

WINTER-WISE

A Field Study for Grade 2 Students



FISH CREEK ENVIRONMENTAL LEARNING CENTRE

FishCreek.Education@gov.ab.ca

www.Fish-Creek.org



Introduction

This is a curriculum-connected, full day study with multidisciplinary preparatory and post-visit resources. The intent is to offer a hands-on experience for students that naturally immerses them in the field study components of *Topic D Hot and Cold Temperature* from the Grade 2 Alberta Elementary Science Curriculum components and the vision of Alberta's Plan for Parks.

Fish Creek Provincial Park is one of Canada's largest urban provincial parks, stretching from the western edge of the city to the Bow River. The park has a strong vision within its visitor services program plan to support and foster environmental and cultural education.



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Facility & Rules

THE FACILITY

The Fish Creek Environmental Learning Centre (13931 Woodpath Road SW) is located at the west end of the park and offers five indoor classrooms, bathroom facilities, an outdoor picnic area, an accessible trail system and an extensive variety of natural ecosystems: an old growth spruce forest, grasslands, riverine forests, a creek and several wetlands as well as disturbed (urban) areas.

1. Each teacher will be given a classroom to use as a home base for the day's activities.
2. Some equipment for the day's activities will be available at the Park. It is your responsibility to count all equipment and return it at the end of the day. **There is a fee charged for missing or broken equipment.**
3. Washrooms and water fountains are located in the building. There are no vending machines or coffee/tea available.
4. A short orientation (about 15 minutes) will be provided to the entire group upon arrival to welcome and introduce everyone to the park, its rules, the program for the day and what the students may discover outside.
5. A snack break will take place *after* the group orientation. Please ensure that the students are supervised by teachers during this time.
6. Volunteers will have a separate orientation (~10 minutes) on the day of the field trip during student snack break. This will introduce them to the equipment provided, to a map of the activity area (maps provided), to the general flow of the day and answer any questions that they may have.
7. **There are NO indoor activities available. Please bring your own activities and/or DVDs when planning for inclement weather.**



LUNCH BREAK PROCEDURES

Please challenge your class to bring a litter-less lunch to the park for their program.

INSIDE THE BUILDING

Your class may eat inside the facility, within their assigned room.

- Students must be supervised by an adult at all times while they are in the building (including classrooms, washrooms and hallways).
- Classes from other schools and parks staff may be in the facility at the same time as your class(es). Please respect them and keep noise to a minimum, especially in the washrooms and common areas.
- Help us keep the Learning Centre clean. There are garbage and recycling containers in the brown built-in cabinets in each room.
- Leftover fruit and vegetable materials, such as banana peels and apple cores, are collected in a white compost bucket in each room.

OUTDOOR FACILITIES

There are several picnic tables and a fire pit behind the Fish Creek Environmental Learning Centre. This area is available on a first-come, first-served basis. Plenty of additional picnic tables are available just north of the Learning Centre building about a 2 minute walk up the trail.

- Students must be supervised by an adult at all times.
- Fish Creek Provincial Park is a public park and the facilities in and around the Learning Centre are for everyone to use. Please respect other park users.
- All garbage, recycling and compost must be put in appropriate bins (outside or in the building)
- **DO NOT FEED OR DISTURB WILDLIFE.**
- If you choose to use the fire pit you must bring your own firewood. **Do not use branches or deadfall from the park.** Have a bucket of water nearby and check that the fire is out before leaving the fire pit area.

Before the Visit

PREPARATION

The following steps and materials will assist you in preparing for your field trip to Fish Creek Provincial Park. Please take the time to review the following pages carefully.

1 Site Visit Teacher Orientation

Attending a teacher orientation prior to your class visit is mandatory and essential for familiarizing yourself with the facilities and the surrounding trails. Returning teachers are not obligated to attend but are welcome. Dates for the teacher orientations will be sent to you via email so you can register for an orientation on a date of your choice.

2 Preparation Checklist

A full, detailed teacher checklist for your field trip preparation is available on the next page.

3 Program Start and End

Program start and end times are flexible to accommodate bus availability and travel distance to the park. In general, programs start between 9:30 - 10:00 A.M. and finish between 1:45 - 2:00 P.M.

