

HABITAT GO/FIND

Working in teams, students search for features in a wooded ecosystem and answer critical questions about what they find.

GRADES

3th - 5th

NEXT GENERATION

LS2-C

TIME

40-50 minutes on site

LEARNING OBJECTIVES

- Examine interdependent relationships at play in an ecosystem.
- Apply classroom learnings about ecosystems to real life.
- Cultivate exploration skills.
- Work as a team to complete a task.

PREPARATION

1. Before this field trip, present lessons that introduce students to aspects of ecosystems appropriate to your grade level. They might include
 - species survivability/sustainability
 - decomposition
 - predation
 - positive and adverse impacts of humans
2. Select a nearby wooded ecosystem (natural park, wood lot) that your class can visit within the time available. Having a natural water source (creek, pond, seep, puddled stormwater) is a plus. Check that the site will be safe for students and get any necessary permission to be there.
3. Create a rough map of the study area and clearly mark stopping points so teams don't wander off or find themselves on unsafe terrain.
4. Make one two-sided copy of the worksheet for each team, using your map as page 1.
5. Recruit and brief one chaperone for each team (4-6 students).

WHAT TO DO

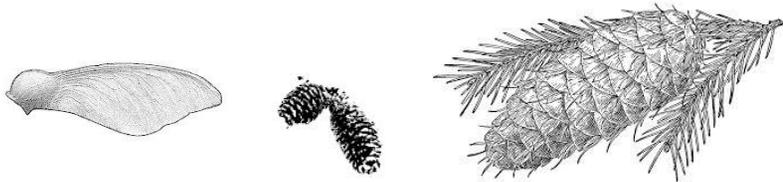
1. At the beginning of your lesson(s) on ecosystems, tell students that they will be going on a field trip to apply what they learn.
2. The day before your field trip, divide students into teams and give a worksheet to each team. Review and invite questions.
3. Bring a few extra copies of the worksheet, pencils, and a whistle to blow when time is up.
4. When you arrive at the ecosystem, emphasize what the study area will be and the stopping points.
5. Tell students how much time they will have and invite any last questions. Make sure each team has a pencil and knows where to come when time is up.
6. Circulate among the teams as they explore to address questions and check progress.
7. Return to school and remind students that they will be reporting their findings at their next session.
8. Lead teams in reporting and discussing their findings, evaluating the field trip, and suggesting what students would like to learn more about.

OPTIONS AND CAUTION

- Begin your field trip with a brief walk to acquaint students with where they are and help any new to this type of habitat settle in to work.
- Use this activity to occupy students constructively during your salmon release.
- A strong wind may require postponing your visit to the woods. If your habitat also has a creek, heavy rain may create unsafe conditions for children.

SEEDS IN THE HABITAT

Find a plant that is making seeds or find seeds that have fallen to the ground. Here are examples:



What kind of seed did you find today?

cone winged pod berry nut other

What type of plant might have made this seed?

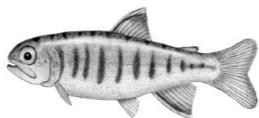
bush tree flower vine other

Name the plant if you can.

How might such seeds like this get moved around in the woods?

birds humans water wind US mail other

If you were a bird, might you eat this seed?

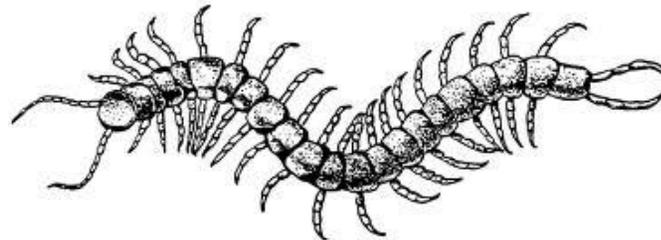


Salmon Connection

Trees and bushes help salmon by shading the stream, keeping the water cool.

ANIMALS IN THE HABITAT

Find a decaying log with loose bark on it. Gently lift the bark to have a look, then put it back.



