

STRUCTURED FOR SURVIVAL

A Field Study for Grade 4 Students

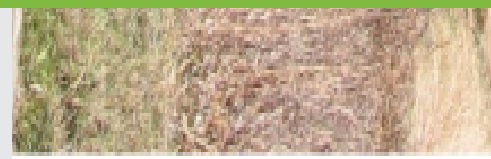
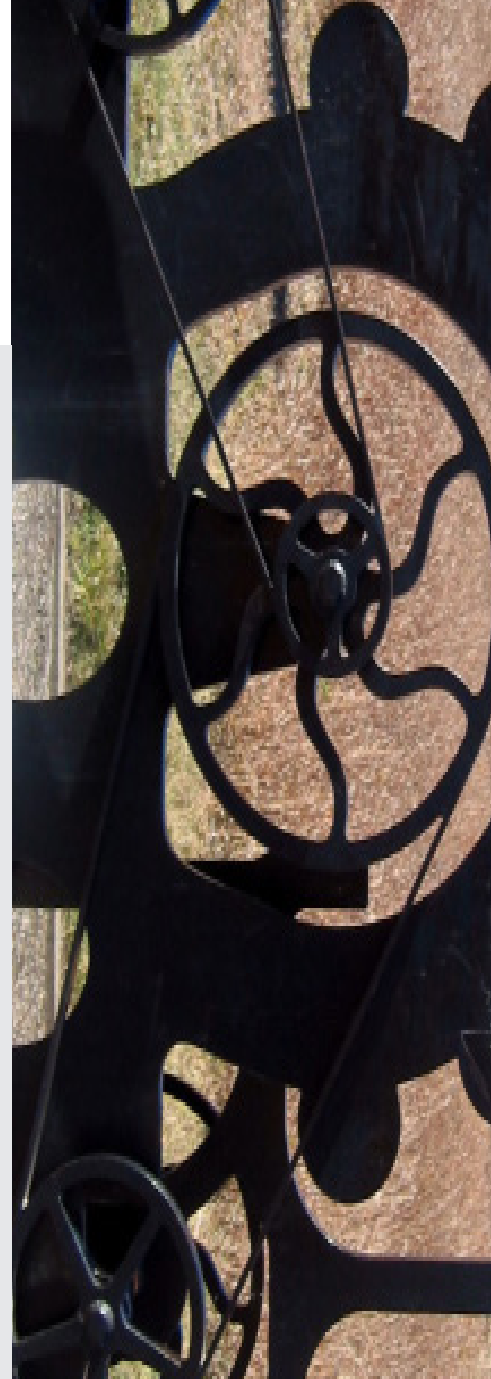
FISH CREEK
ENVIRONMENTAL LEARNING CENTRE

www.Fish-Creek.org

CONNECTING PEOPLE WITH PARKS

FISH CREEK
ENVIRONMENTAL
LEARNING CENTRE


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 a field study related to Grade 4 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.

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.

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.
- 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 Teacher and parent volunteer led on pathways.	Shrubs, Trees, Keys, What Did I See?, activities alternated with Structured for Survival and Skull Scan activities.
LUNCH BREAK	
Educational Activities Teacher and parent volunteer led on pathways.	Shrubs, Trees, Keys, What Did I See?, activities alternated with Structured for Survival and Skull Scan activities.
Groups return to the Learning Centre for Program Wrap-up	Debrief by staff educator. 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: email aep.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 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 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, 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 to 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.

Road Signs

Discuss with students the various road signs they are familiar with. Stop Signs, Yield, Speed Limit, Crosswalk, are examples that most will know and understand. Discuss also the idea of rules or regulations in parks. This can be related to rules that exist at school.

Explain that students are going to create “Road Signs” to represent rules in parks that will help with the ongoing conservation and protection of nature in park spaces. Signs should follow the same conventions as established road signs such as octagon for stop, triangle for yield, red for stop, green for go, yellow for caution. Signs should represent practical things students can do when visiting the park. For example:

- Do not feed wildlife
- Stay on pathways
- Watch wildlife from a safe distance

Visit [Albertaparks.ca](https://www.albertaparks.ca) for information on park regulations. You can also visit - <https://www.alberta.ca/traffic-sign-catalogue> for information on Alberta road signs.

Build an Animal

Divide students into groups of 4 - 5. Ask each group to select an animal, insect or spider common to the area. Students then must as a group imitate their selected animal. They will each mimic a body part or parts and move and act in unison. The rest of the class must try and guess what animal the group is acting out.

Discuss what each student represented as far as body parts and functions imitated. You can also discuss characters of the animal that are not possible for students to imitate such as being warm blooded or laying eggs.