4 Field Trip at a Glance

Group Orientation (15 minutes)	Overview of park rules, safety and behaviour expectations for the day.
Student Snack Break Parent Volunteer Orientation (10-15 minutes)	Overview of program activities for adult volunteers.
Educational Activities	Students explore along park pathways participating in curriculum connected activities in small volunteer-led groups.
LUNCH BREAK	
Educational Activities	Students explore along park pathways participating in curriculum connected activities in small volunteer-led groups.
Groups return to the Learning Centre for Program Wrap-up	Return equipment, final washroom break, head count, and gather personal belongings.

Program Wrap-up should take place at least 15-20 minutes prior to the scheduled bus departure.

TEACHER CHECKLIST: Preparing for Your Day at the Park

Prepare yourself

- Read the teacher package thoroughly: phone 403-297-7926 or email FishcreekEducation@gov.ab.ca if you have any questions.
- Register for and attend a Teacher Orientation date on site before your field trip.
- Book your bus(es).
- Give every driver - including the bus driver - a copy of the route map (found in the Appendix). Make sure all drivers know you are coming to the west end of the park, near Woodbine!
- Check student health forms, looking for allergies in particular to bee/wasp stings
- Bring a first aid kit and a few band aids with each adult.

Prepare the students

- Discuss how Fish Creek Provincial Park is a wild environment.
 - Do not feed or disturb wildlife: Quietly observe all wildlife from a comfortable distance.
 - Leave only footprints: Share discoveries, but leave everything as they found it.
 - Pitch in: Litter should be placed in the garbage or in a pocket.
- Discuss behavioural expectations. Explain that the field study will be another school day, just at a different place. All the school rules apply.
- Discuss the purpose of provincial parks and protected areas. Have the class make a list of ways they can show respect for living things during their visit to the park. *Possibilities include:*
 - Stay well back from the banks of Fish Creek
 - Leave ant hills, nests and rotting logs alone and intact. They are animal homes.
 - Walk with care and mindfulness to minimize your impact.
- Discuss outdoor safety. Students need to:
 - Stay with an adult all times.
 - Walk, do not run.
 - Keep feet on the ground: no climbing.
 - Leave dead branches on the ground:
- Discuss what to wear on the field trip
 - Hats, sunscreen, insect repellent.
 - Runners, comfortable boots (no sandals/high heels). Dress in layers and bring extras.
- Complete some preparatory activities, either the ones in the next section of this package or your own.

Prepare the adults

Please follow the recommended adult to student ratios as outlined in your school board regulations.

- Provide the following to adult volunteers and review with them: Key Messages, Chaperone Letter, access map,
- Emphasize the following: there is nowhere to buy anything here, including coffee.
- Ensure adult volunteers are aware that their role is to lead a small group of students for part of the day and supervise students during lunch period.

FISH CREEK PROVINCIAL PARK: Key Messages

Please review and be sure everyone understands the following information before your visit the park.

- Our vision: Alberta's parks inspire people to discover, value, protect, and enjoy the natural world and the benefits it provides for current and future generations.
- Alberta Parks acknowledges that Fish Creek Provincial Park is part of the traditional territory of Treaty 7 region in Southern Alberta, which includes the Blackfoot Confederacy (comprising Siksika, Piikani and Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda First Nation. The City of Calgary is also home to Metis Nation of Alberta, Region III.
- Alberta's parks and protected areas belong to all Albertans and contain many different natural landscapes that are home to numerous plant and animal species as well as significant cultural and historic resources. The province's network of parks and protected areas helps to ensure that Alberta's natural and cultural heritage is preserved for future generations.
- There are a wide variety of visitors and users of our parks. Everyone must respect and share the park and its facilities and resources.
- Stay on designated trails while moving through the park and participating in group activities. Staying on designated trails reduces impact to the natural habitats of the park. Please share the trail with other users.
- Feeding wildlife is prohibited. The park's ecosystems provide all the food and habitat wildlife require for their basic needs. Feeding wildlife can cause wildlife to associate humans with food. Quietly observe wildlife from a safe and comfortable distance so as not to disturb them or put them or you at risk.
- Everything in the park – living and non-living is protected. Students are welcome to share their discoveries, but must remember to leave everything as they found it. Do not remove anything natural from the park.
- Litter must be placed in garbage cans or packed out.
- Use only designated fire pits. The collecting and burning of park vegetation is not permitted. You must ensure fires are fully extinguished before leaving them.



