

ANIMALS IN WINTER

A Teacher Conducted Field Study for Grade 1 Students



FISH CREEK
ENVIRONMENTAL LEARNING CENTRE

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CONNECTING PEOPLE WITH PARKS

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Alberta Parks



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 B: Seasonal Changes* and *Topic D: Needs of Plants and Animals* from the Grade 1, 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.

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.



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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. See the the Pre-Field Trip Activities section of this manual for more information and how this relates to the field trip topics of study.

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 an around the Learning Centre are for everyone to use. Please respect other park users.
- Leave no trace: 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 am and finish between 1:45- 2:00 pm.

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 the park doing curriculum connected activities in small, volunteer-led groups.
LUNCH BREAK	
Educational Activities	Students continue to complete curriculum connected activities with volunteer leaders.
Groups return to the Learning Centre for Program Wrap-up	Final washroom break, head count, equipment return 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 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 rubbish bins provided 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 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, information booklets will be provided to volunteers on the day of the trip to assist them in leading groups.
- Emphasize the following: there is nowhere to buy anything in the park, 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 the 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.
- The terms can be introduced through games such as Owls and Crows.
- Play Vocabulary Bingo. You call out the definitions and students have the words on their Bingo sheets.

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.

Pre and Post Test

RESOURCE: Appendix p. A4

This preparatory and post test is designed to evaluate learning associated with this field study experience, not the entire science unit.

For maximum benefit, students should do this activity first and again after the field trip. By comparing the changes in their scores, it's possible to gain insight to the impact of the field excursion on learning.

Animal Senses

RESOURCE: Appendix p. A3

Discuss the senses with your students and have them attach each sense arrow to the deer pointing at the corresponding sense organ.

Smell: *very important for safety, feeding, raising young. Deer have 297 million olfactory receptors, humans have only five million! Their nose is 60X better than ours!*

Hearing: *Mule deer have large ears which they can move in many directions this allows deer to detect danger and communicate with one another.*

Sight: *Deer have eyes on the side of their head which helps them see almost 360 degrees, this helps them detect predators. Deer also have eyes that allow them to see better in low light.*

Taste: *Deer eat 1-3 kg of food a day. That's about 3% of their body weight. Deer love the taste of leaves and buds of woody shrubs, grasses and other plants.*

Once you have done the deer, challenge the students to find out about the senses of an animal of their choice.

Owls and Crows

This game offers a good organisational 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.

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.

Your Day At the Park

FIELD TRIP ACTIVITY SUMMARY

The following outdoor field trip activities are curriculum-connected and focus learning, in an experiential way, on the natural environment. A student journal is available in the Appendix (p.A6) to photocopy for each student to record their findings.

1 I Spy

Students will observe the natural world through magnifying glasses. They can then draw and record their favourite things that they saw.

2 I Hear

Students will listen for different sounds, noting the direction and the proximity of the sound. They can draw and record the sounds that they heard.

3 I Touch

Students will search for items in nature that feel similar to the objects they pull out of the Touch Bag

4 Scratch 'N Sniff

Students will explore the natural area using their sense of smell. They can then draw pictures of the objects that had smells and compare the strengths of different odours.

5 Winter Colours

Students will search for colours in nature using the Colour Palette provided. They can then draw the objects that they found.

6 Insects

Students will look for insect galls and discuss why and how insects survive in the winter.

7 Animal Signs

Students will search for the signs and evidence of animals eating, their movements and their shelter.

8 Birds

Students will search for birds and discuss how birds survive the winter. Students will draw a picture of the birds they observed and identify the foods they eat.

9 Snow Is

Students will take a closer look at the snow through their magnifying glasses and record their findings.

10 We Discovered

Students will reflect upon the day in the field. Group leaders can review key concepts and vocabulary with the students and groups can develop questions.



PROGRAM EQUIPMENT

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

1 Scavenger Hunt

Students will seek signs of the season with kinesthetic, auditory and visual objectives. This is not meant to be a competition, rather it is a fun way for students to hone their observation skills.

2 Colour Palette

Students will work in pairs to match the colours on the palette to the shades in nature.

