clover and other nitrogen fixing plants, non-nitrogen fixing plants would not survive.

Follow up question: what other nutrients do plants need to survive?

B: Caverns

What kinds of pollution from roads enter streams, lakes, and Puget Sound every day?

ANSWER: When cars drive around they leak motor oil, gas, antifreeze, lubricants, heavy metals, and soaps from windshield wiper fluid. Those pollutants sit on the roads until it rains. When it rains they go down the street, into a storm drain and to the nearest water body.

Follow up question: Can we always see the pollutants? Does stormwater get cleaned at a treatment plant before it goes into the creek or Puget Sound?

C: English Ivy

Where is this plant growing? How could this invasive plant harm trees?

ANSWER: Ivy will grow up trees: it can kill trees 3 ways: 1) it can add so much mass to the tree that during a wind storm the wind can knock the tree down 2) it can suck up all available water and nutrients leaving none for the tree3) it can cover enough of the trunk and branches and prevent the tree from getting the sunlight it needs.

Follow up activity: Find a tree and help it out by pulling some ivy off of it!

D: Bike Rack

How does this type of transportation prevent water pollution? How is it different from cars?

ANSWER: Cars can leak oils or other fluids onto pavement that eventually gets washed into creeks and oceans. Bikes don't pollute at all!

Follow up action question: Give one place you could walk or bike instead of drive.

CHAPERONE/TEACHER

Scavenger Hunt
Discussion Question Guide

King County
Department of Natural Resources and Parks
Wastewater Treatment Division

E: Blackberry **Why is this plant a threat to native plants like ferns and shrubs?**

ANSWER: The Himalayan Blackberry likes to spread and take over the land. It grows quickly and can out-compete other native plants (meaning it grows faster than they do)!

Follow up question: Can you think of the ways that this plant spreads, grows and reproduces?

F: Retaining Wall **What do you think happens here if there is too much water in the creek?**

ANSWER: In winter rainy months creeks and rivers can flood; here that water could wash onto the bike trail and even the road. The rock walls help keep the water away from the trail.

Follow up question: What did this area look like before there were roads and paved trails?

G: Western Red Cedar **How do trees prevent rain water run-off and erosion? (Hint: tree needles, leaves and roots…)**

ANSWER: The needles, leaves and branches collect rain and allow it to slowly dry or slowly fall into the soil. Without trees rain quickly falls to the soil or pavement and rushes quickly to the drain and stream. The tree roots help hold soil in place, without tree roots the water running off of pavement and soil collects more soil as it goes eroding stream banks as it flows to creeks and the Puget Sound.

Follow up question: What invasive plant have you seen today that could threaten this tree?

H: Sword Fern **How do sword ferns support this eco system?**

ANSWER: This native low-lying plant provides excellent habitat for bugs and small animals. It is often found on hill sides where it's roots help stabilize the soil.

Follow up question: What invasive plant have you seen today that can 'over grow' an area making it impossible for these natives to survive?

I: Water Sign **What is the technical term for this water?**

ANSWER: "Reclaimed Water;" meaning it has been cleaned to about 99% at the Treatment Plant. Any purple pipes, fire hydrants, or signs like this indicate this type of water use!

Follow up action question: What are some uses of reclaimed water? (Hint: non-potable uses)

CHAPERONE/TEACHER

Scavenger Hunt
Discussion Question Guide

King County
Department of Natural Resources and Parks
Wastewater Treatment Division

J: Grotto **How does this park help with stormwater pollution? (Hint: look at the sign)**

ANSWER: The wetlands in this park filter stormwater from the treatment plant. They naturally clean the pollution out of the water before it goes to the creek and the Puget Sound.

Follow up question: Who designed this park? A city worker, an engineer a gardener or an artist?

K: Dog poop sign

Why should dog owners/walkers pick up the dog poop and throw it in the trash? What is in it that can harm fish and wildlife?

ANSWER: Nobody likes dog poop in parks and on walking trails! Dog poop also has bacteria, nutrients that can cause algae growth and solids that cause cloudiness/higher turbidity.

L: Duck Weed