What animal or animals do you see?

worm beetle insect centipede other none

What evidence have animals left behind to prove that this is their habitat?

eggs or egg sacs tunnels droppings other nothing

What might this habitat provide that animals need?

food water protection other

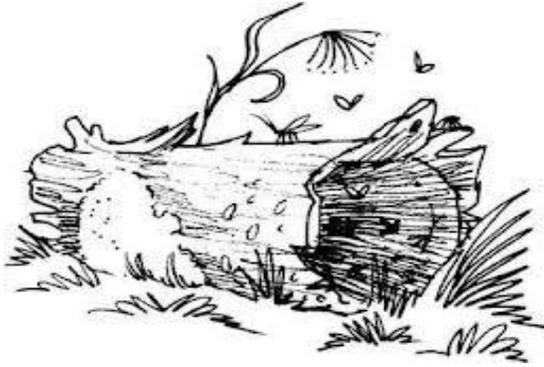


Salmon Connection

Some of these small land animals find their way into streams, where they could become food for salmon.

DECOMPOSING WOOD IN THE HABITAT

Find a dead log, branch, or chunk of wood on the ground. Gently poke it with a stick.



What happens when wood decomposes?

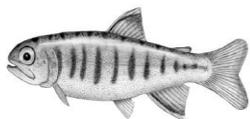
What evidence of decomposing do you see?

sawdust fresh dirt soft wood other

What do you see helping break down the wood?

worms or beetles moisture plant roots
birds pecking fungus or moss other

If you came back in 9 years, what would this wood look like?

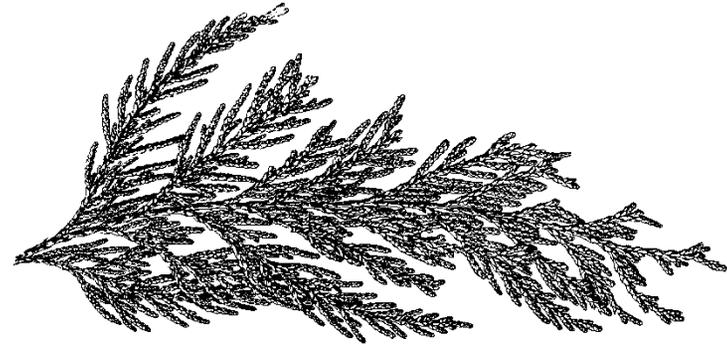


Salmon Connection

When plants decompose, new soil is created, which filters pollution from both air and water, helping keep streams clean.

CEDAR IN THE HABITAT

Look for a large tree with hairy, red-brown bark and flat sprays of leaves.

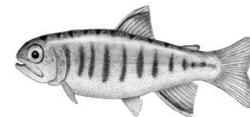


Coast Salish people used the Western red cedar for many things. What part might they have used to line a cooking pit so food would not burn?

What part could be carved to make art?

What part would make a good canoe?

What part could make a roof?



Salmon Connection

After salmon spawn, their decomposing carcasses provide rich nutrients such as nitrogen to fertilize cedar trees nearby.

SKUNK CABBAGE IN THE HABITAT

Look in damp soil for a bright yellow flower in early spring or very large green leaves in late spring. Do not leave the trail!



Where might the "skunk" part of this plant's name have come from?

Where might the "cabbage" part have come from?

Where does this plant like to live?

in the water near the water away from the water

in the sun in the shade some sun/some shade

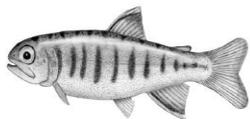
other _____

Why might its flower stink?

to keep people away to keep other plants away

to attract insects to pollinate it

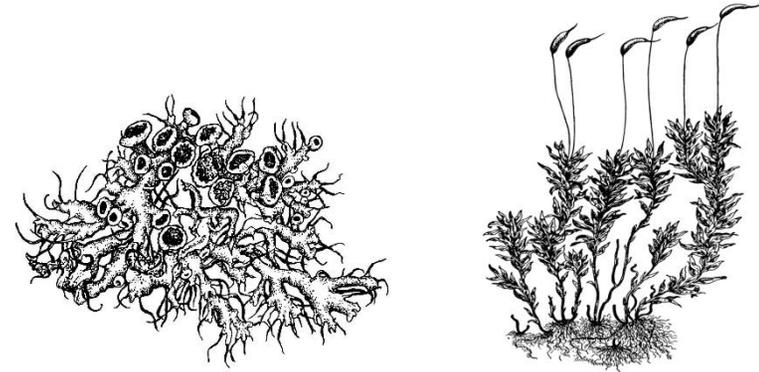
other _____



Salmon Connection

Skunk cabbage at the water's edge provides protection for young salmon as they learn to search for food.

MOSS AND LICHEN IN THE HABITAT



Look for clumps of moss growing on trees or wood. Look for shaggy pieces of lichen on branches or on the ground.