3 Magnifying Glass

Students will use the magnifying glasses to examine signs of animals, such as tracks, scat and food sources. The magnifying glasses will also be used to examine snow.

4 Touch Bag

Students will feel different items from the bag that are rough, prickly, smooth, spongy, sticky and soft. They will then find as many of each of the different textures in nature on their exploratory walks.

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

INFORMATION BOOKLETS

The Learning Centre will provide your adult volunteers with an information booklet that contains an outline and detailed explanation of the Land Study, which they will lead their smaller group of students on.

ANIMALS & WINTER

Information Book about Seasonal Changes, the Senses and the Needs of Plants and Animals

Leader Information & Instructions

Thank you for volunteering in the park today. This fieldtrip is an opportunity for students to use sensory exploration to discover the changing seasons.

This resource will assist you in guiding your group of students on a walk to learn and discuss the signs of winter and how animals adapt and meet their needs in the park.

Key Words:

adaptation - physical characteristic or behaviour that helps a plant or animal survive

habitat - place where a plant or animal finds all of its basic needs (food, water, shelter and space)

living - something that uses energy, breathes, grows and reproduces

need - what a living thing requires to survive; water, food, space and shelter

non-living - something that was never alive (rocks, air, water, sun etc.)

shelter: Something all living things need to some degree. It protects living things from the elements (sun, wind, water, cold).

Important Note: Be sure you are back at the Learning Centre for lunch and 15 minutes before your bus leaves.

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These booklets will have pictures and information that will support and enhance your students' learning.

Each page of the information booklet will have guiding questions to help facilitate curriculum-connected discussions and inquiry.

Important Notes:

- 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 data sheets or to share information about their discoveries.

Pre and Post Test

RESOURCE: Appendix p.A4

This preparatory and post test is designed to evaluate learning associated with this field study experience, not the entire science unit.

For maximum benefit, students should do this activity first and again after the field trip. By comparing the changes in their scores, it's possible to gain insight to the impact of the field excursion on learning.

Subnivean Maze

RESOURCE: Appendix p.A5

This is a fun activity where students complete the maze to get the mouse from the surface of the snow, through the tunnels in the snow and down to the safety and warmth of the subnivean zone.

Create a Creature

Review the five senses and what these senses look like in different animals. Ask the class to draw an animal that had certain senses that you specify.

For example:

- excellent hearing (large ears)
- poor eyesight (small eyes)
- good sense of taste (long tongue)
- whiskers for touching (lots of bristles)
- excellent sense of smell (large snout)

Display the finished products around the classroom and encourage students to share their ideas.

What's That Sound?



Coyotes have an excellent sense of hearing. They listen for movement underneath the snow and will pounce on the mice and voles hiding below. This game hones the hearing of the students.

Direct students to sit in a circle and close their eyes. Select one or two students to hide in the classroom and make squeaking mouse sounds with their hand over their mouth (to muffle the sound similar to the snow). Playing music or talking to the coyotes that sit in the circle while the mice hide will help keep their hiding spot mysterious to the coyotes until the mice squeak.

The students in the circle that can detect and point to where the "mice" are hiding the fastest are successful coyotes. They are the next to be mice and hide.

Appendix

ANIMALS IN WINTER VOCABULARY

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

Autumn (Fall): Time of year when days begin to shorten, temperatures begin to drop and trees' leaves will change colour and fall off. This is the transition season between summer and winter.

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).

Need: What a living thing requires to survive such as water, food, space and shelter.

Non-living: Something that was never alive (rocks, air, water, sun etc.)

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 snowpack.

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

Wild: Undomesticated or a living thing that finds its own food, shelter, water and all its other needs in a natural habitat.

