

# Wildlife Soundscapes

By: Caitlin Davey

Duration: 90 minutes

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 1-3	English Language Arts Science and Technology Social Sciences	Across Canada	Scratch

## Overview

In this lesson, students will explore the sounds of wildlife in protected environments and begin to consider how we can restore and protect animal habitats.

## Prep Work

- Review the completed version of the project: <http://bit.ly/soundscape-example>
- Watch this video about wolves: <http://bit.ly/how-wolves-change-rivers-video>
- Print the Solution Sheet for the main activity: [bit.ly/wildlife-soundscapes-solution](http://bit.ly/wildlife-soundscapes-solution) (see below)

## Lesson

*This lesson was made in partnership with*

## Key Coding Concepts

- ✓ Algorithms
- ✓ Events
- ✓ Sequences

## Terminology

### Algorithm

A step-by-step set of operations to be performed to help solve a problem

### Events

One thing causing another thing to happen i.e. 'when clicked' block

### Sequence

Identifying a series of steps for a task. Computers and Scratch



David  
Suzuki  
Foundation

SOLUTIONS ARE IN OUR NATURE

## Introduction

Watch this video about wolves:

<http://bit.ly/how-wolves-change-rivers-video> (~4 minutes).

Ask: What does this video tell us about [wildlife/ecosystems]? (A: That they're all connected!)

Provide some background information on the boreal woodland caribou:

*The boreal woodland caribou is threatened with extinction in every province and territory. (Ask: What does 'extinction' mean?)*

*These shy animals need large forests without roads and buildings to survive. At least half of the boreal caribou have been lost as their homes have been destroyed. For example, all of the woodland caribou in oil and gas development areas of Alberta are shrinking in half every 8 years.*

We're making a "wildlife soundscape" for the woodland caribou using Scratch. A soundscape is when we take all of the sounds we might hear in a place, and put them together.

Ask: What is wildlife? What sorts of sounds might we hear in a wildlife soundscape? (Take note of the answers on a whiteboard or anchor chart paper)

Create a wildlife soundscape with your class!

- Tell learners that we are making a soundscape. Each of them will take turns adding a sound

read and perform commands in order from top to bottom

## Curricular Connections

Understanding life systems; Needs and characteristics of living things; Habitats and communities; Sustainability and stewardship

## References

Image from:

<https://animalcorner.co.uk/animals/caribou/>

The Boreal Forest

<https://davidsuzuki.org/project/boreal-forest/>

Indigenous people hold the key to caribou survival

<https://davidsuzuki.org/story/indigenous-people-hold-the-key-to-caribou-survival/>

Half measures aren't enough to save caribou

<https://davidsuzuki.org/story/half-measures-arent-enough-to-save-caribou/>

The simple-minded nature of human super predators

<https://davidsuzuki.org/story/the-simple-minded-nature-of-human-super-predators/>

Manufacturing the Wild

<https://curio.ca/en/video/manufacturing-the-wild-8265/>

that they would hear in a forest (when you point at them, or when they pass a 'talking stick' item).

- Remind them that forests are quiet and peaceful, so let's try to make our soundscape sound the same!
- If learners can't think of a sound effect, they can use a sound from the list that you created (from the previous question)
- Go through the entire class until everyone has had a chance to add their sound.
- Congratulate learners on creating their first soundscape. Now, let's make one using the computer!

B.C. Wolf Cull: Saving Endangered Caribou?  
<https://curio.ca/en/video/bc-wolf-cull-saving-endangered-caribou-5707/>

Nature Bites Back: The Case of the Sea Otter  
<https://curio.ca/en/video/nature-bites-back-the-case-of-the-sea-otter-867/>

### Code Along

- Open up a new Scratch project at [scratch.mit.edu](http://scratch.mit.edu) and click on "Create" (top, left corner).
- Point out the main elements: Stage, Sprites, and Scripts (especially the "sounds" category). Demonstrate how to drag and connect blocks.
- Give learners a few minutes to click on blocks and explore.
- Go through 1-2 challenges with the group, where learners are tasked with trying to make something happen in Scratch. For example, "Try to make Scratch move" or "Try to make Scratch say something when the space key is pressed" (See the Code-Along Challenges doc (<http://bit.ly/scratch-challenge-solutions-doc>) for more examples and solutions)

### Activity

Show the example project (<http://bit.ly/soundscape-example>) so learners know what they are working towards. Ask them what they see/hear - what is happening in this project?

