

Original Orchestra Grade 2

Nature Sounds & Songbirds



CLASSROOM CULMINATIONS LEARNING PACKAGE

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Original Orchestra Grade 2

Classroom Culminations: Nature Sounds and Songbirds

Introduction

What is music? How is it detected and how are we affected by its variations? The acoustic ecology of human experience has changed dramatically since the Industrial Revolution. During the Original Orchestra curricula, students will learn about the science behind sound, and explore the impact that natural and human made sound have on our hearing and our emotions. By employing active listening and creativity, students will learn about beat and rhythm, and create music using instruments made from natural objects as well as drums. They will explore music from a Tla'amin cultural perspective, learning Tla'Amin songs alongside the opportunity to make a rattle. Finally, students will hone their musical understanding and mindful listening by learning to identify common birds by ear. This inter-curricular hands-on series of lessons will help students to become composers in an original orchestra, exploring their senses and emotions through nature's music.

How to Use this Resource

The Original Orchestra Curriculum Package has 3 Components:

Part 1. Classroom Beginnings: Recommended for use in the classroom prior to the Field Experience.

Part 2. The Original Orchestra Field Experience Curriculum: A facilitated curricular experience.

Part 3. Classroom Culminations: Recommended for use in the classroom following the Field Experience.

Original Orchestra Grade 3: Content & Curricular Competencies

Social Studies	Diverse characteristics of communities and cultures in Canada and around the world, including at least one Canadian First Peoples community and culture (i.e. Tla'Amin)	Explain why people, events, or places are significant to various individuals and groups Sequence objects, images, and events, or explain why some aspects change and others stay the same Explain why people's beliefs, values, worldviews, experiences, and roles give them different perspectives on people, places or issues
Arts Education	Students will know a variety of local works of art and artistic traditions from [Tla'Amin] Students will know traditional and contemporary Aboriginal arts and arts-making processes Students will know processes, materials, technologies, tools, and techniques to support arts activities Students will know music: beat/pulse, rhythm, tempo, pitch, dynamics, form	Students will: Explore elements, processes, materials, movements, technologies, tools, and techniques of the arts Create artistic works collaboratively and as an individual using ideas inspired by imagination, inquiry, experimentation, and purposeful play Explore personal experience, community, and culture through arts activities
Career Education	Personal Development: Risk taking and its role in self-exploration Connection to community: cultural and social awareness	Work respectfully with others to achieve common goals Share ideas, information, personal feelings, and knowledge with others

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Song Writing, Drumming, and Found Sounds

