

TREE TALES

A teacher-conducted field study for
Grade 6 students



FISH CREEK
ENVIRONMENTAL LEARNING CENTRE

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Introduction

This is a curriculum-connected, full day field study with multidisciplinary preparatory and post-visit activity support. The intent is to offer a natural world experience for students that reflects the outdoor field study components of *Topic E: Trees and Forests* from the Grade 6, Alberta Elementary Science Curriculum 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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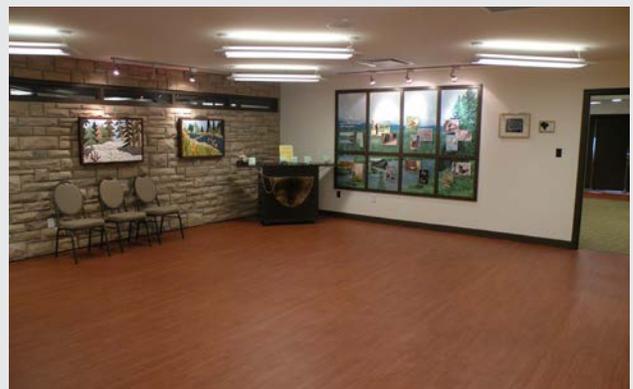
Facility & Rules

THE FACILITY

The Fish Creek Environmental Learning Centre, located at the west end of the Park off of 37 Street SW, offers five indoor classrooms, an outdoor picnic area and access to an extensive variety of natural ecosystems: an old spruce forest, grasslands, riverine, creek and pond wetlands and disturbed (urban) areas.

The Fish Creek Environmental Learning Centre offers you the following facilities and services:

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 lost or broken equipment.**
3. Washrooms and water fountains are located in the building. There are no vending machines or coffee 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. Parent volunteers will have a separate orientation (about 10 minutes). 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 will answer any questions that they may have.
6. A washroom and snack break will take place *after* the group orientation and during the parent volunteer orientation. Please ensure that the students are supervised during this time.
7. **There are NO indoor activities available. Please bring your own activities and/or DVDs when planning for inclement weather.**



LUNCH BREAK PROCEDURES

Your class may eat inside the facility, within their assigned room. Please ensure that the students understand the following :

INSIDE THE BUILDING

- Students must be supervised by an adult while they are in the building (classrooms and washrooms).
- Classes from other schools may be in the facility at the same time. Please respect them and keep noise to a minimum, especially in the washrooms, hallways and other common areas.
- Help us keep the classrooms clean. There are garbage containers in the brown cabinets by the classroom doors.
- Recyclable containers go into the brown cabinet labelled “juice boxes, cans and bottles”. Do the students know what recycling is, how it conserves resources and how it helps the environment?
- 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 is a picnic area just to the north of the Fish Creek Environmental Learning Centre, about two minutes walk up the trail, with plenty of picnic tables.

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.

When using the fire pit area be sure to:

- Provide your own roasting sticks and firewood. **Do not use branches or deadfall from the park.**
- Have a bucket of water nearby **before** the fire is lit. Check that the fire is out before you leave.
- **Do not feed or disturb wildlife.**

Preparation Materials

I. 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 at the back of this resource package or by clicking [HERE](#). These are general guidelines to assist you in planning your field trip.

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, equipment and trail safety for parent volunteers.
Educational Activities	Students explore the park in small, parent-led groups. Environmental Educator will be available to answer questions and provide support during your lunch break and at the end of the day and is always available should the need arise at the Learning Centre.
LUNCH BREAK	Environmental Educator will circulate and answer questions, show nature biofacts and ensure that the program is going smoothly.
Educational Activities	Students continue to complete curriculum-connected activities with their parent leaders.
Groups return to Learning Centre for Program Wrap-up	Final washroom break, head count, inventory and return equipment borrowed from the park, gather personal belongings.

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

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 are essential to the success of your trip! The preparatory activities described here will introduce the field study day to your students and will allow them to practise the skills to be used during the field study day.

Feel free to use your own activities and the ones described in this package. Within the activities you select and present to your students be sure to consider other curriculum areas and explore how all subject areas can be connected to your field study day.

1 Vocabulary *Worksheet: Yes*

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

- words could be incorporated into the weekly spelling quiz
- Using appropriate pop songs, invite the students to replace the lyrics with vocabulary. This exercise may be a challenge, but demonstrates high understanding of the vocabulary and links with linguistic and musical connections.
- Photocopy the crossword puzzle at the back of this package. Distribute to the students. A fun way to test their knowledge!

2 Tree Machine *Worksheet: No*

This kinesthetic activity will engage students in the anatomy of the tree and the movement of water. Explain to the students that they will be constructing a tree in the classrooms. Each part of the tree will have a motion and sound effect.

