



Grade 7 Field-trip; Teacher's Guide "Ecosystems"

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*Thank you for your participation in our Grade 7 Weaselhead Education Program!*

The following items are included in this Teacher's Guide:

- behavioural expectations
- a map of the Weaselhead
- field-trip program outline
- background information on the Weaselhead area

Pre-trip preparation:

- Please have the students broken into 5 groups per class prior to field trip.
- Students will need journals and/or copies of the worksheets available for download here: <https://theweaselhead.com/education/outdoorprograms/>
- If possible, bring one adult leader (parent volunteer) per student group.
- View the Weaselhead Field-trip Introduction with students, available for download here: <http://theweaselhead.com/education/outdoorprograms/>

**Participants should bring:**

- appropriate clothing for the weather (dress in layers)
- two water bottles (students will need at least a litre of water for a full day trip)
- a snack, and a waste-free lunch for a full day field-trip
- pencils (crayons, markers or paint are optional)
- journal and/or worksheets with something hard to write on (e.g. cardboard stapled to paper, or a clipboard)
- something to put on the ground to sit on if wanted (e.g.: a carrier bag with folded newspaper or a magazine in it and taped shut)

*NOTE: This entire program is held outside with no indoor facilities, students must be prepared for all weather and conditions. They will be hiking up to 6km on dirt trails and should be wearing appropriate footwear. Lunch is held outside and students will be sitting on the ground. The only washrooms available are in the parking lot – there are none in the Weaselhead itself.*



## Behavioural expectations of all group members (adults and students):

- Remain in the assigned group and keep in sight of supervisors at all times. Ensure there is always an adult leader in the lead and at the end of the group.
- NEVER remove natural items from the area, including stones, sticks etc. Vegetation, insects, animals – all life is to be treated with respect and unharmed.
- All garbage, even biodegradable items, must be packed out.
- Behaviours such as tripping, wrestling, and teasing are unacceptable and may result in withdrawal from the activity.
- Cooperation by listening, participating in group discussions, observing and recording is expected.
- Every adult is expected to participate in the activities and to provide due safety and care of the students.

## Map of the Weaselhead:

*Naturalist leaders will decide which ecosystems are covered based on teacher's preference, the time available, weather, and presence of other student groups in the Park. Students will pass through areas of spruce, balsam poplar, aspen forest, grassland, and patches dominated by shrubs.*



## **Field-trip Program Outline: full-day, 9.30 am to 2.30pm**

Meet the Naturalists at the grey parking shed found in the northwest corner of the Weaselhead parking lot <https://goo.gl/maps/1gqTLnYTTS3e6q2P6>. Please look out for the signs at the entrance of the parking lot at the intersection of 37th St. and 66<sup>th</sup> Ave SW and do not enter North Glenmore Park.

*Please note: Naturalist leaders may adapt this program outline to suit the day's needs. If more than one class is participating, classes will follow different routes and cover ecosystems in a different order than described below. The worksheets cover 6 different ecosystems: riverine forest, aspen stand, man-modified grassland, spruce forest, tall shrubs, and wetland. Please let your Naturalist know if you have a preference as to which should be visited (normally time allows for only 5).*

### **Weaselhead Parking Lot 37<sup>th</sup> St and 66<sup>th</sup> Ave SW (approx. 15 min.)**

- introduction, park regulations and behavioural expectations
- washroom visit (*Please note: there are no washrooms in the Weaselhead, and the Portapotties in the parking lot are only accessible at the beginning and end of the field-trip*)

### **Visit the grassland ecosystem (approx. 45 min.)**

- Naturalists will identify the 'tame' introduced grassland area near the parking lot. The students will walk to an area with native grasses. The Naturalist will lead discussion of the differences in history, species, and management of natural vs. man-modified ecosystems.
- Students will get into ~5 groups to lay out transects across the grassland and compare the cover of native fescue grass with that of an introduced weedy species – creeping thistle.
- Students will explore the area, identify different plant species, and discuss the impact of biodiversity on ecosystem resilience.