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

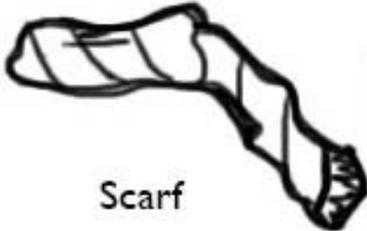
DRESS FOR SUCCESS



Warm Socks



Toque or warm hat



Scarf



Long Pants

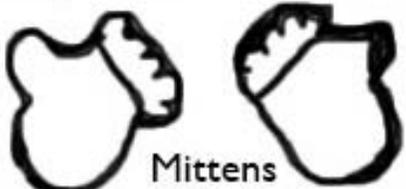


Snow Pants



Thick, warm Jacket or Parka

Sweatshirt or Sweaters



Mittens



Winter Boots

ANIMAL SENSES



Smell →

Hear →

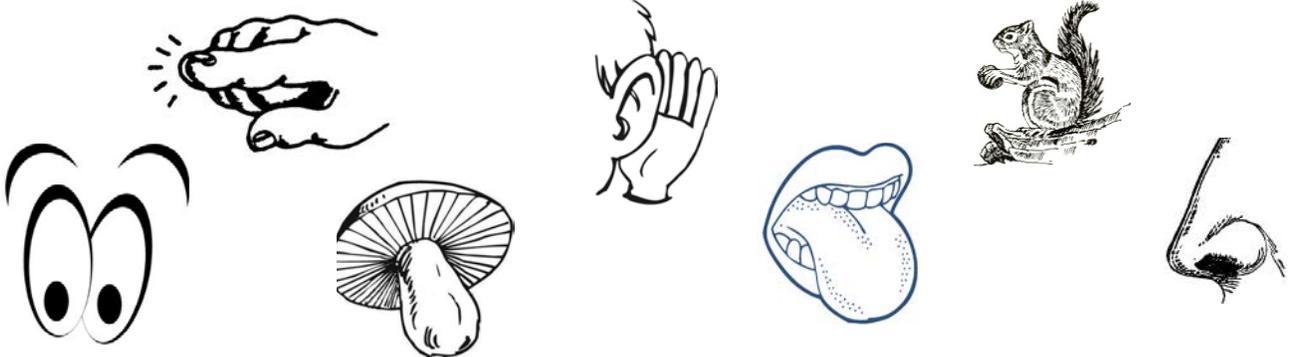
Taste →

See →

ANIMALS IN WINTER QUIZ

Name: _____ Date: _____

1. **Circle** the pictures of your five senses:



2. **Colour** the animals that stay and adapt to survive the winter.

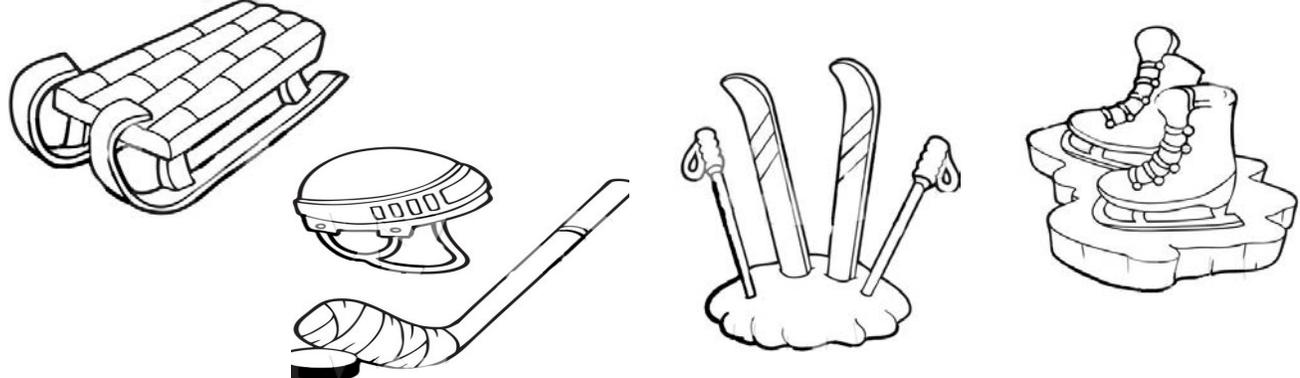


Deer Chickadee Ladybug Frog Porcupine

3. **Write** about how each of the words below changes in winter:

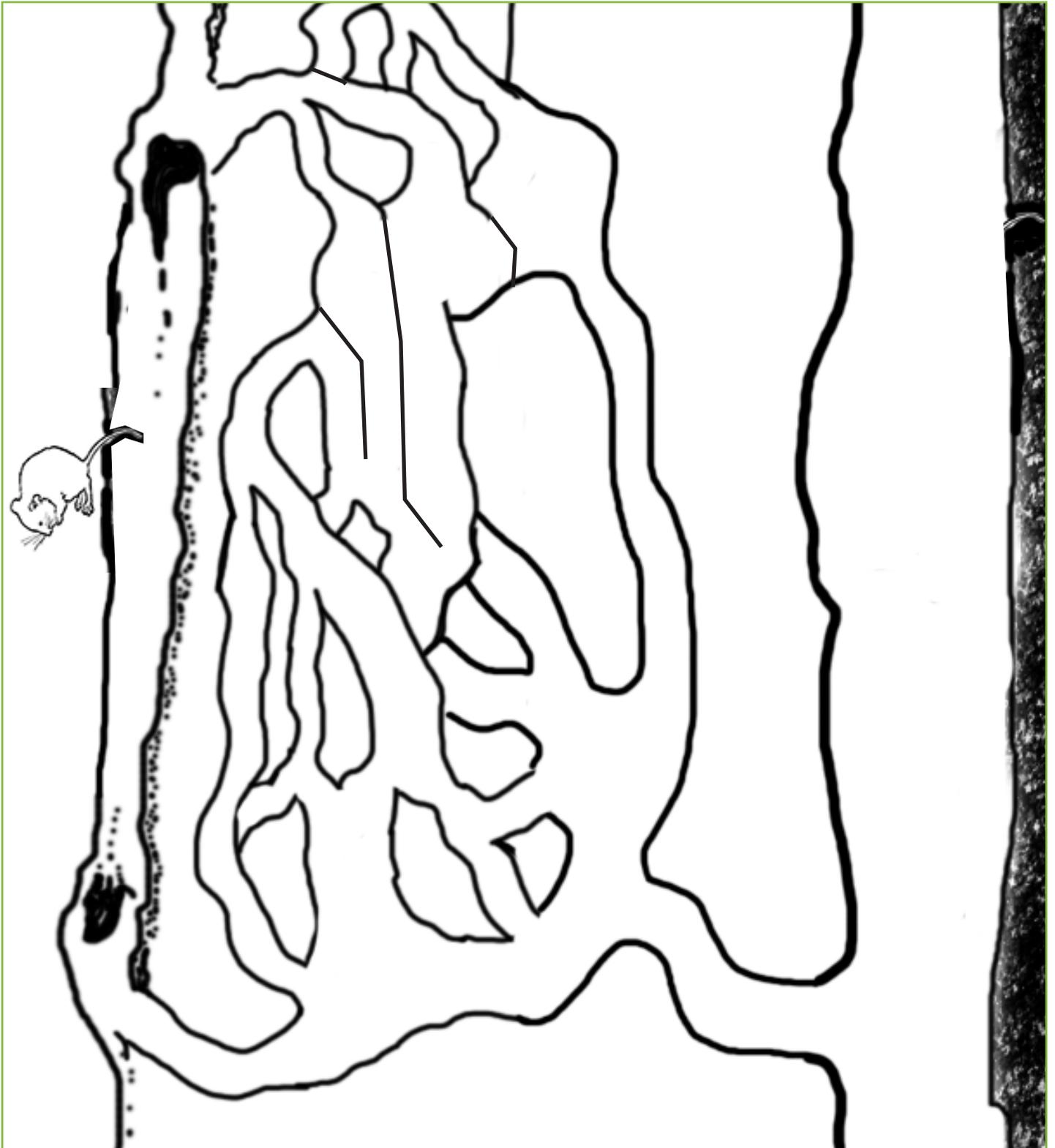
- a. temperature: _____
- b. weather: _____
- c. sunlight: _____

4. **Circle** the activities that YOU enjoy doing in the winter. Winter is fun!



SUBNIVEAN MAZE

Help the mouse get from the surface of the snow, through the tunnels under snow to safety of the subnivean zone under the snow.



We Discovered

Record some of your favourite discoveries.