3 Dichotomous Key *Worksheet: No*

Scientists classify living organisms based on common physical and genetic characteristics. A **dichotomous key** is a tool to determine organisms based on characteristics at different levels including: *Kingdom, Phylum, Class, Order, Family, Genus, Species*.

These activities will help students develop an understanding of why and how keys are a useful system of classifying knowledge.

- Using candy, students will create a key of the different characteristics (candy not included)
- Students will create a key of the students in their class



Program Equipment

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

PLEASE NOTE: There is an additional fee for lost, stolen or broken equipment.

For the *Grade 6 Tree Tales* program, your students will be provided with the following:

1 Dichotomous Tree and Shrub Key

These keys will be used by students to identify the trees and shrubs they discover outside.

2 Rope

Students select an area and mark out a 4 metre square by laying their rope on the ground (knots in the rope indicate where students turn to make a corner).

3 Tree Cookies

Students will interpret the growth pattern of a young tree by recognizing the differences in colouration and texture of new and old growth, and locate scars that separate new and old growth.

Students will examine a “tree cookie” (a slice of tree trunk) to learn the tree’s growth history while it was alive.

4 Magnifying Glasses

Students will use the magnifying glasses to examine signs of animals (such as tracks, evidence of feeding, droppings) and ground level plants.

Students will use the magnifying glasses to compare and contrast leaf shape, size and texture.

Students will use the magnifying glasses to count the number of rings on the tree cookie.

Field Trip Activities

Information Booklets



The Learning Centre will provide your adult chaperones with an information booklet with all of the field trip activities outlined and explained in full detail. These booklets will have pictures and information that will support and enhance your students' learning.

These booklets will be provided at the Park for your field trip.

By providing laminated copies, at your field trip we hope to reduce the amount of photocopying and wasted paper.

Important Notes:

- We greatly appreciate all feedback to strengthen our resources; please let us know if you have any recommended changes

Field Trip Activity Summary

The following Field Trip Activities are curriculum-connected. You are certainly welcome to change, remove or follow the activities to suit the needs of your students.

1

Mystery Plant Worksheet: No

- Students will practice using the dichotomous keys before going outside
- Students will use evidence to investigate the identity of mystery plant species

If your group is struggling with the dichotomous key, ask the Environmental Educator for tips BEFORE you go outside.

2

Tree Tracking Worksheet: Yes

- Students will observe and record characteristics of four different trees or shrubs
- Students will identify the species with a dichotomous key
- Students will compare a compound and a simple leaf.
- Students will compare alternate and opposite leaf patterns

3

Forest Bingo Worksheet: Yes

- Students will explore how different organisms have relationships with trees
- Students will discuss how animals utilize trees in the forests
- Students will brainstorm the benefits that trees and forests provide humans

4

Tree Cookies Worksheet: Yes

- Students will examine the growth patterns of trees and interpret growing conditions students will observe summerwood, springwood, cambium and heartwood in samples
- Students will count the number of rings to estimate the age of the tree
- Students will draw and label interesting features of their tree cookie (wood rot, fire etc.)

5

Ecosystem Inventory Worksheet: Yes

- Students will explore a white spruce and balsam poplar forest
- Students will investigate the types of organisms that are found living in tree communities
- Students will define: interdependence, adaptations, ecosystems and provide examples
- Students will compare alternate and opposite leaf patterns

Post-field 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.

Multiple Choice Keys *Worksheet: No*

Explain to the students that so far, they have been working with dichotomous keys: that is, keys that present the user with only two possibilities to choose from at one time. Not all keys are dichotomous; sometimes the user may have more than 2 possibilities to choose from at one time. Have the students select a topic and then develop a multi-choice key to classify 15 items.

When the keys are completed, have the students list their 15 items separately (this is the equivalent of the data sheets and is necessary due to the thousands of television shows, songs and computer programs available to choose from). Students should then cover up the answers on their keys and exchange keys and lists with another student. Can they follow the key through and match-up those items that with which they are familiar?

Ecosystem Follow-up *Worksheet: Yes*

Divide the class back into their small groups. Distribute their ecosystem inventory data sheets. On the blackboard, compile a class list of discoveries in each type of forest.

- What is the relationship between each organism and the trees growing in the area? (Use the teacher sample sheets included in your teacher package to help you with some of the possibilities).
- How does this list of relationships compare to the list compiled during the preparatory activity?
- Did the students discover some relationships they hadn't considered prior to their field trip? Correctly identifying every relationship is not critical. The students will learn just from the process of considering the possibilities.

Tree Tales Quiz *Worksheet: Yes*

Develop a short quiz to assess the information learned by the students. Results may indicate areas that other post field study activities need to focus on and which concepts your students have thoroughly comprehended.

A sample quiz follows. Use your own or this one, remembering that you may wish to modify it to fit the skill levels of your students.

