



Weaselhead Grade 8 At School Teacher's Package Biodiversity and Ecosystems: Freshwater Ecosystems

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Thank you for your participation in our Grade 8 Weaselhead Education Program! This program is specifically designed to meet curricular learning outcomes focused on the Alberta Science curriculum. Our program is led by a Weaselhead Naturalist who brings their own expertise and personal experiences to your program.

The following items have been enclosed in this Teacher's Guide package:

- Curriculum Connections
- Program Objectives
- Participant Guidelines
- Behavioural Expectations
- Program Outline
- Activities
- Information about freshwater ecosystems
- Background Information on the Weaselhead Area

Curriculum Connections

Science: Unit E: Freshwater and Saltwater Ecosystems

Guiding Questions

- How do water, land and climate interact?
- What are the characteristics of freshwater and saltwater systems, and how do they affect living things, including humans?

Program Objectives

Students learn about freshwater ecosystems, their biotic and abiotic components.

Pre program preparation

- Students should have a journal or clipboard with blank paper.
- Students should be divided into 5 groups for pond dipping and testing.

For outdoor activities participants should:

- dress for the weather; Dress in layers and wear appropriate footwear.

- bring pencils or pens.
- bring a field journal OR blank paper on a clipboard.

Outdoor activity behavioural expectations

- Remain with the group and keep in sight of supervisors at all times.
- There is always an adult leader at the front of the group and at the end of the group.
- Never remove natural items from the area. Vegetation, insects, mammals, birds, and amphibian life is to be respected and left in the natural habitat.
- Leave no trace of our visit. All litter must be brought back out.
- Unsafe behaviour such as tripping, wrestling, fighting, and teasing is unacceptable and may result in withdrawal from the activity.
- Cooperation by listening, participating in group discussions, observing, and recording is expected during the learning experience.
- Each adult is expected to participate in the activities and to provide due safety and care for each of the students.
- No headphones or earbuds are allowed. This is for the safety of the participants.
- **Cell phones are not to be used, unless there is an emergency. This applies to parent volunteers as well.**

Program Outline: 1 ½ hours

5 minutes	● Introduction, Land Acknowledgement
60 minutes	● Pond dip and water quality testing
25 minutes	● Discussion of how human activities impact freshwater ecosystems and how students can make a positive difference

Activities

- Pond dip focused on discovering aquatic invertebrates
- Water quality testing including:
 - Dissolved oxygen
 - Phosphates
 - Nitrates/Nitrite/Ammonia
 - pH
 - Temperature
 - Turbidity

In the event a pond dip is not possible due to site unavailability or weather, chemical testing can still be performed and a presentation on aquatic invertebrates will replace the pond dip.

Weaselhead History

The Weaselhead area has a name shrouded in mystery. Like so many Indigenous stories, how the Weaselhead got its name has been lost over time. What we do know is that although there are weasels that call this area home, the name has nothing to do with actual weasels!

Weaselhead is a traditional Blackfoot last name so the name may be related to someone from the Blackfoot Confederacy. There is written history of a man with the name Weazel Head on the Tsuut'ina reserve as well, but little is known about where he originated. Early settler Sam Livingston, whose house is now part of Calgary's Heritage Park, was the first European to settle in the Elbow River valley, now known as the Weaselhead.

Between 1910 and 1990, Tsuut'ina reserve and parts of the Weaselhead were used for military training exercises. Foxholes and signs warning of ordinances possibly left behind remind of this history even today. The last time an exploded device was found was during the floods of 2013.

The City of Calgary bought what is now the Weaselhead from the Tsuut'ina Nation in 1929 to build the Glenmore Reservoir, which still provides roughly 40% of Calgary's drinking water.

Today, this protected area spans 404 hectares (989 acres) and is bursting with diverse habitats. Wander through dense White Spruce forests, leafy Balsam Poplar groves, and colourful wildflower meadows. The Elbow River winds through it all, with floodplains, beaver ponds, and wetlands teeming with life.

As you explore, you'll uncover clues to the area's rich history. Fossils in sandstone cliffs date back 35 million years, and traces of ancient river paths still shape the landscape. You can find evidence of Indigenous campsites and buffalo hunts, as well as remnants of a military training base that once operated here.

With over 480 plant species, including rare ones like the Western Wood Lily, the Weaselhead is a wildlife haven. Frogs, salamanders, and more than 200 bird species thrive here, while larger animals like moose, bears, and even cougars visit throughout the year.

The Weaselhead is a living tapestry of Calgary's natural and cultural history, offering a rich, engaging experience for all who visit.

REMEMBER: This is a natural area park. It is illegal to remove anything from the area. Fossils and certain plant species are protected in Alberta.