About the Original Orchestra Classroom Culminations

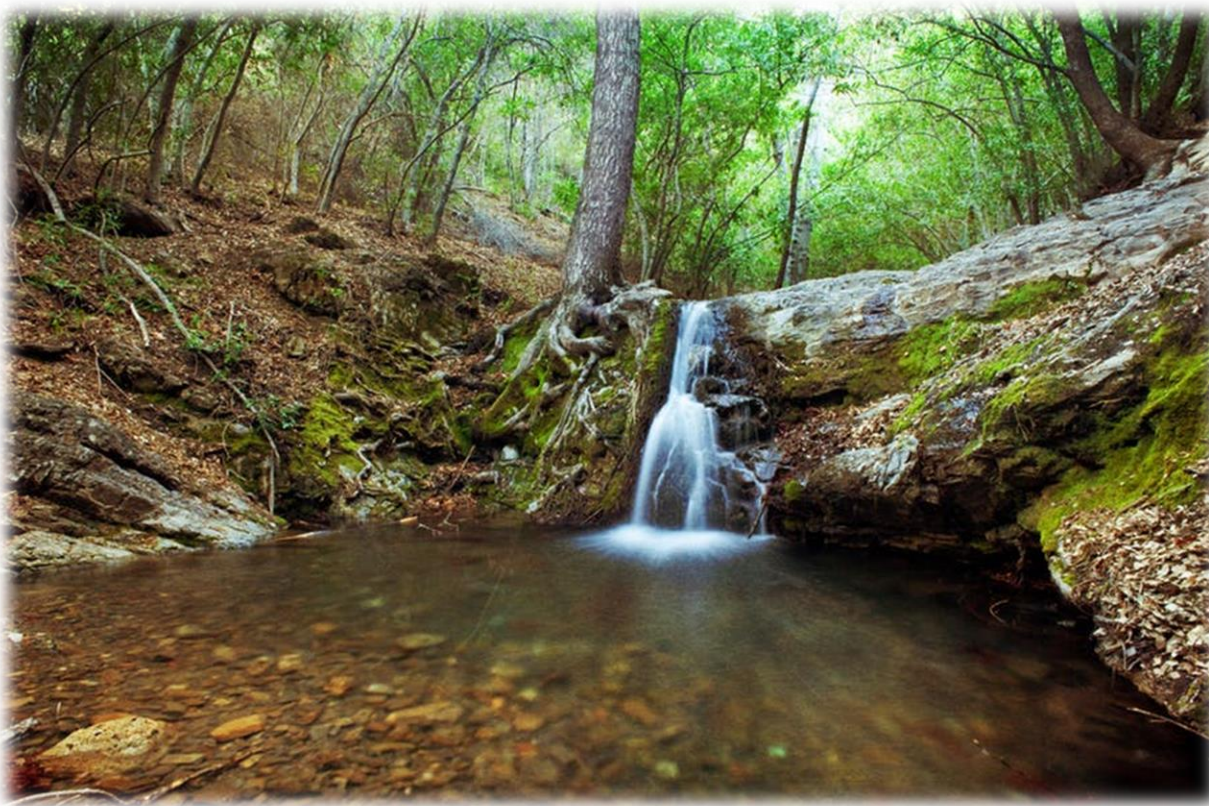
The Original Orchestra Classroom Culminations learning package has three lessons that focus on mindful listening in nature, specifically to bird songs. Typically a part of our daily soundscape, birdsongs are often heard but not paid attention to. Birdsongs are a complex form of communication that to the human ear, often goes either unnoticed or unappreciated. These vocalizations are an ordered sound that is both musical and purposeful. This three part series of lessons will build upon students previous experiences in the Original Orchestra, expanding a practice of mindful listening in nature to include specifically bird songs. Students will learn about different common species that make the most familiar birdsongs and also about the trials faced by these original songsters in today's world.

Lessons in this Resource

Lesson 1: Birdsongs and a School Ground Walk About

Lesson 2: Who's that Bird?

Lesson 3: The Trials of Song Birds



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Classroom Culminations: Nature Sounds and Songbirds

Lesson 1: Birdsongs and a School Ground Walk About

Background

When invited to listen carefully to the vocalizations of birds, students fine tune their sense of hearing by paying close attention to the soundscape that surrounds them. Bird songs are one of nature's original orchestras. It's important to note that birds make both calls and sing songs. The two distinct vocalizations serve a different purpose. Bird calls typically denote danger or alarm, while bird songs are sung primarily by males in an effort to acquire a mate or stake out territory.

Time: 45 Minutes

Materials

- Notecards
- Pencils



Procedure

1. Take students outside, preferably to a quiet area with little human-made sound, and ask them to sit/lie quietly with their eyes shut, and listen to the sounds around them for one minute. (Some pupils may struggle- discuss expectations beforehand).
2. Ask students questions like: What did you hear? How many different sounds did you pick out? Can you name any of them?
3. Have them do this activity another day only this time create a '**sound map**,' mapping only the sounds of distinctly different birds. Students close their eyes and listen, but afterwards, they are given a piece of paper. They mark an "X" in the middle to demarcate their own location and then draw a symbol representing each individual bird sound/song they hear in the approximately accurate location.
4. To debrief, survey the group to see how many students heard 1, 2, ...5 different bird songs.
5. Ask students if they recognized any of the birds who made those songs.
6. Ask students why they think birds make sounds or songs? (Answer: To communicate).

Amazing Facts about Birdsongs

- Birds are not born knowing their bird song, they have to be taught it by their parents in order to sing it.
- The songs of many bird species are highly complex and can contain dozens of notes per second. Songbirds may take as many as 30 mini breaths per second to keep up the tune.
- In most cases, when you hear a bird singing, you're probably hearing a male. Males use song to attract mates and stake out their home territory through song.
- Several songbird species don't sing only their own tunes, but appropriate the tunes of other species as well. The marsh warbler knows the songs of both European species as well as African species since they migrate to Africa in winter, and may know the various songs of as many as 70 other bird species.