Forestry Issues *Worksheet: No*

Where, when and how trees are harvested is a very controversial issue. Have the students collect news articles reporting current developments and events in the forestry area. If possible, students should gather reports on the same event from more than one source for comparison purposes. Ask the students to critically review the articles.

- Is there enough information?
- Are some important facts missing?
- Are there conflicting pieces of information?
- Is the report balanced or biased?
- How reliable is it?

Have the students write a short critique of the articles

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.

Dear Adult Chaperone,

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) 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 science 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



Trees and Forest Vocabulary

alternate -leaves placed singly at different heights along a stem

blade - flat part of a leaf

cambium - the new wood growth that occurs just under the bark inwards to the heartwood

compound -leaf made up of several leaflets

coniferous -tree or shrub that bears its seeds inside cones. Most species have small, needle-shaped evergreen leaves.

crown - the top part of the tree where most of the leafy foliage is located.

deciduous - tree or shrub that sheds leaves annually

growth rings - the dark rings that are visible in a cross section of tree trunk that indicate one year of growth

heartwood - the older, middle part of the tree trunk that helps stabilize and strengthen the tree

lateral or surface root - roots that run parallel to the surface to gather water and nutrients. They provide less stabilization than a tap root.

leaflet - blade of a compound leaf attached to a common leaf stem

lobed - a particular type of leaf in which the blade is prominently indented

margin - edge of the leaf blade, usually described as smooth, wavy or serrated (toothed)

opposite - two leaves originating at the same point on opposite sides along a stem

pith - the soft centre of a small branch or twig

simple - single bladed leaf

springwood - large light coloured wood cells that are produced in the spring

summerwood - small dark wood cells that are produced in the summer

tap root - a root that extends deep into the ground to gather water and stabilize the tree

Song Activity

Discuss the vocabulary and key concepts of the unit with your class, with the words and definitions on the board for visual reference.

Using appropriate pop songs, invite the students to replace the lyrics with scientific vocabulary. This exercise may be a challenge, but demonstrates high understanding of the vocabulary and links with linguistic and musical connections.

In small groups, students can perform their work in front of their peers. Keep a copy of the songs and perform them before the unit test to review and retain the key vocabulary.

Example based off of Gilbert and Sullivan “Model Major General”:

*I am the very model of a coniferous evergreen
I've adaptation reproductive, growth and wonders still unseen*

*I bear my seeds inside a cone, so I thrive geographical
From cold alpine and boreal, to climates that are tropical*

*I sprout small needle leaves, with stoma that capture the air
I'm stabilized by the taproot, with water slurped by the root hair*

*With ingredients for photosynthesis, I can produce my food
To make many layered rings that grow and comprise the wood*

*In short, in reproduction, growth and ensuring that the air is clean,
I am in the very model of a coniferous evergreen!*

Example based off of Disney's Frozen “Let it Go”:

*The snow melts fast in the park today, And the conifers are green,
Bringing the air through stoma, The air they do keep clean
The water's sucked up like a twirly straw inside
The roots keep it in. As they photosynthesize*