ANIMALS IN WINTER

A Field Study for Grade 1 Students

STUDENT JOURNAL
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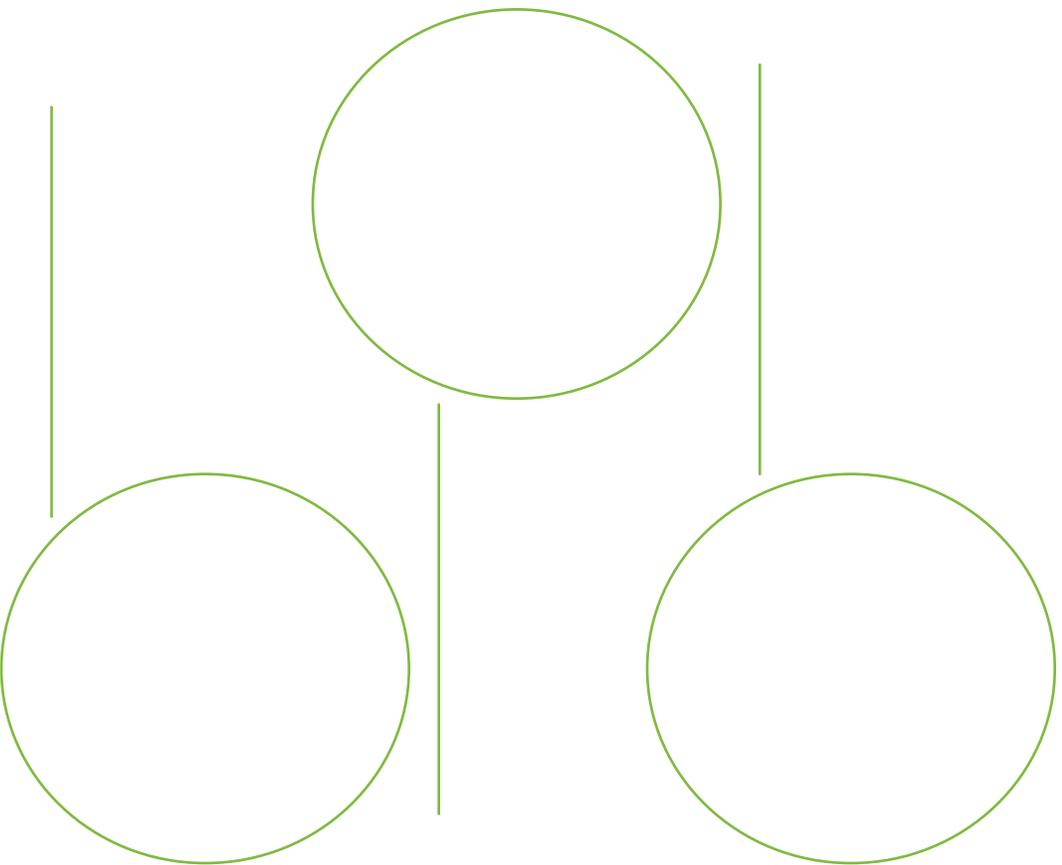


Name: _____

Date: _____

My Favourite “I Spy” Things

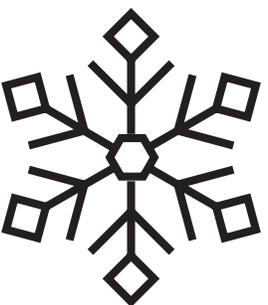
In the circles draw pictures of the things you saw! Practice writing the names of them on the lines.



Four large empty circles are arranged in a 2x2 grid. Each circle is intended for drawing a picture. Below each circle is a horizontal line for writing the name of the object drawn.