Bird Extension Activities: For the Birds (Audubon Society)

https://www.massaudubon.org/content/download/7007/129231/file/Birds_k-2.pdf

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Song Writing, Drumming, and Found Sounds

Lesson 2: Who's that Bird and Why does it Matter?

Adapted from The Cats and Birds Education Program <https://catsandbirds.ca/educators-grades-4-to-6/>

Summary

By exploring local outdoor areas, students become familiar with bird diversity and ecology. Furthermore, students will attempt to bird by ear using careful listening. This act cultivates attention and auditory differential skills.

Central Questions

- Why are birds important?
- What services do birds provide?
- What challenges do birds face?
- What could happen if one or more species of declines?



Materials

- Video: Birding by Ear <https://www.youtube.com/watch?v=yxjXZnWrPrY>
- Speakers, Computer, Projector, and Internet

Procedure

1. Play the Birding by Ear Video for students. Pause after each vocalization to give students an opportunity to guess the species. (Note: The bird songs or calls in this video are only those of common birds).
2. Once students have participated for the entire video, take the group outside into a forested area and invite them to sit peacefully in one place.
3. Encourage students to choose a safe, solo, silent, and still seated position. This will optimize what they are able to hear. Invite students back together after 3-5 minutes. Ask them if they heard any birds. If so, what specific species of birds did they hear? Were there any bird calls or songs that the children heard but did not recognize?
4. Tell students that the birds they heard and perhaps saw also, each have an important job they do for nature (and the ecosystem as a whole). Ask children what they think those jobs may be?
5. The jobs/role birds do in ecosystems are:
 - Control of insect populations
 - Dispersal of seeds
 - Transportation / cycling of nutrients
 - Pollination of flowers
6. Ask children if they know any threats to birds:
 - habitat destruction (nesting, roosting, and foraging habitats)
 - collision with windows and other human made structures
 - chemicals: pesticides and herbicides (decreasing available food populations and poisoning)
 - non-native predators, including cats
7. Closing: By listening to nature's orchestra of songbirds, we are attuned to the many different kinds of life around us and the important role those animals play in the health and well-being of the earth.

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Classroom Culminations: Nature Sounds and Songbirds

Lesson 3: Songbird Threats Game

Background

Birds Many of Canada's approximately 450 bird species are in trouble, some have declined by more than 90 per cent, and a full third are considered of urgent conservation concern. The official list of Bird Species at Risk has doubled since 2001. Birds are ecologically significant species, as they provide a variety of "services" such as seed dispersal, insect control, and pollination: it is critical that we act to protect them.

Environment Canada research estimates that, in addition to the impacts of climate change and habitat loss, 130 to 433 million birds a year die as a result of human-related causes. These include collisions with windows, power lines, wind turbines and cars, use of pesticides decreasing food availability, and predation by domestic cats. Humane Canada is one of many organizations that urges cat owners to keep their pets safely indoors unless the cat is supervised or in an enclosure when outdoors. Estimates indicate that as many as 30 per cent or higher of pet cats are allowed to stray, in other words, roam at large outdoors. While cats' independent natures might lead some people to treat them like something between pet and wildlife, we owe them the same level of care we provide dogs.



While it is extremely difficult to calculate the number of birds killed by stray and feral cats — especially when the number of feral cats is not known — it is estimated that cats are responsible for 75 percent of the 130 to 433 million bird deaths directly caused by humans annually in Canada.

Materials

- 2 ropes
- 50-100 Poker Chips (i.e. food tokens); Milk caps work well too
- Pinnies (optional)
- 3 Hoola Hoops

Time: 45 Minutes

Procedure: Cats and Birds Game

1. Warm-up 1. Remind students of important concepts from the previous lesson: songbirds are an integral component to of nature and all ecosystems.
2. What are characteristics of cats that indicate they are predators? [Eyes in front of face enabling accurate judgement of distance, ability to jump quickly, claws on paws to grasp prey, retractable claws to move quietly] What are the characteristics of songbirds that help them avoid natural predators in their environment as prey? [Eyes on both sides of their head giving them a large field of view to detect movement of predators, ability to fly away, and warning others by alarm calls].
3. Let the students know they are about to play a game that explores what happens to songbirds populations when domestic cats are allowed to roam freely outdoors.