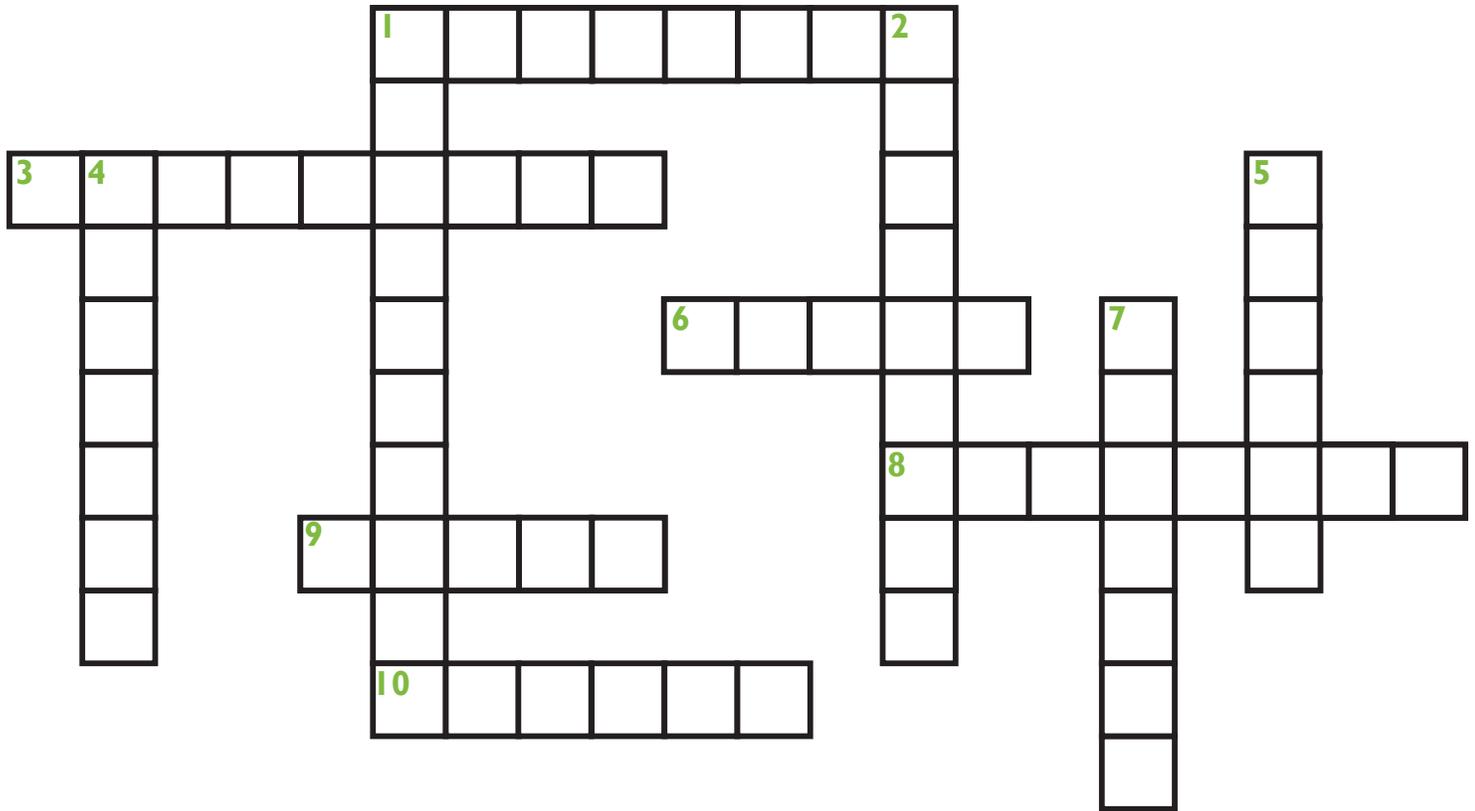
*Conifers have cones, Dedicous have leaves,
But the trees will never grieve
Ground to crown, They will grow!*

*Let's watch them grow!
Let it grow, let it grow
Cambium growth in store
Let it grow, let it grow
Spring and summerwood galore*

*Chloroplasts spin In the light of day
Let the tree grow on!
The herbivores never bother them anyways*

For more inspiration, please check out: <http://billybproductions.com/cd-billy-b-sing-about-trees/>

Forest Crossword



CLUES ACROSS

1. Leaf made up of several leaflets.
3. Leaves placed singly at different heights along a stem are said to be ...
6. Flat part of a leaf.
8. Two leaves originating at the same point but on different sides of the stem are said to be ...
9. Type of leaf in which the blade is prominently indented.
10. Single bladed leaf.