### **Snack (15min)**

### **Walk and visit Aspen Stand ecosystem (approx. 30 mins.)**

- features of this ecosystem are observed and discussed, including special adaptations of aspen (e.g cloning vs. sexual reproduction )

### **Walk to Elbow River (15 min.)**

### **Visit Riverine Forest ecosystem (approx. 30 min.)**

- exact spot may vary – there are several excellent places in the Park to study this ecosystem
- energy movement through ecosystems explored
- special conditions for seed germination discussed

### **Walk to area for lunch break (approx. 45 min)**

### **Walk and visit Tall Shrub ecosystem (approx. 45 min.)**

- exact spot may vary – there are several excellent places in the Park to study this
- gas exchange in plants
- reasons why some naturally occurring ecosystems have low biodiversity

### **Walk and visit Spruce Forest ecosystem (approx. 45 min.)**

- Exact spot may vary – there are several excellent places in the Park to study this
- activity – finding examples and/or evidence of ecosystems components
- lumber as a resource
- discussion re. succession

### **Walk and visit a Weaselhead Wetland (approx. 60 min):**

- Exact spot may vary – there are several excellent places in the Park to study wetland ecosystems.
- going over common terms used when talking about ecosystems
- students will work in groups to prepare a presentation on how our actions impact wetlands, how the impact might be measured, and what actions might be taken to protect a wetland

### **Back to the Top of the Hill**

- final questions
- if there is time play a game (*'Ecosystem Word Association'*; *'Weaselhead Theatre'*)

## **Weaselhead History**

It is not known exactly how the Weaselhead area received its name – however it has nothing to do with weasels, nor a weasel's head – the City's website says it was likely named after the Tsuut'ina Chief Weaselhead who was in power at the time of European contact, but Hal Eagletail, a Tssut'ina elder told the Society it was named it after a Cree man called 'Weaselhead' who was murdered in the valley. The area was part of the Tsuut'ina Nation's lands until 1931 when it was sold to the City prior to construction of Glenmore Reservoir. For a long time (since 1913) the Weaselhead was used as a training ground by the military, until being made a park in the early 1980's. Today, the Weaselhead Natural Environment Park covers approximately 237 hectares and receives the highest level of protection available to a Calgary park. The area consists of the Elbow River, the north and south escarpments of the river valley, the river floodplain and the delta where the river flows into Glenmore Reservoir.

The river was formed by the melt waters from the glaciers at the end of the last glaciation period approximately 10 thousand years ago, although the valley itself predates that glaciation. Today's floodplains hold many signs of the past movement of the river across its floodplain such as the numerous old and new oxbow wetlands. Fossils dating back 35 million years can be seen in the sandstone deposits along the cliffs and there are numerous indigenous archaeological sites, including buffalo runs and hunting campsites that can be dated as recently as 1887.

The flora of the area is rich and varied: evergreen white spruce can be found next to deciduous balsam poplar in the moist floodplain; patches of tall shrubs such as red-osier dogwood and saskatoon grow between stands of trembling aspen on drier slopes; wildflowers bloom in the remnant fescue grassland above the valley... There are numerous aquatic habitats ranging from riverine wetlands, to beaver ponds, to the river itself, all supporting a variety of aquatic plant species. The flora of the area is made up of some 480+ species. Some of these species are endangered or threatened such as the western wood lily.

The varied plant life supports a diversity of wildlife. There are untold numbers of invertebrates both aquatic and terrestrial. At least ten species of fish are known, with several being sought by sport fishers. Amphibians live here - boreal chorus frogs and wood frogs, and now rarely, tiger salamanders. Few reptiles inhabit Alberta, but garter snakes are common here. Over 200 species of birds, from waterfowl, to songbirds, to raptors use the park. Some of these use the region as a stopover during fall and spring migrations, others nest in the Weaselhead during the summer only, still others live here all year round. For mammals like the shrews, hares, deer, and beaver, the Weaselhead provides a permanent home. Other species, including moose, black bear, and cougar are known to use the park on a seasonal basis.

*REMEMBER: Never remove anything from the area. Fossils, archeological remains and certain plant species are protected in Alberta.*

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