Snow Is

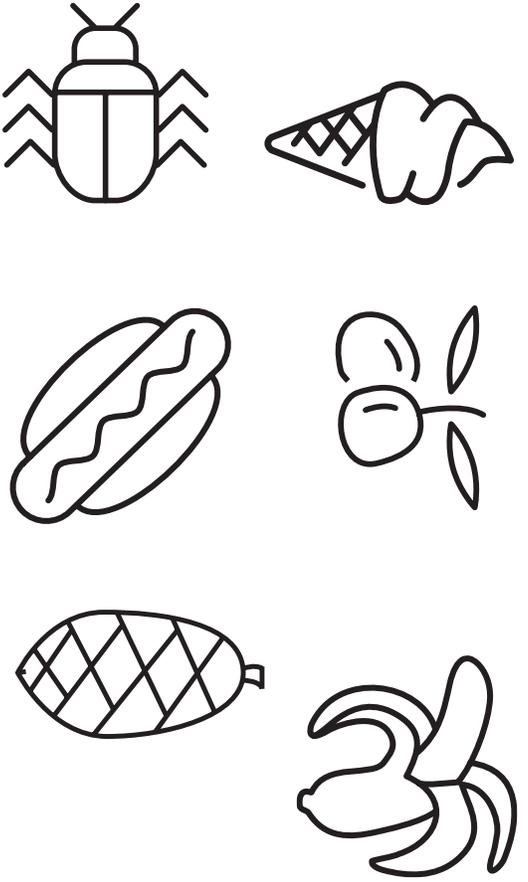
Draw some of the snow crystals (shapes) that you saw with your magnifying glass.



Birds

Draw a chickadee. If you did not see a chickadee, draw a picture of a bird that you did see.

Circle the pictures of foods that birds might eat.



I Heard

Draw pictures, use symbols or write words that describe the sounds you heard.

Favourite Feels

In the chart below draw pictures or write the names of things you found in the park that have that texture.

Rough	Prickly
Smooth	Spongy
Sticky	Soft

More Signs of Animals

Draw pictures of the things you saw that animals in the park **EAT** in the winter.

Draw pictures of the animal **SHELTERS** you saw.

Signs of Animals

Draw some animal tracks that you saw.

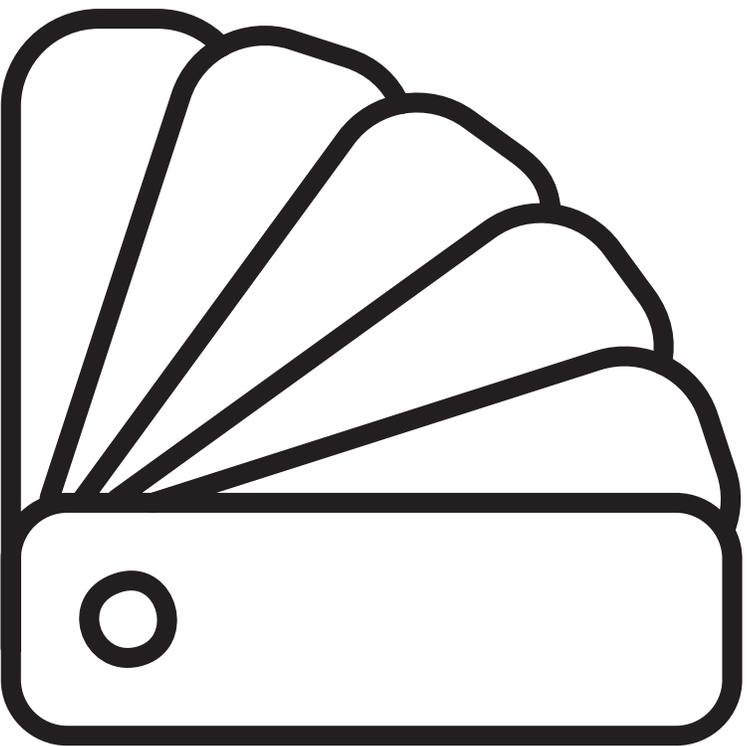


Scratch 'N' Sniff

Draw pictures of things you found in the park that had a smell. Draw a circle around the ones that had a stronger smell after it was scratched.

Winter Colours

Fill in the colour swatch with the different colours you found outside in the park.



Draw or describe your favourite colour and where you found it.

Insects

Draw a goldenrod plant that has a gall on it.

Draw a spruce tree that has a gall on it.

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 sunshine.
- 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



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
- Follow Buffalo Run Blvd past the gas bar and Costco complex to 130 Ave SW
- Heading east through two traffic circles to continue onto 130 Ave SW
- Turn right onto Woodpath Rd SW and follow road straight into the park

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

- Take the 130 Ave SW exit and keep right at top of ramp onto eastbound 130 Ave SW
- Turn right on Woodpath Rd SW and follow road straight into the park

