Weaselhead Grade 5
Outdoor Program Teacher's Guide
Rivers and Wetlands

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Thank you for your participation in our Grade 5 Weaselhead Education Program! This program is specifically designed to meet cross curricular learning outcomes focused on the new Alberta Science and Social Studies curriculums. This program is focused on Earth Systems, Living Systems, and the Scientific Method. Our program is led by a Weaselhead Naturalist who brings their own expertise and personal experiences to your lessons.

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

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

Curriculum Connections

Science: Students learn how rivers and wetlands influence the lives of plants and animals with a focus on the effects of weather and climate. They discover why beavers matter for the health of our wetlands and rivers. They learn how the scientific method was applied to the Southwest Calgary Ring Road Impact Study.

Social Studies: Students will learn about the landscape history of the area by considering the Elbow River and surrounding wetlands. Maps of the region are studied.

Guiding Questions

Science

Earth Systems

- How can climate and its effects be understood?
- What is the difference between climate and weather?
- How can weather affect rivers and wetlands?
- How is climate change affecting rivers and wetlands?

Living Systems

- How are organisms supported by vital biological processes and systems?

Scientific Method

- How does evidence lead to understanding?

Social Studies

- How do social scientists develop an understanding of the world?

- How has geography contributed to the development of the local area?
- How has the Weaselhead changed over time?

Program Objectives

Students examine evidence to better understand how our changing climate is impacting plants, insects, and vertebrates. Students develop a deeper understanding of the Scientific Method, learning about our Impact Study and the importance of monitoring changes over time.

Before the Trip

Pre-trip Preparation

- Please have students divided into 4 or 5 groups per class prior to the field trip.
- Students should bring a journal or set-up a field trip journal on a clipboard with blank paper.

Participants should:

- dress for the weather; dress in layers and wear appropriate footwear.
- bring a snack, lunch, and plenty of water for a full day field trip.
- bring pencils or pens.
- bring a field journal OR blank paper on a clipboard.
- bring a plastic bag OR mat, if the student does not want to sit on the ground. (Optional)

NOTE: This entire program is held outside with no indoor facilities. Students must be prepared for all weather and conditions. They will be hiking approximately 3-5 km on dirt trails. Appropriate footwear is a safety requirement.