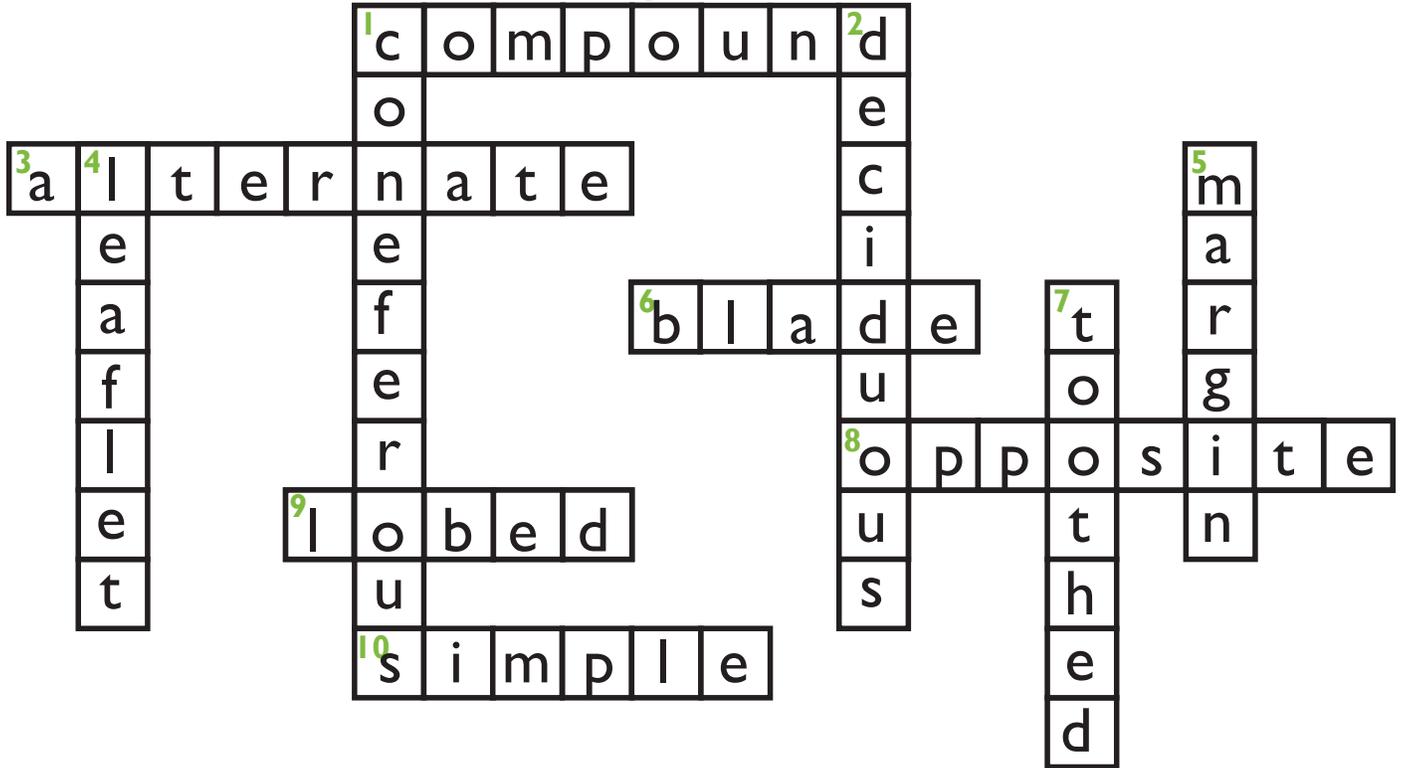
CLUES DOWN

1. Tree or shrub that bears its seeds inside cones.
2. Tree or shrub that sheds its leaves annually.
4. Blade of a compound leaf attached to a common leaf stem.
5. Edge of the leaf blade.
7. Notches along the leaf edge.

WORDS:

alternate, compound, blade, margin, toothed, opposite, deciduous, lobbed, simple, leaflet, coniferous

Forest Crossword Answer Key



CLUES ACROSS

- Leaf made up of several leaflets.
- Leaves placed singly at different heights along a stem are said to be ...
- Flat part of a leaf.
- Two leaves originating at the same point but on different sides of the stem are said to be ...
- Type of leaf in which the blade is prominently indented.
- Single bladed leaf.

WORDS:

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CLUES DOWN

- Tree or shrub that bears its seeds inside cones.
- Tree or shrub that sheds its leaves annually.
- Blade of a compound leaf attached to a common leaf stem.
- Edge of the leaf blade.
- Notches along the leaf edge.

Teacher Information: Key

Scientists classify living organisms based on common physical and genetic characteristics. A dichotomous key is a tool to determine organisms based on characteristics at different levels including: *Kingdom, Phylum, Class, Order, Family, Genus, Species*.

During the field trip in Fish Creek Provincial Park, students will observe and record characteristics of at least 4 different trees or shrubs. In addition, students will use a copy of the Centre's dichotomous tree key. The following activity will help students develop an understanding of why and how keys are a useful system of classifying knowledge.

Candy Key

- Purchase an assortment of 10 different 5 cent candies from a local supermarket or cornerstore.
- Assign one candy per student, and give the student 1 minute to generate as many characteristics to describe the candy as possible (colour, shape, texture, coating, size etc.)
- Challenge the class to try to group similar candies together under the characteristics generated, writing the generated dichotomous key on the board for future reference. For example, fuzzy peaches and strawberry candy could be classified together as fruit, sour patch kids and sour soothers grouped together under the characteristic of sour.
- There may be debate about splitting groups apart or lumping them together based on specific characteristics. These debates happen in the scientific community too!
- Allow the students to eat the candy at the end.

Key the Class

- Students will gain an appreciation for a key by using the similarities and differences of their classmates to develop their own key. Develop a keying system for the members of the class based on observation only.
- The first split, for example, can be by sex or between students with and without glasses. Other divisions can be made according to hair colour and/or length, height, shoe size and so on. Refer to the following sample of a class group keyed out.

Extend the Key

- Invite one group write fictitious names instead of their own on the key. Exchange each group's key. Can they identify the student by working through the similarities and differences in the key?
- Follow up the keying activity with a discussion about the key they will use at the park. A key further classifies from a basic organization. Tree identifications at the park will be made on the basis of this keying concept. For example, two species of trees may belong to a certain Family because they share particular traits. However, they may each be in a different Genus because of differences in other features.

Tree Machine

This kinesthetic activity will engage students in the anatomy of the tree and the movement of water. Explain to the students that they will be constructing a tree in the classrooms. Each part of the tree will have a motion and sound effect. After you get the students in position, describe how the anatomy assists the tree.

Heartwood: Select a few “shy” students to represent the heartwood, which is the inner core and stabilizes tree. The tissue in this part of the tree are dead, but were once thousands of tubes that transported water in the tree. Encourage the students to stand tall and strong.

