

Healthy Water Environments

Activity Information

Grade Appropriate level: 4 –7

Duration: 3 or 4 trips of 1.5 hours each to compare results

Materials:

1. Small, clear plastic containers (i.e. bug boxes) to hold water creatures
2. Small aquarium net (1 per 2 to 4 students) or create your own using this guide: <https://www.rspb.org.uk/globalassets/downloads/kids--schools/teaching-resources/make-a-pond-dipping-net.pdf>
3. Small sketch pad and pencil (1 per group)
4. Chart of insect/organisms found in a healthy creek – with pictures (get from metrovancouver.org):
<http://www.metrovancouver.org/services/parks/ParksPublications/PondOrganisms-fieldtrip.pdf>

Objective

Discovering the organisms needed to maintain a healthy creek.

Prescribed Learning Outcomes

Applications of Science

It is expected that the students will:

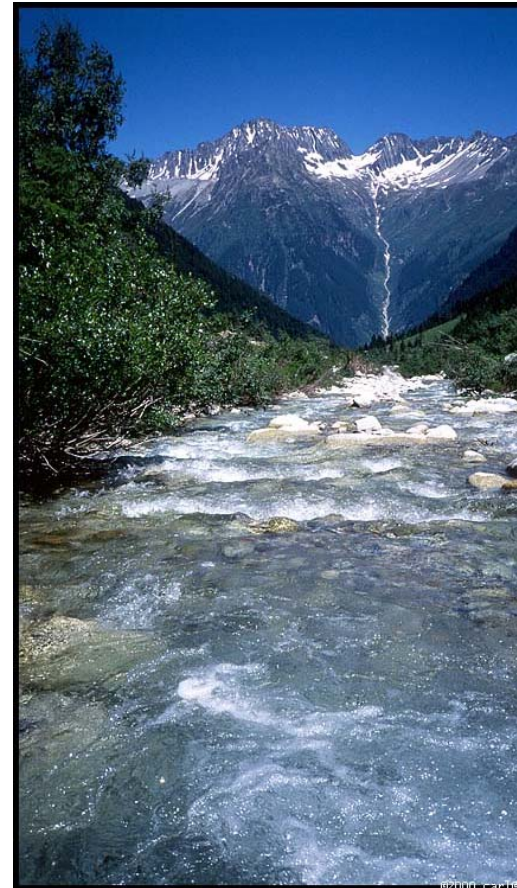
- identify relevant variables in an experiment
- identify and test a prediction
- classify and order based on a set of keys and criteria
- correctly state a hypothesis
- differentiate between relevant and irrelevant information
- use appropriate technologies to record, measure, save, and retrieve data
- identify ways science is used responsibly in their communities

Life Science (Classification of Organisms)

- develop common classification systems for organisms
- classify plants and animals, i.e. invertebrates etc.

Life Sciences (Ecology)

- describe ways in which species interact with each other
- determine the limiting factors for local ecosystems



Skills

Measuring, recording, hypothesizing, observing, interpreting results.

Suggested Instructional Strategies

1. Divide class into groups (2-4). Each group will have 1 net, 1 clear container, sketch pad and pencil.
2. While walking down to the creek, stop and discuss the physical habitat that surrounds the creek (trees, bushes, animal tracks, birds, insects, etc.) and what kinds of animals and plants might depend on the creek for survival.
3. At the creek, spread groups of students along the creek bed. (parent supervisors are recommended, particularly if it's steep terrain with fast-moving water.)
4. Each group gathers water in containers then collects any organisms found in the creek (using nets), place into containers to study.
5. Sketch each new organism-count number of each.
6. Gather all groups together, display specimens, and discuss anything unusual, most common, best location. (why?) Were the specimens the same plants and animals students expected to find?
7. Using graph paper, chart the organisms and number of each found. (repeat for all trips)
8. Gently return all specimens to the creek.



Suggested Assessment Strategies

1. Discuss organisms needed for sustaining a healthy creek (if possible invite a biologist from department of Fisheries and Oceans)



2. Draw a picture of any organism found in the creek or in the ocean (i.e., whale) then write a short story or poem under it (i.e., Haiku, Senryu, Tanka or free verse) for Language arts class
3. Make a collage of living organisms of a healthy creek or inhabitants of a healthy ocean for Art class
4. Discuss the types of careers one might associate with streams and oceans, i.e. scientists, wildlife biologists, scuba divers, eco-tourism etc.
5. Invite a local Indigenous person to the class to share how that pond may sustain their culture and way of life.

Cross-Curricular Interests

Mathematics, Language Arts, Fine Arts, Science, Career and Personal Planning

Suggested Links

<http://www.mcps.k12.md.us/curriculum/outdoored/units/streamstudent.doc>

<http://www.bpa.gov/corporate/kr/ed/kidsinthecreek/materials/presentnote.htm>

<http://www.crewater.org/shadethechehalis.html>

<http://www.oceansoffun.org/careers.htm>

Lesson Plan submitted by: Carol McLeod

Prepared/adapted by: Audrey Perun for FORED BC

https://www.naturekidsbc.ca/wp-content/uploads/2020/04/SalmonWILDvol20_Fall2019.pdf

<https://youtu.be/vvG2vH4xCv4>

<https://www.metrofieldguide.com/how-to-go-pond-dipping/>

<http://canadianherpetology.ca/conservation/doc/>

<http://canadianherpetology.ca/conservation/doc/Guide%20to%20Amphibians%20of%20British%20Columbia%20North%20of%2050.pdf>