Open the starter project (<http://bit.ly/soundscape-starter>) and review the Sprites and backgrounds. Have learners open the starter project on their screens and click "REMIX."

Use the Solution Sheet to guide learners through the following steps:

- Animal sounds
- Change the backdrop
- Showing/hiding animals

Give learners time to work on their projects, and add as many sounds and changes as they like.

## Assessment

### Learning Outcomes

**I can** use code to tell the computer what to do

**I can** use events to control when things happen in my project

**I can** create a soundscape in Scratch

### Success Criteria

I remixed the starter project and renamed it with my first name.

All of the animals in my project make a sound.

My backdrop changes from day to night (or the other way around).

I made at least 1 animal show, then hide (or the other way around).

### Assessment Ideas

Have students write a reflection on the effects of human activity on animal life.

- What did they learn from creating a rich soundscape in Scratch?
- What would their forest sound like if there were fewer or even no animals?

Show learners how to add a “say [hello] for \_ secs” script to provide some context for their soundscape. They can edit the ‘hello’ text to describe what they learned about the caribou and their habitat.

## Extensions

Complete a KW(D)L chart with the class (Know, Want to know, (Do), Learned). Ask them what they think they know about habitats (or caribou) at the beginning of the lesson, and what they want to know. After the lesson, regroup and complete the ‘learned’ column as well. Brainstorm and research what we can DO as a class. How can we help save the boreal woodland caribou and their habitat (or endangered species in general)?

Use this as an opportunity to learn about onomatopoeia (when words look the way they sound - like ‘buzz’). When brainstorming sounds in a wildlife soundscape, have learners think of these words and write them at the front.

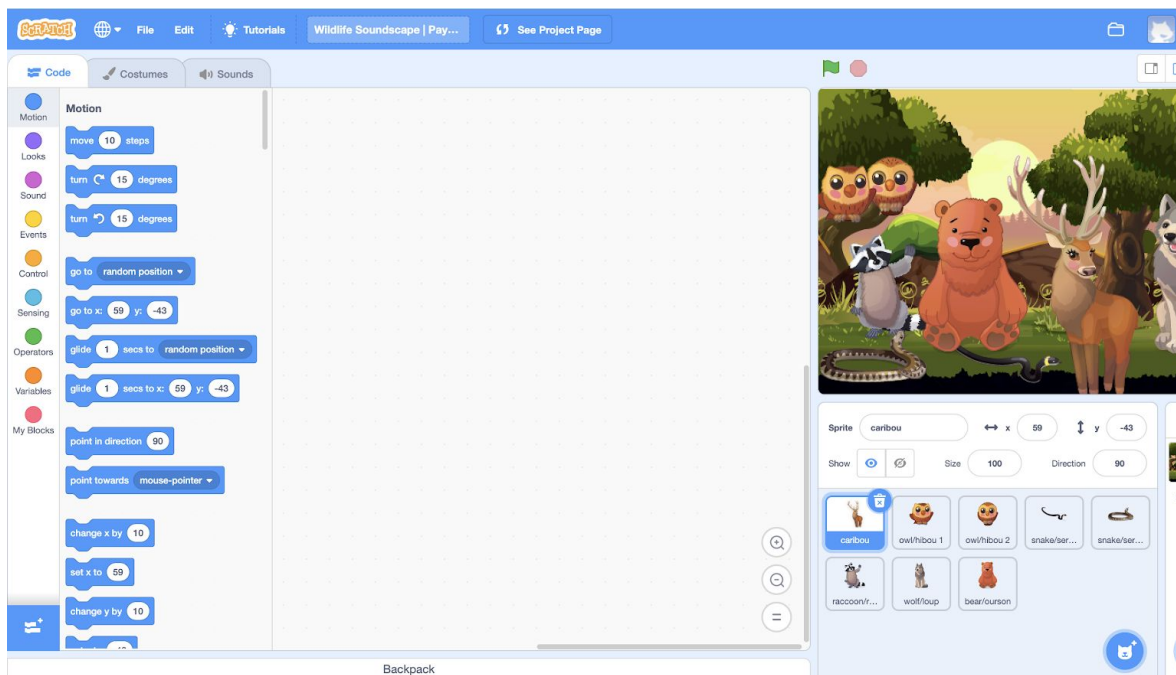
Define “nocturnal” and spend time discussing which animals come out at night, and which are out during the day.