Taproot: Choose Students sit criss cross at the base of the tree to become the taproot. This specialized root anchors the tree; depending on the species, some taproots extend 30 feet into the ground. Remind the students that not all trees have taproots including the redwoods. When it is their role, the roots will make “slurping” sounds.

Lateral root: Instruct several students with long hair to carefully lie down on the ground with their hair extended. These students will symbolize the hundreds of lateral roots that seek water in the soil to absorb into the root hairs. These roots will join the taproot in the slurping sounds.

Sapwood/xylem: The next important part of the tree is the sapwood. Instruct the students to make a circle around the heartwood, carefully avoiding the lateral roots students. The sapwood is responsible for pumping the water from the ground into the leaves for photosynthesis. Encourage the students to practice making a “Whee” sound on cue and raising their hands from the ground to above their heads to demonstrate the flow of water.

Phloem/cambium: After the tree has finished the process of photosynthesis, the sugar products are carried downwards for storage by the phloem. Invite more students to stand in a circle around the sapwood students to be the phloem. Direct the students to practice making a “Whoo” sound on cue as they sound as they lowered their raised hands down to their feet.

Bark: The outer most layer of the tree, the bark, is used in protecting the vulnerable inner portions of the tree. The bark safeguards the tree from insects, fire, disease and damage from students’ pocket knives. Summon the rest of the students to stand up and make a final circle around the tree. The bark students will pantomime flexing their muscles and grunting “Who-ha”

Now that the tree is complete, go through the parts of the tree in sequence. Begin with the heartwood, reminding them to stand strong and the bark to protect the tree. Cue the roots to slurp for 10 seconds, then transition to the sapwood “Whee” to bring up the water. After the photosynthesis, the sugar will go down the phloem “Whoo” to be stored.

Source: Sharing the Joy of Nature, Joseph Cornell, Dawn Publications 1989

Tree Tracking- Student Data Collection Sheet

DECIDUOUS

LOCATION DESCRIPTION		
No. of trunks at ground level		
Silhouette		
Bark <ul style="list-style-type: none"> • branches: prickly or not prickly • texture • colour 		
Leaf <ul style="list-style-type: none"> • stem: rounded or flattened • placement (against stem) • margin • simple or compound alternate or opposite • shape • tip: rounded or pointed • colour and markings: top and underneath • texture 		
Other Observations		
Name		
Notes		

Tree Tracking- Student Data Collection Sheet

CONIFEROUS

LOCATION DESCRIPTION		
Shape - low, spreading or erect tree-like		
Silhouette		
Bark <ul style="list-style-type: none"> • texture • colour 		
Leaves <ul style="list-style-type: none"> • scale-like or needle-like • single or cluster • flat or square • round or sharp ends • colour 		
Seed Container <ul style="list-style-type: none"> • berry or cone • colour • cone: texture size placement on twig edges 		
Other Observations		
Name		
Notes		

Ecosystem Inventory- Student Data Collection Sheet

FOREST TYPE: _____

PLOT LOCATION: _____

DESCRIPTION: _____

ORGANISMS: _____ LEVEL

Description: • name					
• number					
• shape					
• colour					
• size comparison					
Location (be specific)					
Other Notes					
Relationship with Tree					

Tree Cookies- Student Data Collection Sheet

TREE COOKIE # _____

Age of tree when felled: _____

(Count rings: remember to include springwood and summerwood as 1)

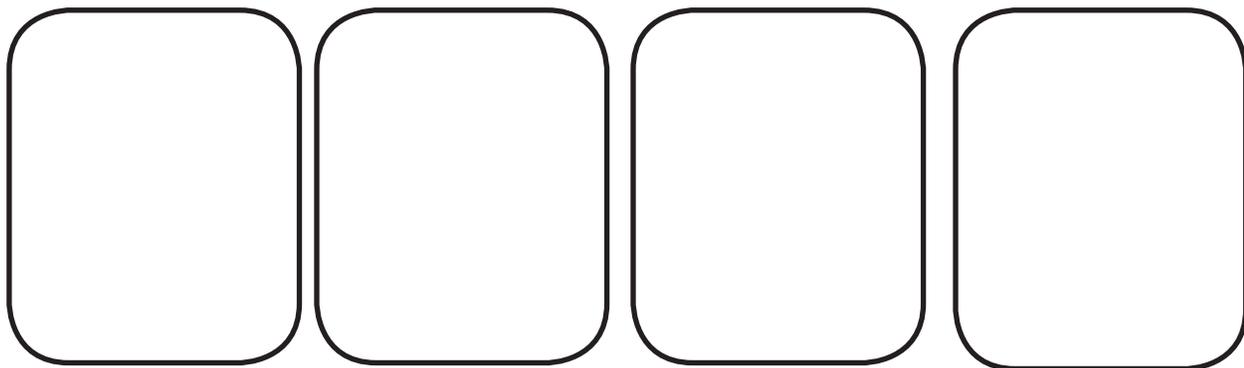
Is each ring about the same width all the way around the cookie? _____

If not, list possible reasons for differences. _____

Are the rings all about the same distance apart from each other? _____

List possible reasons for differences. _____

Draw all markings or discolourations and list possible causes.