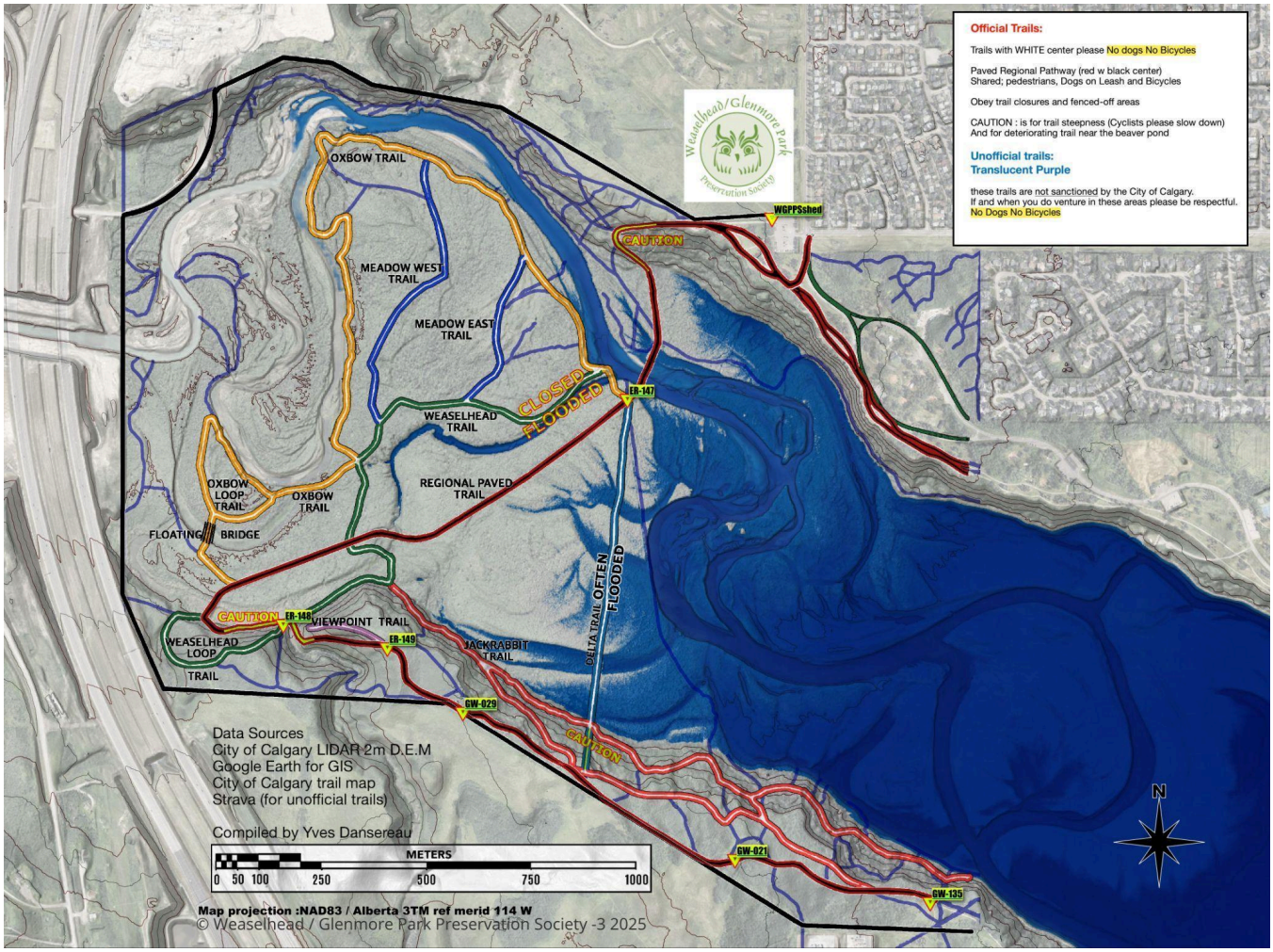
Behavioural Expectations

- 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.

- **Both adult's and student's cell phones must be kept away unless taking pictures or in case of emergency.**

Map of the Area

Your group will be starting their hike at the 37th Street Parking Lot. Meet your Naturalist leader at the shed located in the NW corner of the parking lot. We will hike into the Weaselhead down the hill to cross the bridge and explore the area. Depending on conditions, we may also be using the fields and the Aspen Forest in North Glenmore Park.



Field Trip Program Outline: Full Day

9:30 am	• Meet your Naturalists at the grey shed in the NW corner of the parking lot at 37th Street.
9:30 – 9:45 am	• Introduction, Land Acknowledgement, park rules, and expectations • Washroom visit
9:45 – 10:00 am	• From the top escarpment, observe and discuss the Elbow River watershed and its importance for sustaining biodiversity
10:00 - 10:30 am	• Hike down the hill and across the river to discuss how the river has changed and how weather and climate are affecting it
10:30 – 10:40 am	• Snack break
10:40 – 11:40 am	• Hike towards a pond study site • Activity: Pond dip
11:40 am – 12:10 pm	• Lunch
12:10 – 12:50 pm	• Activity: Build a Beaver and discussion of beavers as ecosystem engineers
12:50 – 2:15 pm	• Hike and lessons • Activity: Mapping activity to see changes in the Weaselhead over time
2:15 – 2:30 pm	• Walk back to parking lot • Wrap up and conclusion: Highlighting the importance of stewardship, the actions the Weaselhead Society takes, and the actions the students can make themselves for healthy rivers and wetlands.

Activities

- Pond Dip: Learn about the differences between the different systems that support aquatic organisms and how changes in weather and climate affect them.

- Maps: Students view historical maps of the area that include images and stories about the damming of the Glenmore Reservoir, the building of Priddis Trail, and the construction of the Ring Road and draw what they think the area will look like in 15 years.

- Build a beaver: Students learn about the adaptations of beavers and how they are ecosystem engineers that support climate mitigation.

- Scientific Method: Naturalist leads a discussion with students regarding ideas about the changing environment and the influence of climate variables. Students develop a question and hypothesis related to their topics of interest.

Optional follow up in class activities

- Students develop a wetland or river study based on the scientific method. They consider controlled and manipulated variables and design a methodology to test their hypothesis. They plan and conduct their controlled experiment.
- Research projects on the contributions of diverse cultural groups to the development of the local area.
- Debates or discussions on current environmental issues affecting Calgary and the Weaselhead, emphasizing democratic decision-making and civic responsibility.

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.