PRE-FIELD TRIP ACTIVITIES

Preparatory activities will enhance your students experience and learning at the park.

Vocabulary

RESOURCE: Appendix p.A1

Review science vocabulary with the class. This could be done in any number of ways:

- Have students create a rap or new lyrics for a popular song using vocabulary
- Play Vocabulary Bingo. You call out the definitions and students have the words on their Bingo sheets.

Owls and Crows

This game offers a good organizational format that can be used repeatedly with a wide variety of topics.

Divide the group into two equal teams, the Owls and the Crows. Have the teams line up along a line facing each other. About 3 metres behind each team designate a “home base” area for that team.

Make a vocabulary related statement out loud. If the statement is true the Owls chase the Crows trying to catch them before they can reach their home base. If the statement is false Crows chase the Owls. Anyone that is caught before reaching their home base must join the other team.

Dress for Success

RESOURCE: Appendix p.A2

The focus of this exercise is to discuss how humans prepare for winter by changing the clothing we wear.

Using the worksheet, instruct your students to colour the clothing and change the student in the picture to reflect what they look like. Direct students to cut out the articles of clothing and glue them to the student. This activity can be used as an opportunity to think about the differences in seasonal clothing and to discuss what students should wear when they visit the park for their field trip.

If the students are not sure of the answer Owls and Crows may run towards each other. Remain silent and neutral and reveal the answer once the students settle.

Warmer than..., Cooler Than...

RESOURCE: Appendix p.A3

Students have to guess what is “Warmer Than ...” or “Cooler Than ...” items listed. A good activity to help prepare for being outdoors on the field trip.

Your Day At the Park

FIELD TRIP ACTIVITY SUMMARY

The following outdoor field trip activities are curriculum-connected and focus learning to the natural environment. A student journal is available in the Appendix (p.A4) to photocopy for each student to record their findings.

1

Taking Temperature

Students will observe and record temperatures both indoors and out. Students will record the time, location and make other temperature observations as indicated in their student journals.

2

Hide The Hare

To explore the adaptation of camouflage students will take turns hiding and searching for silhouettes of snowshoe hares.

3

How Deep Is It?

Students will measure the depth of snow and guess its insulation value.

4

Snoopin' Snow

Students will examine snow crystals and attempt to classify them.

5

Wildlife in Winter

Students will search for evidence of how animals and plants survive winter.

6

Mousicles

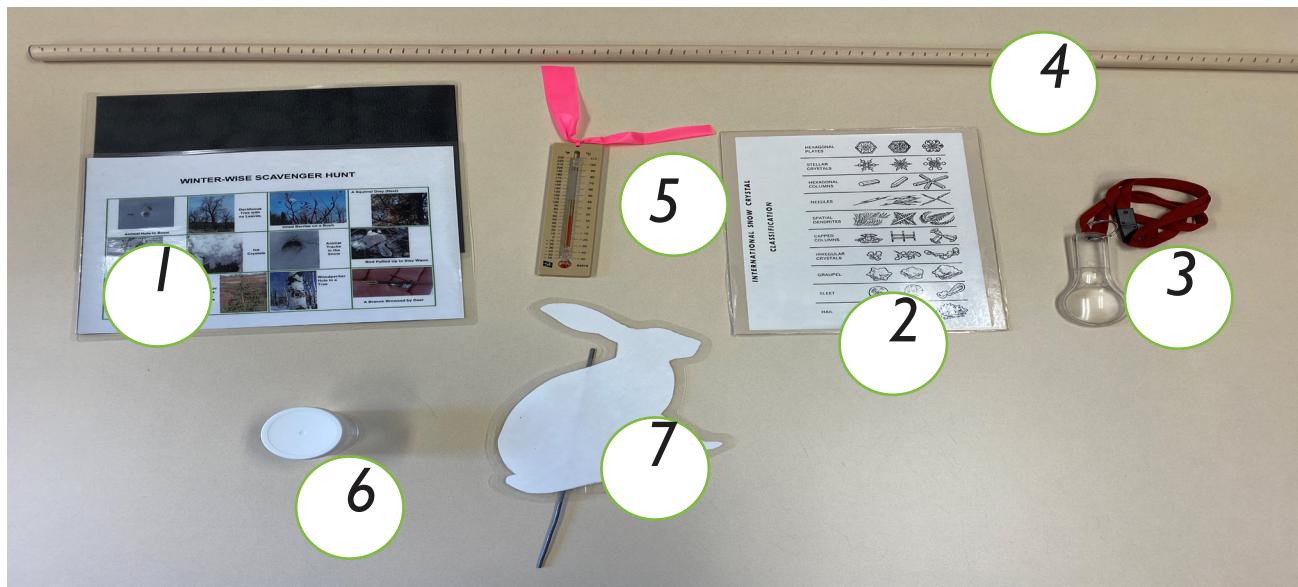
Students will stash two water containers to see how they change over the course of the day due to temperature, sunlight exposure and insulation.