Key the Class

A dichotomous key is a tool biologists use to identify organisms. It is based on observing physical characteristics and following a simple process of elimination. A fun and easy way to demonstrate how they work is to have students create a key to identify a classmate.

Ask students to secretly pick an individual in the class. They will create a series of statements to describe observable, physical characteristics that will see the individual they selected put into smaller and smaller subsets of the entire class until the individual is the sole member of a final subset.

It is important that students understand characteristics must be easily observed, well defined and ones that are relatively permanent. Examples are gender, eye colour, hair colour, height. Ethnicity can be used, but caution must be exercised in instructing to ensure nothing can be viewed as offensive or demeaning.

Characteristics that cannot be easily observed or defined should be avoided particularly if they may be defined differently by different observers.

Students should be challenged to create a description utilizing the fewest number of defining characteristics as possible.

An example:

Group - your class of 30 students.

The individual is “Gerald” a male who is tall with blue eyes.

Subset 1: the student is -

A) Male

B) Female

Subset 2: The student is -

A) Taller than me -

B) Shorter than me

Subset 3: The student has -

A) Blue Eyes

B) Eyes that are not blue

The student has Blue eyes

The student is the only MALE – TALLER THAN ME – WITH BLUE EYES, so the student is – “Gerald”.

Your Day At the Park

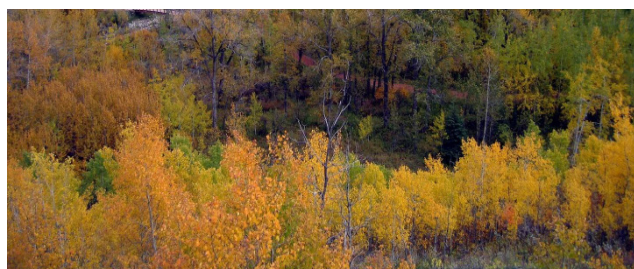
FIELD TRIP ACTIVITY SUMMARY

The following outdoor field trip activities are curriculum-connected and intended to connect learning in an experiential way to the natural world.



Shrubs, Trees, Keys

Completed in small, adult volunteer led groups.



Activity Summary: Students will identify common trees and shrubs based on their observation of physical characteristics using a supplied plant key.



Structured for Survival

Completed in small, adult volunteer led groups.

Activity Summary: Students will compare the various body parts or physical features of the animals and insects observed and recorded in the “What did I see?” activity.

- They will describe specific features and functions of different animals and insects observed.
- They will compare features and functions of different animals and insects observed.
- They will compare different features and functions observed in animals and insects to humans.



What did I see?

Completed in small, adult volunteer led groups.

Activity Summary: Students will explore and discover wildlife, birds and insects along park pathways.

- They will describe the physical features and characteristics of animals and insects they observe.
- They will describe the habitats animals and insects were observed in.
- They will describe the behaviour of the animals and insects observed.
- They will attempt to identify the animals and insects observed.



Skull Scan

Completed in small, adult volunteer led groups in the Learning Centre.

Activity Summary: Students will examine a variety of animal skulls and skull replicas to discover aspects of the animals life history and behaviour.

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 groups with the following equipment and resources to utilize during your visit.

1 Tree and Shrub Key

A dichotomous key to identify the 15 most common native trees and shrubs in the park. Key includes photos to assist in identification.

2 Park Partner I.D. Guide

A guide complete with photos and descriptions of common flora and fauna of the park to assist in identification.

3 Bug Box

A container to collect and examine insects and spiders.

4 Magnifying Glass

Each student will receive one to use for the day.

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 to help guide them on the outdoor exploratory activities which they will lead their smaller group of students on.



These booklets will 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.
- These resources are specifically developed for use in Fish Creek Provincial Park within Alberta Parks programs.
- 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 student journals or to share information about their discoveries.

Signs of Respect Poster Extension

Students working individually or in small groups develop a poster that represents evidence they found in the Park of visitors showing respect or disrespect for the Park and its plants, animals and other visitors. Posters should represent or explain the benefits or issues with the behaviours being presented.

Refer students back to the “Road Signs” they created in the pre-trip activity and share information from Albertaparks.ca to assist.

Poster can be displayed in the classroom or school hallways.

Plant Parts Purpose

RESOURCE: Appendix p. A 3 & 4
Students will identify different plant parts and describe the function of each.



Form to Function Match-up

RESOURCE: Appendix p. A2 Example Match-up.

Ask students to select an animal they observed while at the Park and research it for interesting or unique features and their corresponding functions.
Challenge students to then create a match-up activity about these interesting features to share with their classmates.

Appendix

PROGRAM VOCABULARY

Amphibian: Cold blooded animals with smooth, slimy skin. Immature phases have gills and develop in the water; adults have lungs and may live on land. These animals can breathe through their skin and must be in moist environments to live.

