



# Weaselhead Grade 4 At School Program Teacher's Guide Dark Skies

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Thank you for your participation in our Grade 4 Weaselhead Education Program! This program is specifically designed to meet cross curricular learning outcomes focused on the new Alberta Science and Social Studies curriculums. 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
- Background Information on the Weaselhead Area

## Curriculum Connections

**Science:** Students investigate and discuss how the sun and artificial light impacts vegetation. Students will investigate how human activity has impacted the local environment over time.

**Social Studies:** Students will explore the importance of dark skies for people and animals and learn about the Nocturnal Sanctuary initiative at the Weaselhead. They will be engaged in the importance of the night sky for storytelling with local Indigenous stories shared. The importance of our Nocturnal Sanctuary initiative is connected to how First Nations used the sky historically.

## Guiding Questions

### Science

#### Living Systems

- How do animals use their senses to detect food, predators, danger, or other plants and animals?
- How do dark skies influence these senses?
- How do plants detect and respond to sensory stimuli such as light?

#### Space

- How is the night sky used for storytelling?
- How does a Nocturnal Sanctuary help animals?

## Scientific Method

- How can evidence advance knowledge in science?

## Program Objectives

Students will explore how natural and artificial light influence life on earth. They will learn the importance of dark skies for both biological and cultural wellbeing and gain knowledge in how they can darken the night.

## Before the Program

### Pre program preparation

- Students should have a journal or clipboard with blank paper.

### Program Outline: 1 ½ hours

5 minutes	<ul style="list-style-type: none"><li>• Introduction, Land Acknowledgement</li></ul>
40 minutes	<ul style="list-style-type: none"><li>• Presentation on artificial light and how different forms of light affect plants and animals.</li><li>• Activity: exploration into how different colours, brightnesses and shields changes how light is perceived</li></ul>
30 minutes	<ul style="list-style-type: none"><li>• Storytelling and the night sky: students are introduced to how different cultures including local Indigenous Nations have used constellations and lunar cycles to understand the world around them.</li></ul>
15 minutes	<ul style="list-style-type: none"><li>• Wrap up discussion including an introduction to the Nocturnal Sanctuary initiative and actions we can all take to keep skies dark.</li></ul>

## Activities

- Introduction to natural and artificial light and how it affects plants and animals (including us!). Using lights with different colours, students will learn how different colours and brightnesses change how light is perceived and affects different life forms.
- Stories from the Land; students are introduced to the importance of the night sky for cultural transmission with examples from different cultural groups including local Indigenous Nations. Any Indigenous stories shared are done so with permission and respect.

## 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.*