

Sir Sandford Fleming Park

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Welcome to your Sir Sandford Fleming Park BioKit Circuit. Use the activities in this circuit, along with the HRM Urban BioKit, to explore the natural treasures and unique places in this park – utilizing your keen powers of observation. In addition to the material required for the BioKit, you will need a **clear plastic jar**.

Location: Purcells Cove Road, Jollimore, Halifax.

Race to the Top



Behind the Adventure Earth Centre A Tree's Life Story

GPS: N 44° 37.720' W 63° 35.821'

Life for trees is a constant battle for sunlight, water, nutrients and pollination. You can tell the age of a tree and the history of its life by counting the tree's rings.

On the path you'll see a large tree stump. On the top of this trunk you'll find the tree's ring lines, as pictured here. Use your magnifying glass to count the rings.



Photo: © Getty Images

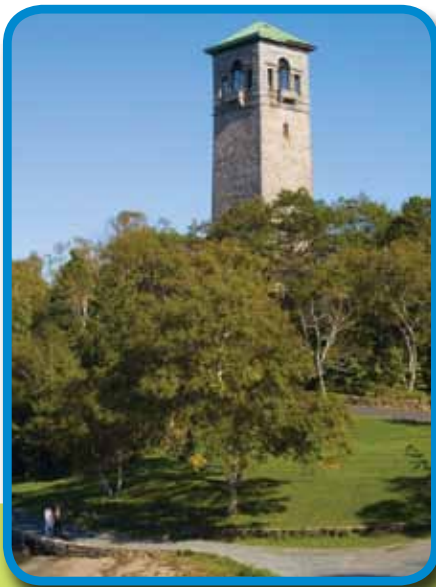
- 1) Each ring = one year
- 2) Large gap between rings = good growing conditions
- 3) Narrow distance = poor growing conditions

During winter trees in Canada usually enter in a dormant phase, and so they do not grow during this period.

Estimate the tree's age at the time it was cut down: _____

In what stage of its life (young or old) did it have good growing conditions?

Look at the fallen trees around the stump: can you match one of the fallen trees to this stump?



Dingle Tower

HISTORY

Sir Sandford Fleming Park is a large urban park located across from the Halifax Peninsula, from which it is separated by the Northwest Arm inlet. In 1908, this property was donated to the City of Halifax by Sir Sandford Fleming for public use. During his time as Chief Engineer of the Northern Railway of Canada, Sir Fleming proposed the concept of worldwide standard time zones, and was credited as its inventor. This achievement, among others, earned him recognition as one of Canada's greatest minds of the 19th century. The park was originally his summer retreat, which he established after completion of the Intercolonial Railway.

The park features a great variety of trees and animals. During your walk you will have the chance to go by a small lake called Frog Lake, which is home to many ducks, frogs, turtles and aquatic plant species.



Just for fun!

Like people all trees are different. Old trees especially tell stories about the past, big storms, droughts and fires. Slowly walk through the surrounding forest and look for faces or interesting shapes in trees. Pick one face to show to a friend or someone in your family. Then together decide if any faces you can see look happy, sad or any other emotion.

SQUARE ROCK

Pileated Woodpecker

Photo: © Parks Canada, B. Morin

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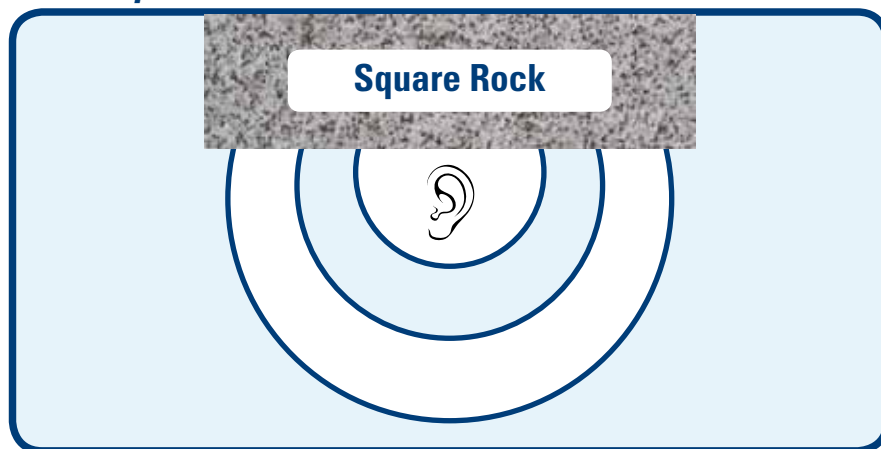
GPS: N 44° 37.689' W 63° 36.027'

A great way to experience the wild is to listen. The chirping of frogs, buzzing of insects and singing of birds are all sounds you can hear. Animals emit sounds for many reasons, including to attract mates, mark territory, and even to signal a change in weather!

Sit with your back against Square Rock, close your eyes, and listen closely to the sounds around you for five minutes.

1. In the "Ear map" below, mark down any sounds you hear. Note down what direction and how far away they're coming from.
2. When entering a sound in the map, guess what created it.

Ear map



How many different sounds did you hear? _____

Which sounds did you like best? Why? _____

Were there any sounds you've never heard before? _____

Beaver Lodge

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Northeast section of the Frog Lake

GPS: N 44° 37.620' W 63° 36.107'

Somewhere in this area close to the water's edge, there is a beaver lodge.

Beavers start building these lodges by placing a wooden pole upright, then criss-crossing branches horizontally around the pole. They fill in the spaces between branches with mud and weeds. The only entry and exit point is found about two metres under water.

Imagine that you're a wolf or coyote looking to consume the beaver.
What are three things preventing you from obtaining your next meal?