Mosses and lichens take many interesting shapes and forms. Moss can look like green carpet or yellow feathers. Lichen can look like lettuce leaves or green beards.

Scientists have given them many interesting names. Look for specimens that seem like a fit for the names below:

Pixie Cup

Pimpled Kidney

Witch's Hair

Electrified Cat's Tail Moss

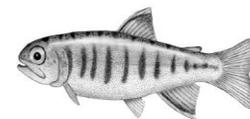
Beaded Bone

Hairy Lantern Moss

Freckle Pelt

Purple Worm Liverwort

What names would you give some of the other mosses and lichens you find?



Salmon Connection

Lichen is an indicator of air pollution and climate change, both of which affect habitat conditions for salmon.

SHELTER IN THE HABITAT

Look for a space under a fern, a cavity in a dead tree trunk, or other place you think a small animal might shelter.



What kind of animal might use this shelter?

Why might an animal need this shelter?

to hide to nest to sleep to stay dry

other _____

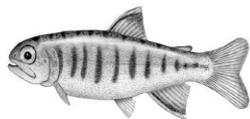
What evidence do you see that an animal has been here?

fur feathers droppings nesting material

hulls or other food leavings a hole dug in the dirt

a rubbed-against look a hole pecked in the wood

other _____

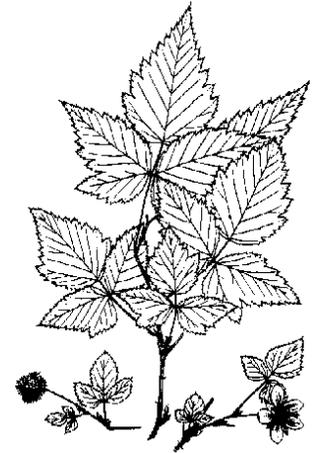


Salmon Connection

Logs, rocks, and overhanging plants provide shelter for salmon in a stream and gravel lightly protects their eggs and alevin.

SALMONBERRY IN THE HABITAT

Look for tall bushes on the side of the trail with bright pink blossoms and maybe the beginning of berries.



Salmonberry blooms very early in the spring. What advantages might this timing have for the habitat here?

bees can get to work in early spring

the bright flowers provide nectar for hummingbirds

birds will have berries to eat by late spring

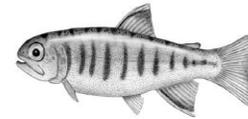
other _____

How might the salmonberry bushes be preventing erosion?

roots are holding the soil

leaves keep some rain from reaching the ground, where it could wash away soil

other _____

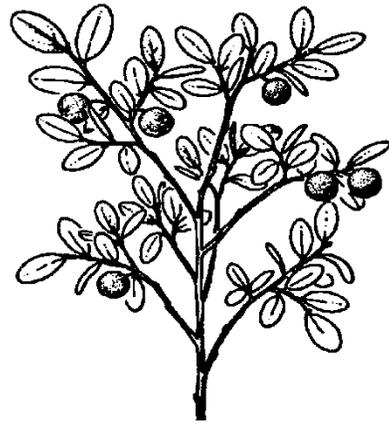


Salmon Connection

By holding the soil, salmonberry bushes help stop it from washing into the stream and covering up salmon eggs.

RED HUCKLEBERRY IN THE HABITAT

Look for a bush with small, rounded leaves, often growing out of a rotting stump.



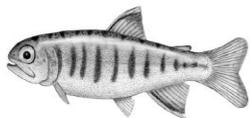
What does the stump do for the huckleberry?

feeds the bush sings it to sleep at night
protects the bush as it grows
stores water over hot summers
other _____

What does the huckleberry provide in this habitat?

berries for the birds shade color
roots that help decompose the stump
other _____

What might happen to the huckleberry after the stump decomposes into dirt?



Salmon Connection

Sometimes Native Americans in this area used the berries of this bush as fish bait.

SWORD FERN IN THE HABITAT

Look for a low-to-the-ground plant with stiff, green fronds (branches) growing in a circular clump.



What kind of habitat does this fern like?

bright sun deep shade wet soil dry soil
some sun/some shade
other _____

Look at the leaves carefully. Where are its “seeds”?

Note: These fern seeds are actually spore clusters called “sori.”

How might its spores get carried to other places in the woods?

birds other animals wind humans monkeys

How does the shape of the plant affect how water is captured?



Salmon Connection

By holding the soil, sword ferns help stop it from washing into the stream and covering up salmon eggs.