Have learners demonstrate their understanding by having animals in the project ‘show’ and ‘hide’ according to the backdrop.

# Wildlife Soundscapes

## STEP 1: Opening the Starter Project

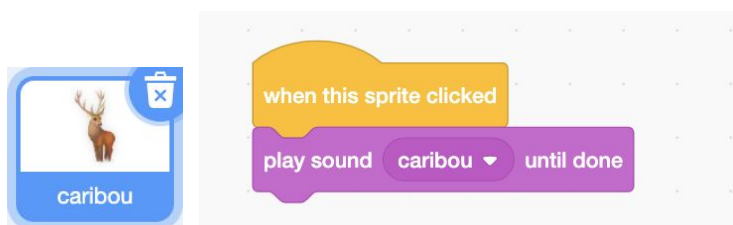
1. Sign in to Scratch
2. Open the starter project: <http://bit.ly/soundscape-starter>
3. Remix the project & change the project name



\*Starter project has 2 backdrops and 8 sprites with sounds

## STEP 2: Adding Animal Sounds

1. Select the caribou sprite
2. Make the caribou say something (play sound until done will make sure that the sound doesn't get cut off)
3. Make this happen when the sprite is clicked

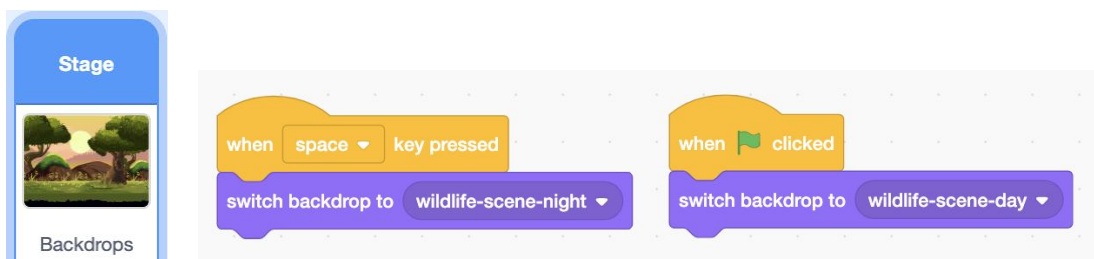


4. Show learners how to select another animal sprite and add the same instructions - to make a sound when the sprite is clicked.
5. Give them 5 extra minutes to add sounds to the other animals in the project  
For example, the raccoon:



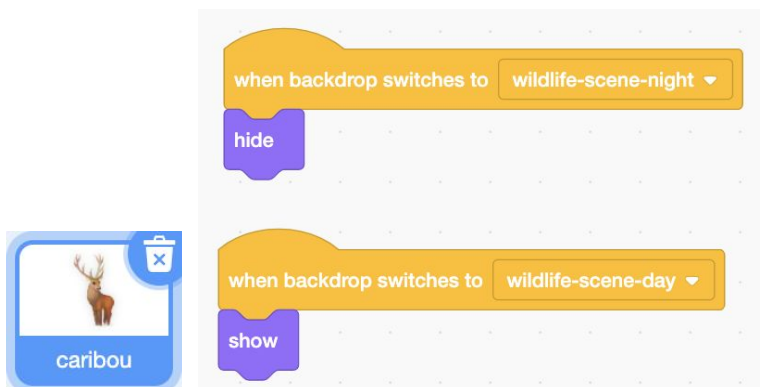
### STEP 3: Changing the Backdrop

1. Select the stage
2. Use the 'switch backdrop' script to change the backdrop to the night scene
3. Make this happen when we press the space key
4. Make the backdrop reset to the day scene when the green flag is pressed