Tree Tales Quiz

Name _____ Date _____ Score _____ /50

1. Look at the illustrations in the middle and then, from the word list on the right, select all the terms that accurately describe each illustration. Write those words in the blank spaces on the left side of each illustration. Some terms may be used more than once. (9 marks)



- lobed
- alternate
- toothed
- leaflet
- opposite
- simple
- compound
- smooth

2. On the line beside each word below write the letter of the description that best describes that word. (4 marks)

- | | |
|---|---|
| <p>_____ ecosystem</p> <p>_____ adaptation</p> <p>_____ forest canopy</p> <p>_____ photosynthesis</p> | <p>a. The part of the tree that anchors it to the ground.</p> <p>b. A collection of plants and animals that live in the same area and help each other to survive.</p> <p>c. A tree that uses cones to reproduce and sheds its eaves.</p> <p>d. The upper level of the forests where most of the leaves are located.</p> <p>e. A special talent or ability a living thing has that allows it to better live in its environment.</p> <p>f. The process plants go through to produce food.</p> <p>g. The part of the tree that sap (food) flows through.</p> |
|---|---|

Total correct on this page: _____ /13

3. Within each row, there is one word that does not fit with the others. Circle that word. At the end of each row, on the line provided, write a word or phrase that explains what the list is referring to. (8 marks)

a. white spruce, cedar, poplar, juniper _____

b. lobed, blade, margin, toothed, coniferous _____

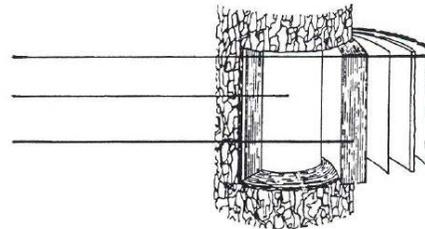
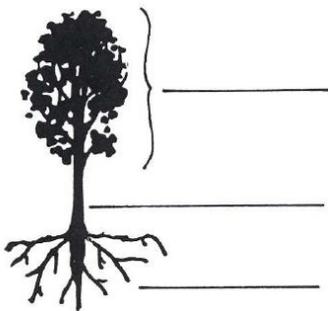
c. sun, insects, soil, nutrients, water _____

d. leaflet, heartwood, cambium, sapwood, bark _____

(1 mark each = ___/4)

(1 mark each = ___/4) ___/8

4. Label the parts of a tree by writing their names on the lines provided below. (6 marks)



5. Describe one tree or shrub you identified at Fish Creek Provincial Park. Remember to include the name, diagrams of its silhouette and leaf shape along with at least two interesting facts you read or two direct discoveries you made about it. (4 marks)

SILHOUETTE NAME: _____

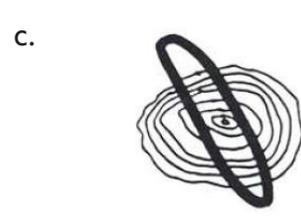
LEAF SHAPE

Total correct on this page: ___/18

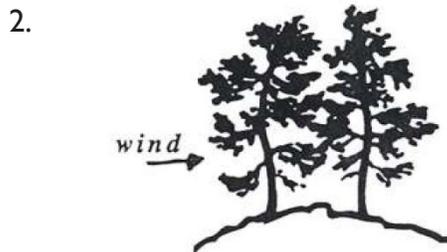
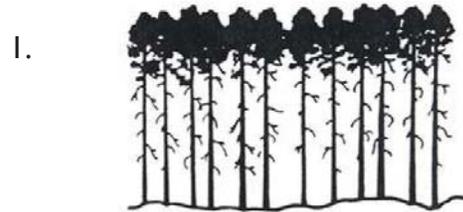
6. Look at the circled areas on the slice of tree trunk pictured below. Briefly described what each circled area reveals about the tree when it was alive. (6 marks)







7. Draw a line connecting each tree cookie with the illustration showing the tree that the cookie might have come from. (3 marks)



8. Circle the best definition for the term interdependency. (1 mark)
- a. A banking cash withdrawal system, similar to Interact.
 - b. All organisms rely on other organisms to fill some or all of their survival needs of food, water, space and shelter.
 - c. All organisms rely on other organisms for food and water.
9. Select one plant and one animal you found in the white spruce forest and explain the interdependency each has with the white spruce trees. (3 marks)

10. Select one plant and one animal you found in the poplar forest and explain the interdependency each has with the poplar trees. (3 marks)