1. _____
2. _____
3. _____

Warning! Do not walk on the lodge or touch any part of it.
 This could be dangerous to you and harmful to the beavers.



American beaver Photo: © Parks Canada, W. Lynch



A beaver lodge Photo: © Parks Canada, A. Guindon

WATERFOWL ON FROG LAKE

4 South section of the Frog Lake, near Purcells Cove Road

GPS: N 44° 37.466' W 63° 36.219'

As a wildlife observer, it is important for you to make observations, like which species are present and how many of each you can see. To get close to waterfowl, stay low and be very quiet. Beside the pictures, **record your observations** of waterfowl you see on or around the lake. If you see a species not on the list, make a note and describe it. You could be observing a rare species!

Note: Males and females of the same species can look very different.

Remember! When in nature, you should always be respectful of a habitat and creatures. So, never feed ducks or geese, because it can make them dependent on humans for food.



Photo: © Parks Canada, J. Pleau



Photo: © Parks Canada, B. Morin



Photo: © Parks Canada, A. Guindon

American Black Duck:

Female Mallard:

Male Mallard:

Describe any others:



Canada Goose:

Photo: © Parks Canada, A. Guindon

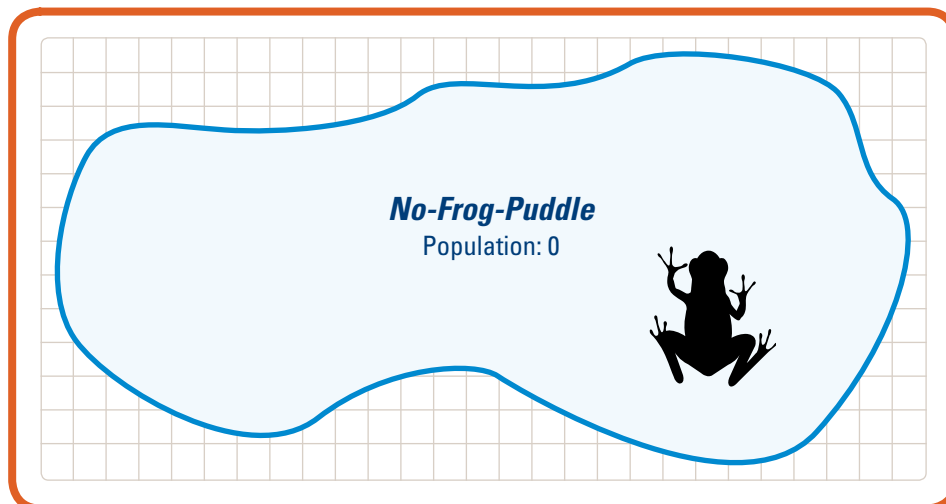
Lake Habitat

5 Northwest section of the Frog Lake

GPS: N 44° 37.684' W 63° 36.186'

The Frog Lake is the perfect habitat for reptiles and amphibians. These delicate creatures are attracted to moist, insect-rich environments like ponds and marshes. Amphibians and reptiles cannot just live in any place with water – they need plants and other animals to create a good habitat for them.

Difference between lakes and puddles: If you were to create a lake for amphibians and reptiles, what would it include? Water without all the plants and animals would just be a big puddle! Find a good place to sit near Frog Lake, and **draw** at least five things in the box below to create your own Frog Lake out of a No-Frog-Puddle.



Citizen Science: The Forest Chorus



Spring peepers have a particularly loud, piercing call that literally is “peep.” Since they all tend to call at once, their chorus can be heard up to half a kilometre away, especially on humid spring evenings. During the breeding season, when males are calling to females, you are more likely to hear them than see them. Open your ears and listen carefully...

Participate in the Frog Watch program to help monitor the abundance and diversity of frogs and toads in Canada. Visit the Nature Watch website to know more.



I-Spy in the Stream

6 *At the two small bridges over the stream*
GPS: N 44° 37.697' W 63° 36.082'

This area of the trail offers a fantastic opportunity to examine the many creatures living in stream habitats. Be sure to scan the area carefully for hidden animals such as leopard frogs or the spotted salamander.

To get a better look, lie on your stomach on one of the bridges. Then look over the edge of the bridge into the murky waters below.

Spotted salamander



Choose a characteristic from the I-Spy list below. The others in your group have to find an animal that has this characteristic. Try to fill in as much of the list as possible.

I-Spy something that...

- | | |
|-----------------|-----------------------------------|
| • Has six legs: | • Has two wings: |
| _____ | _____ |
| • Flies: | • Can swim underwater: |
| _____ | _____ |
| • Jumps: | • Is camouflaged: |
| _____ | _____ |
| • Makes noise: | • Floats: |
| _____ | _____ |
| • Is furry: | • Travels on the water's surface: |
| _____ | _____ |

You can also scoop some water into a clear empty jar and look for creatures living in this murky water.

INSIDE DINGLE TOWER

7 **GPS: N 44° 37.807' W 63° 35.837'**
As part of your park exploration, you can now climb to the top of the tower and unlock discoveries from up high.

Bird's Eye View

From the observation deck on top of the Dingle Tower, you have a bird's-eye view of the entire Northwest Arm and Sir Sandford Fleming Park. From here you may see one of the great hunters of the Nova Scotia wilderness, the **Osprey**.

Imagine that you are an Osprey. Use your binoculars to scan the ocean and forest for prey, then write down your observations:



Photo: © Getty Images

Resources:

- Adventure Earth Centre
earthed.ns.ca
- Osprey Cam
museum.gov.ns/osprey
- Nature Watch
naturewatch.ca
- Biosphere
ec.gc.ca/biosphere