SQUAMISH RIVERS—

Riparian Field Trip

Grades: 2-4

Subject, Science, Language Arts

Time required:50 minutes & prep time

Key Concepts:

Fish and wildlife need a healthy habitat.

You can help make your watershed a good place for people and wildlife.

Objectives:

Students will describe riparian areas and their importance for healthy watersheds.

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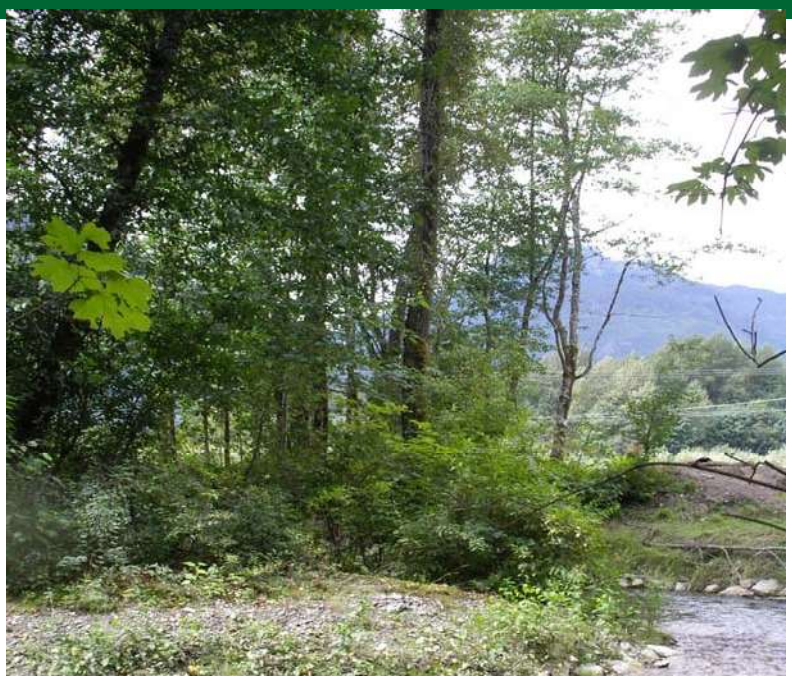
Key Words:
Riparian areas, plants, watershed

Skills:
Gathering information, analysis, classifying, describing



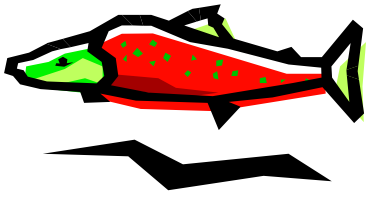
Background:

The word riparian refers to land next to a body of water such as land adjacent to streams, rivers, floodplains, lakes, wetlands, and coastal shorelines. Riparian areas provide a number of ecological functions that are a crucial component of watershed health. Riparian areas provide a transition area between wet habitat and drier upland habitat. Many species of wildlife use riparian areas to live, find food and water, reproduce, and establish viable populations. Riparian areas also function as a flow pathway for energy, materials, and animals. Water and sediment flow through the area into streams and rivers. Wildlife uses the thick vegetation for cover while moving from one area to another.

Healthy riparian areas benefit both stream habitat and the surround land uses. Benefits include: reduced watershed asphalt areas (impervious surfaces), increased distance from urban land use to stream habitat, prevention of soil erosion from steep slopes, effective flood control, protection of stream banks, increased

Materials

- Hula hoops
- Pencils and crayons, clipboards
- Mural paper
- Field guides (optional)



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Background continued:
sediment and pollutant removal, lower stream water temperatures essential for fish habitat, food, cover, and steam habitat, wetland protection, wildlife corridors, increased property values, and foundations for greenways, possibilities for future restoration.

Identifying a riparian area often involves observing the plants that live there. Riparian plants enjoy having "wet feet" that is; moist soils and the ability to handle intermittent high water. Native plants or species of plants that naturally exist in riparian areas can be easily identified using field guides. Some riparian areas have introduced or non-native plants found there. Non-native plants can have an undesirable effect on some native species by out competing them for essential nutrients. Purple loosestrife is one non-native riparian plant that is devastating areas throughout the province. Introduction of non-native species can displace native plants and lead to a decrease in biodiversity.

Procedure:

1. Before heading out into the field, brainstorm with students what they know about streams and the plants and animals that live nearby them. List the types of plants and animals that you might expect to find or find evidence of at your field site.
2. Introduce the concept of riparian area. Explain that riparian areas are important to the health of a watershed, including stream and river habitats.
3. At your field site, place students in small groups at intervals in the riparian area with hula hoops as their survey placement. Give hula hoop site a survey number. Have students list or draw plants and evidence of wildlife and any other interesting features. Be sure that students note their survey site number on their data sheet.
4. Back in the classroom, recreate your riparian area. On a large sheet of butcher paper, draw an area to represent the riparian zone, including the hula hoop survey sites. Have students draw what they found at their survey site on the mural. Ask students to tell about the plants and animals they have found all along the line.
5. Compare the plants and animals found closest to the stream and furthest from the stream. Is there a difference? Now look for signs of a change of plant communities. For example, is there an area where there was a change from low under-story (shrubs) to forest (trees)?
6. Ask students how animals might use riparian areas for food or shelter. Why would these areas be important to fish that live in the nearby stream?

Extensions:

1. Ask students to what they think might happen if::
    - A shopping mall was built in the riparian zone that we visited?
    - A park was created in that same area?

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Evaluation:

1. Describe the ways in which animals might use the riparian area for food or shelter.
2. Describe the ways riparian plants and animals are connected to other watershed species or habitats. For example, aquatic species, land species, birds, or humans.

Community Connections:

1. Invite a member of a local naturalist group to assist students identifying plants when doing the field study.

Resource:

This activity has been adapted from “Riparian Field Trip” from Wild BC.