11. What is the purpose of the following tree parts? (3 marks)

- a. roots: _____
- b. leaves / needles: _____
- c. trunk: _____

Total correct on this page: ____/10

Directions Map

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



Trail Map

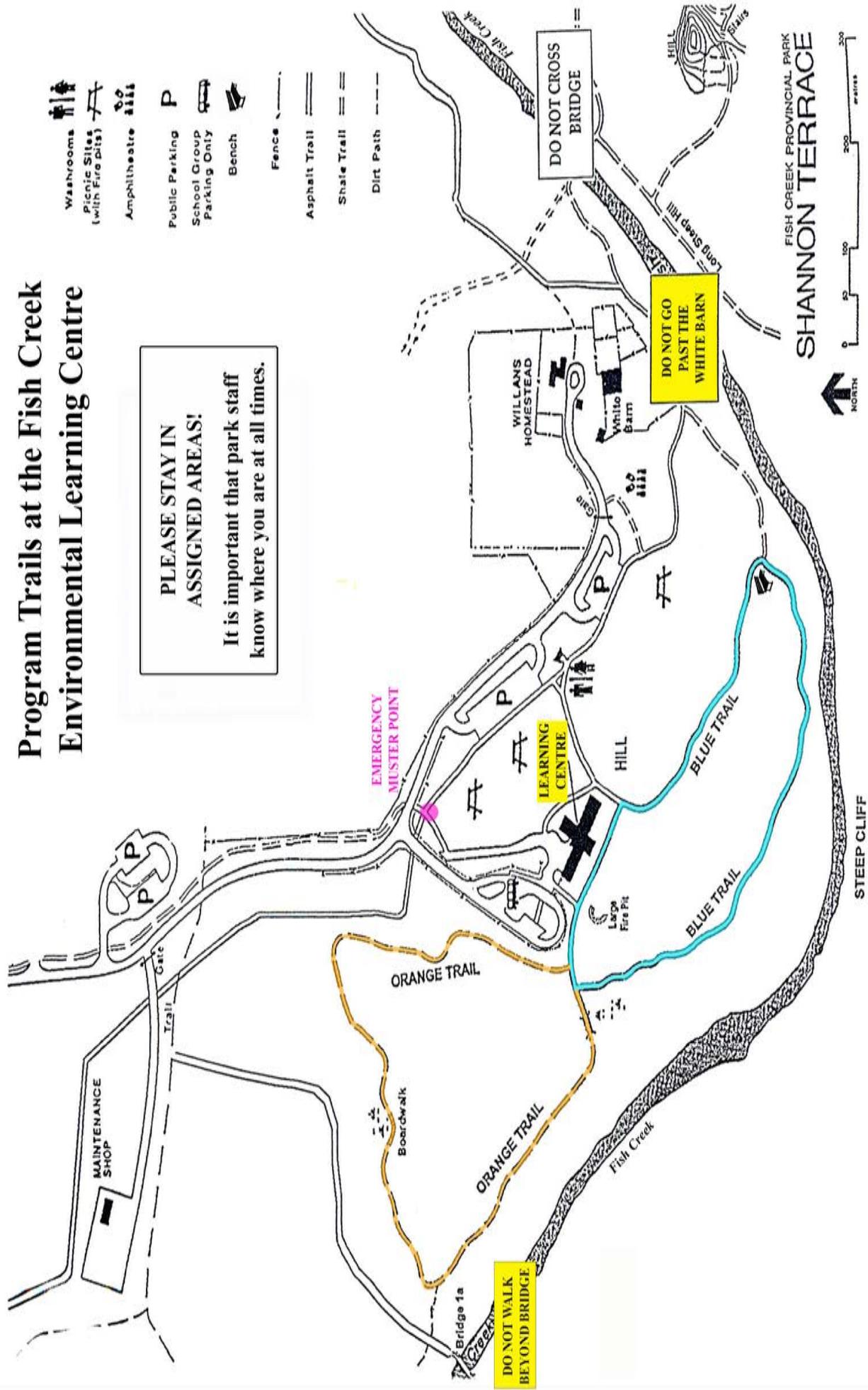
Program Trails at the Fish Creek Environmental Learning Centre

PLEASE STAY IN ASSIGNED AREAS!

It is important that park staff know where you are at all times.

- Washrooms
- Picnic Sites (with Fire pits)
- Amphitheatre
- Public Parking
- School Group Parking Only
- Bench

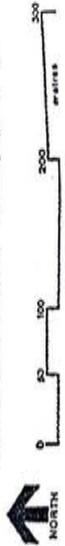
- Fence
- Asphalt Trail
- Shale Trail
- Dirt Path



DO NOT WALK BEYOND BRIDGE

DO NOT GO PAST THE WHITE BARN

DO NOT CROSS BRIDGE



FISH CREEK PROVINCIAL PARK
SHANNON TERRACE