Bird: Warm blooded animals with feathers and a beak or bill.

Carnivore: A meat eater.

Conservation: The preservation and protection of Earth's systems from pollution, depletion, or extinction.

Exoskeleton: The hard or horny skeleton on the outside of animals that include insects, spiders, and crustaceans.

Function: The purpose of something, what something does.

Herbivore: A plant eater.

Insect: Invertebrate animals with an exoskeleton, 3 body parts, six legs and a pair of antennae.

Invertebrate: Animals that lack a backbone or vertebrae.

Mammal: Warm blooded animals that have hair or fur. Females produce milk to feed their young.

Omnivore: An animal that eats both plants and animals.

Reptile: Cold blooded animals that have dry scales covering their skin.

Spider: Invertebrate animals with an exoskeleton, 2 body parts, eight legs, and spinnerets that produce silk.

FORM TO FUNCTION MATCH-UP

Students recorded a variety of information on wildlife they observed while on their field trip. Ask each student to pick one animal (including insects and spiders) to research regarding features of that animal and the function of those features.

Students will then create a match-up activity related to forms and functions to share with their classmates. You may ask students to utilize drawings, images they find in books or the internet or their own written descriptions. A simple example is included below.

Example Match-up:

Animal: Red Squirrel

Features:

Bushy Tail

Big Eyes

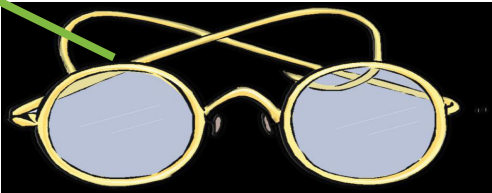
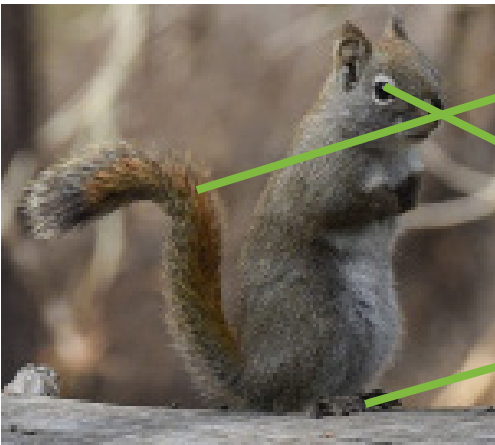
Claws

Functions:

Balance, Warmth

Good Vision, important for moving through the forest

For gripping tree branches, climbing



PLANT PARTS PURPOSE

Students research the basic functions of plant parts to gain an understanding of how plants live and grow.

Utilizing the diagram on the following page or a similar image ask students to identify basic plant structures:

- Roots
- Stem
- Leaf
- Bud
- Flower

You may ask students to answer basic questions about each structure they identify. Some examples are:

What are two functions of roots?

- Absorb water and nutrients.
- Anchor the plant in the soil.

What do the stems do?

- Houses the transport system of the plant (Xylem and Phloem).
- Holds up flowers and shoots.

Why are leaves important?

