Young Stewards of the Watershed

Watersheds
Curriculum Overview

Learning Outcomes — Students will be able to;

- Understand key concepts such as “watershed” and “water cycle”.
- Identify the key components of a watershed, from headwaters to estuary.
- Understand the factors of water volume, gradient, and sediment load that shape the Fraser, Harrison, and Coquihalla rivers.
- Recognize the importance of water as a renewable resource, and take practical steps to reduce damage to local watersheds.

Pre-Trip — **Build vocabulary, establish key concepts, build anticipation.**

- **Interactive games.** The watershed naturalist will deliver an in-class presentation using interactive games to teach watershed concepts.
- **Watershed mapping.** Students will label and colour a map of their local watershed to build terminology and develop their understanding of local geography.

Fieldtrips — **Experiential learning; demonstrate vocabulary and concepts with direct experience.**

- **Visit a local river.** Students will explore the Fraser River and observe the dynamics of water and sediment, erosion and deposition, using a stream table.
- **Visit a water bottling plant.** Students will visit the Nestlé Waters Canada bottling plant near Hope, to understand how groundwater is harvested and used by people.

Post-Trip — **Reinforce vocabulary and key concepts, students investigate further and present their knowledge to the class. These activities are teacher-driven, with support from the naturalist.**

- **Calculate your daily water use.** Chapter 9 of the Science Probe 5 textbook offers an exercise the students can do to analyze their family’s water consumption. Data can be presented graphically in a bar graph.
- **Investigate water pollution.** Students investigate local sources of water pollution and decide what steps they can take at home and school to reduce their impact.
- **Visit a sewage treatment plant.** Students can investigate where their sewage goes, and what treatment occurs before the sewage enters the Fraser River.

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HOPEMOUNTAINCENTRE
for outdoor learning

School District 78
Fraser-Cascade

Young Stewards of the Watershed

Watersheds

Concepts and Terminology

- Watershed
- Water cycle
- Renewable resource
- Surface runoff
- Freshet
- Hydrograph
- Snowpack
- Headwaters, tributary, confluence, main stem, estuary, alluvial fan
- Sedimentation / erosion / deposition
- Ground water, aquifer, water table
- Leaching
- Soil pollution
- Water pollution
  - – Point-source pollution
  - – Non-point-source pollution

Grade 5 "Science Probe" Text Book

Chapter 1 — Forces Around Us:
- Force
- Weight / load
- Friction, surface texture
- Slope
- Equilibrium, balanced vs. unbalanced

Chapter 8 — Natural Resources:
- Renewable resources
- Non-renewable resources
- Conservation of resources
- Re-use, recycle, compost

Chapter 9 — Renewable Resources:
- Harvest
- Salmon
- Forests
- Raw material

WATER
- Calculate daily use
- Water cycle
  – evaporation, condensation, precip.
- Surface runoff
- Groundwater
- Watershed
- Leaching
- Soil pollution
- Pollutants
- Water pollution