7

Winter Scavenger Hunt

Students will search for signs and evidence of plants and animals in winter.

Be sure to divide each class into smaller groups and assign an adult volunteer to each group.



PROGRAM EQUIPMENT

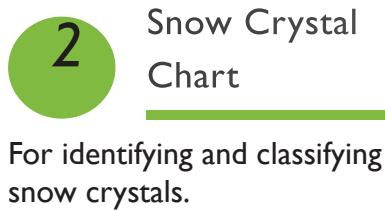
The Learning Centre will provide your students with the following equipment and resources to utilize during the field study..



On a dark backing to be used for "Snoopin' Snow".



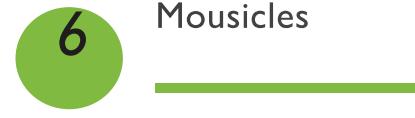
For measuring the depth of snow.



For identifying and classifying snow crystals.



All equipment must be returned prior to departure.
PLEASE NOTE: There is an additional fee for broken or missing equipment.



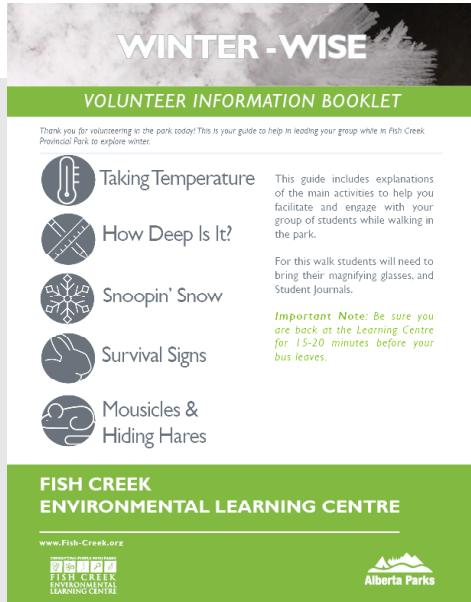
Containers for students to add water to and hide.



Cut-outs of snowshoe hares for students to hide and find.

INFORMATION BOOKLETS

The Learning Centre will provide your adult volunteers with an information booklet to help guide them on the outdoor exploratory activities which they will lead their smaller group of students on.



These booklets have descriptions of activities and tips for leading student groups. They also have pictures and information that will support and enhance your students' learning.

Important Notes:

- By providing laminated copies, we hope to reduce the amount of wasted paper.
- We greatly appreciate all feedback to strengthen our resources; please let us know if you have any recommended changes.

After Your Field Study

POST TRIP ACTIVITIES

In addition to a class discussion about trip highlights and favourite activities, students may need class time to complete journal pages or to share information about their discoveries.

Winter-Wise Creatures

Discuss with students winter issues that animals must adapt to (cold, snow, lack of food, etc.). Ask students to draw or describe a “Winter-wise creature” that has adaptations to allow it to survive.

Some examples they might include:

- Thick fur
- Fluffy feathers
- Strong wings to migrate
- A warm den to hibernate

Display the drawings/descriptions and ask students to share their ideas.

Snow

Review the various observations students made in their journals regarding snow.

- Snow depth measurements
- Snow crystals
- Evidence of wildlife

Review ideas of snow as a blanket, animals living under the snow and the uniqueness of snowflakes and crystals.

Warmer Than..., Cooler Than...

Review the temperature readings students took while on the field trip and discuss their findings.