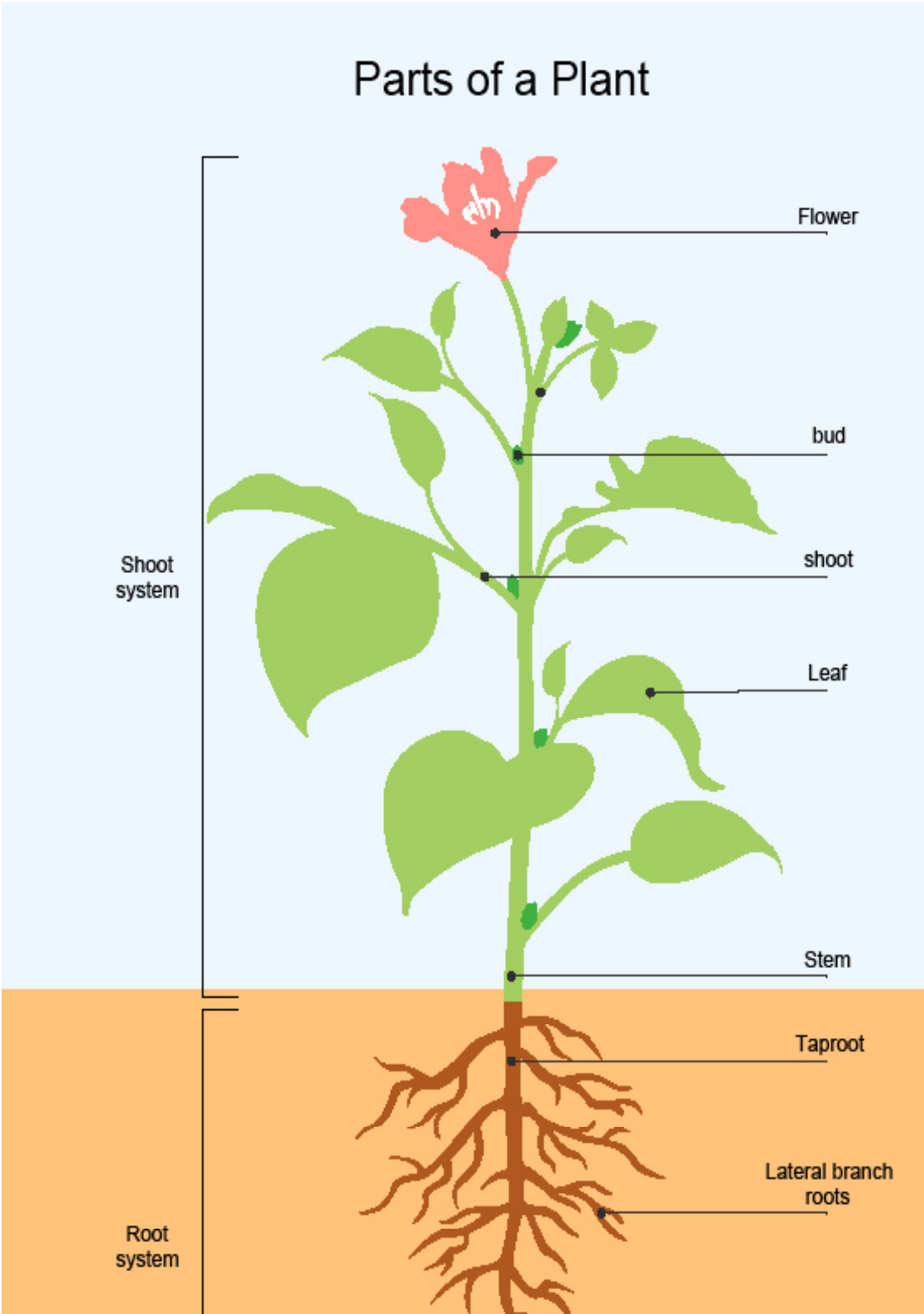
- This is where photosynthesis happens.

What are buds?

- They are the new growth points for leaves, stems or flowers.

What is the function of flowers?

- They are the reproductive parts of plants, producing seeds.



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STUDENT JOURNAL

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Name: _____

Date: _____



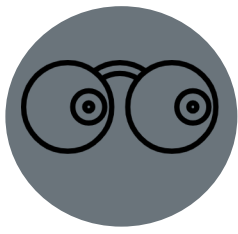
Shrubs, Trees, Keys

What do keys have to do with shrubs and trees? Well, you can use a key to “unlock” the identity of a tree or shrub. The key is a special one called a dichotomous key and it is a tool biologists use to identify things in nature.

You will use a key from the Park to identify trees and shrubs while on the pathways and learn about the structures and characteristics of each one you identify.

Using the supplied key can you identify the trees and shrubs in the chart below? Can you list 1 - 3 features of each?

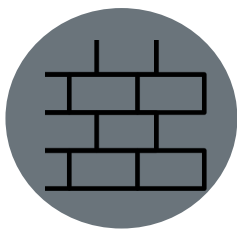
White Spruce			
Trembling Aspen			
Wolf Willow			
Saskatoon			
Wild Rose			
Red-osier Dogwood			



What Did I See?

Watch for and record observations of all the different animals you see while on the pathways. Remember this includes insects and spiders too. Complete as much information for each in the chart below. Remember you can use the “Park Partner” identification guide to help you.

Was it a Mammal, Bird, Reptile, Amphibian, Insect, Spider?	Description - Colours/Patterns, Size	Body Features (Claws, fangs, horns)	Habitat seen in- Grassland, Spruce Forest, Aspen, Creek	What was it doing?	What do you think it was?



Structures for Survival

From the animals you saw and recorded in “What Did I See?” list each in the chart below. Complete the information asked for regarding their structures and functions.

Animal Observed	Observed Body Part or Structure	Possible Function of Body Part or Structure	Compared to You



Skull Scan

Skulls can tell us a lot about an animal and how it lives. Skulls show us a lot about an animal's senses, what and how it eats, how it might hunt or protect itself. Examine the skulls set up in the classroom and try to answer the following questions about each?

What does it eat (herbivore, carnivore, omnivore)?

What are its most acute or best senses (sight, hearing, taste, smell, touch)?

Deer	Coyote
Beaver	Bobcat

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 on-site 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).

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 top of ramp onto eastbound 130 Ave SW