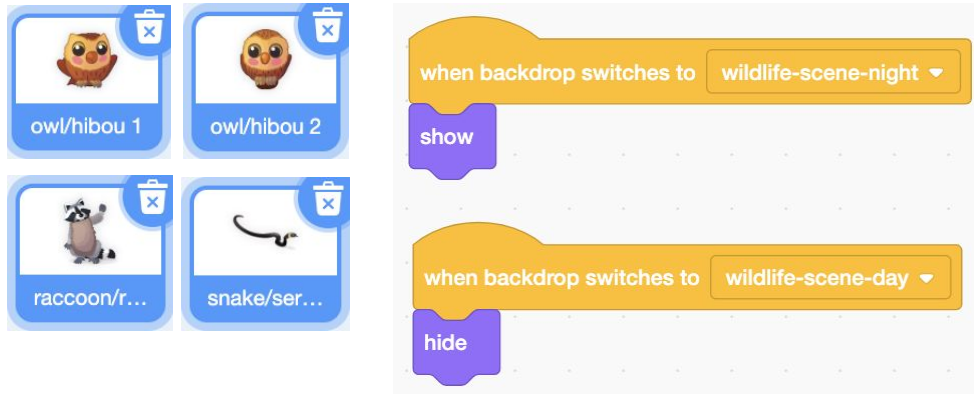
### STEP 4: Showing/Hiding Animals

1. Select the Caribou sprite
2. Make the sprite hide
3. Make this happen when the backdrop changes to the night scene
4. Make the caribou show when the backdrop changes to the day scene

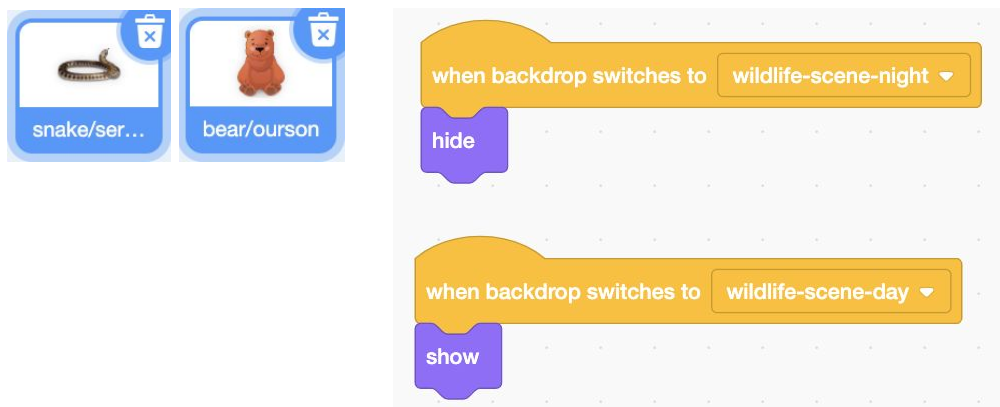


## ADD-ON: Nocturnal or Diurnal?

1. Discuss which animals would come out at night (nocturnal) or during the day (diurnal)
2. For each animal that comes out at night, make them:
  - a. Hide when it switches to the day scene backdrop
  - b. Show when it switches to the night scene backdrop

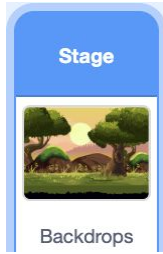


3. For each animal that comes out during the day, make them:
  - a. Show when it switches to the day scene backdrop
  - b. Hide when it switches to the night scene backdrop



## ADD-ON: Background sounds

1. Select the stage
2. Make the night time sounds play after we switch to the night scene
3. Make the day time sounds play after we switch to the day scene



```
when space key pressed
switch backdrop to wildlife-scene-night
play sound Night:Nuit.mp3 until done

when clicked
switch backdrop to wildlife-scene-day
play sound Day:Jour.mp3 until done
```