- Where were temperatures the warmest and coolest?
- Why were temperatures as observed?

Sun

Shade

Near the building

Also discuss the changes observed in their “Mousicles”.

- Did they freeze?
- Which Mousicle was better insulated?
- What would be the best spot for a mouse to stay warm in winter?

Appendix

PROGRAM VOCABULARY

Adaptation: A physical characteristic or behaviour that helps a plant or animal survive.

Habitat: The place(s) where a plant or animal finds all of its basic needs (food, water, shelter and space).

Hibernate: To spend the winter in close quarters in a dormant condition. Characterized by inactivity and slower metabolic processes (lower body temperature and slowed breathing).

Insulation: A covering to stop heat, sound or electricity from escaping or entering.

Migrate: To go from one region or place to another, usually according to seasonal or temperature changes.

Season: A division of the year marked by changes in weather, ecology, and the amount of daylight.

Shelter: A place where living things find protection from the elements (sun, wind, water, cold).

Subnivean Zone: The area between the surface of the ground and the bottom of the snow pack.

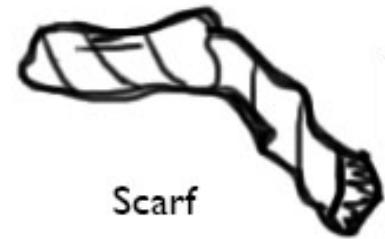
Temperature: The degree or level of how hot or cold something is, measured on a defined scale (Celsius).

Torpor: A state of lowered metabolic rate and body temperature often in response to adverse environmental conditions such as extreme cold or heat.

Weather: The state of the atmosphere with respect to heat or cold, wetness or dryness, calm or storm, clearness or cloudiness.

Winter: The coldest season of the year, with the shortest day (least amount of sunlight).

DRESS FOR SUCCESS



Scarf



Long Pants



Warm Socks



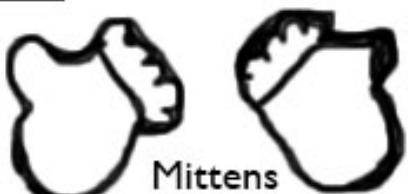
Thick, warm
Jacket or Parka



Sweatshirt or
Sweaters



Snow Pants



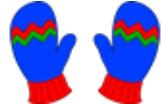
Mittens



Winter Boots

WARMER THAN ... , COOLER THAN...

What is warmer than or cooler than in each of the following?



1) Mittens are warmer than _____.



Toque



2) Boots are warmer than _____.



Shorts



3) Earmuffs are cooler than _____.



Shoes



4) Sweaters are cooler than _____.



Gloves



5) Snow pants are warmer than _____.



Parka

WINTER-WISE

A Field Study for Grade 2 Students



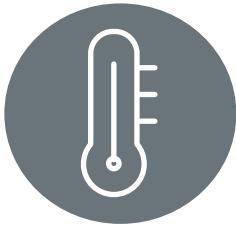
STUDENT JOURNAL

www.Fish-Creek.org



Name:

Date:



Taking Temperature

Using the thermometer provided take the temperature in the same spot, both inside and outside, at 3 different times during the day. Also, find what you think is the coldest and warmest spot outside and record the temperatures and describe the spot.

Inside	Outside
TIME: _____	
Morning	

Inside	Outside
TIME: _____	
Midday	

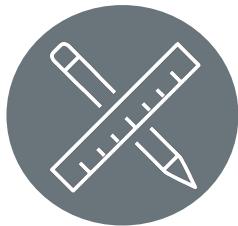
Inside	Outside
TIME: _____	
Afternoon	

OUTSIDE COLD SPOT

Temperature: _____ Description: _____

OUTSIDE WARM SPOT

Temperature: _____ Description: _____



How Deep Is It?

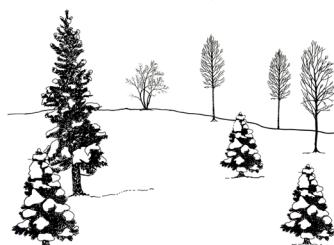
Measure the depth of snow in a variety of places throughout the day.

Use the probe provided and push it straight into the snow until it hits the ground. Measure the depth of the snow on the probe.

Depth of snow in a shady forest spot?



Depth of snow off the trail?



Depth of snow in an open area (behind the Learning Centre or in the picnic area)?

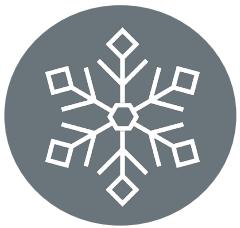


Depth of snow under a big evergreen tree?



Depth of snow under a bush or shrub?

What areas do you think would be the best insulated for animals or plants to hide out over the winter?



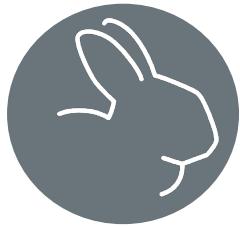
Snoopin' Snow

Spread some snow onto the laminated black cards. Make sure the cards are cold so the snow does not melt.

Examine the snow crystals by viewing them with the magnifying glasses.

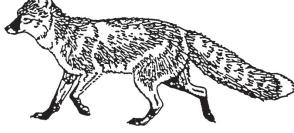
Compare the crystals you see to the snow crystal classification chart.

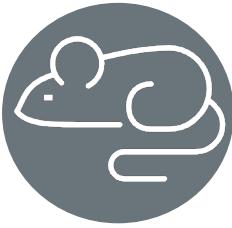
In the boxes draw/sketch and name the snow crystals you identified.



Survival Signs!

Animals, insects and plants have many ways to survive the cold of winter. In the spaces below sketch or describe signs that you found of how things survive the cold. The examples given are to get you started.

 <p>Evergreen trees have waxy, needle-like leaves to keep from drying out.</p>	<p>Many birds migrate to warmer places where they can find food.</p> 	<p>Some animals hibernate and sleep through winter.</p> 	 <p>Some animals grow thick fur coats to insulate against the cold.</p>



Mousicles & Hiding Hares

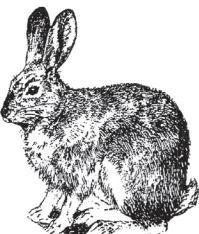


This is a “Mousicle”. It is a container to mimic a mouse in winter. Your group will have two “Mousicles” to take outside and hide, hide from the cold. You have to remember where you hid them so you can check on them at lunchtime and to bring them back at the end of your trip.

Fill each Mousicle 1/2 full with water. Screw the cap on firmly so they do not leak. While you are outside in the morning hide each of the Mousicles in a different spot. One spot should be in the open, the other should be under the snow.

At lunch and at the end of the day check each one to see if anything has happened to the water. Describe what you discover:

Your group will be given a few snowshoe hare pictures to take along while you explore outside. Hares turn white in the winter to camouflage in a snowy landscape. Group members will take turns hiding the pictures along the trail. See how long it takes to find them.



What was the best hiding spot?

Is it helpful for the Hares to change colour?

What might the Hares be hiding from?

Dear Adult Volunteer,

Thank you for volunteering for a field trip to Fish Creek Provincial Park! This excursion allows students to explore, discover and learn in one of the largest urban parks in North America.

Here are a few tips that may help you enjoy your visit:

- Pack a hearty and healthy lunch (snacks and water too!). There are no vending machines or stores onsite to purchase food
- Please dress appropriately for the weather. We will run our programs rain, snow or sun-shine
- Ensure that you are aware of what part of Fish Creek the program is taking place. We host educational programs at the WEST end (near Woodbine) and the EAST end (near Deer Run)

Our staff will be available throughout the day to ensure that you and your group have a safe and educational experience in the park.

You are not expected to be a naturalist or history expert, but a positive attitude goes a long way!

Thank you again, we are very excited to see you in the park soon.

Warmest regards,

Environmental Education Team

CONNECTING PEOPLE WITH PARKS



FISH CREEK
ENVIRONMENTAL



Access Map - Fish Creek Environmental Learning Centre

13931 Woodpath Road SW, Calgary, Alberta



DIRECTIONS

From Anderson Rd SW heading west:

- Follow signs to Tsuut'ina Trail and follow exit onto Buffalo Run Blvd

From south of 130 Ave SW on northbound Tsuut'ina Trail:

- Take the 130 Ave SW exit and keep right at toe of ramp onto eastbound 130 Ave SW