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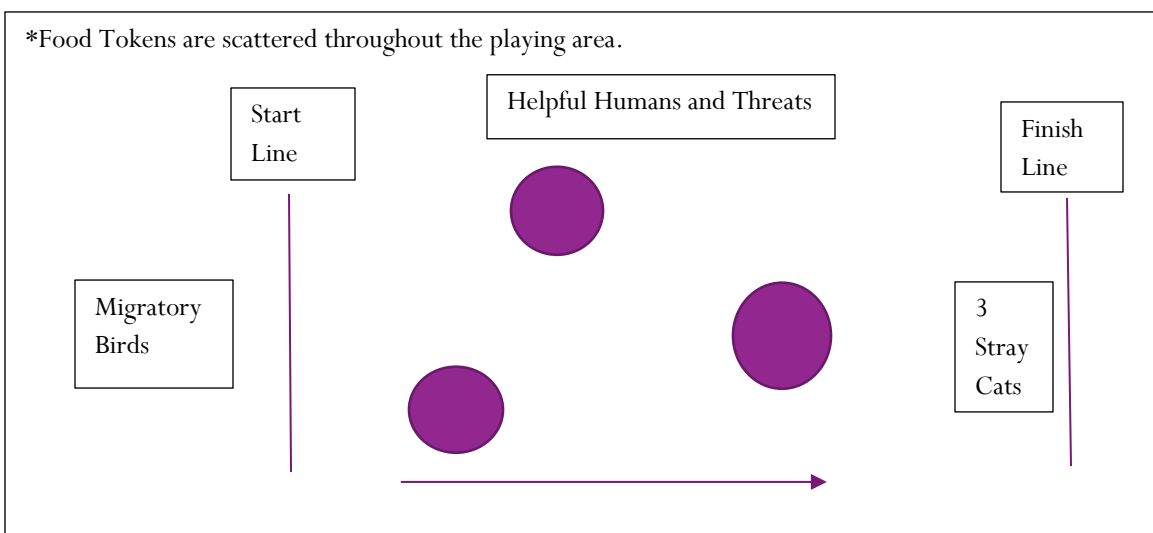
Song Writing, Drumming, and Found Sounds

Lesson 3: Songbird Threats Game (continued)

Procedure: Cats and Birds Game (continued)

Game Set-Up

1. In a large open area, identify the boundaries of the play area – this is the ‘neighbourhood’. Identify two end zones, roosting and nesting habitats, using 2 lines to clearly indicate the boundaries. Between the end zones is the feeding habitat. It is not as important to have the other two sides clearly marked (see diagram Figure 11).
2. Create 3 or 4 “safe havens” in the feeding habitat of approximately 1 meter in diameter between the two ends. The number of safe havens depend on your class size and size of the playing area; aim for one per six to seven students (safe havens help to slow down the game and increase interaction between cats and birds).
3. Distribute food tokens throughout the play area.
4. Explain the set-up to the students, indicating the roosting and nesting habitats at either end, the feeding habitat with food tokens in between, and the safe havens.
5. Designate 3 students as Stray Cats and 3 as Threats/Helpful Humans; the rest of the class are Songbirds (assuming a class size of 24 students; the overall ratio should be approximately 1/8 Stray Cat, 1/8 Threat/Human and 3/4 Songbirds).
6. Optional: to assist in identifying players, give the Stray Cats coloured pinnies or armbands to wear.
7. Explain the mission of the Songbirds is to “fly” from one side of the neighbourhood to the other side to search for food. As they find them, they pick up food tokens while avoiding being tagged by a Stray Cat. Birds reaching the opposite end from which they started with three or more tokens survive another day. Those that do not obtain three tokens move to the sidelines to decompose.
8. Explain that once the signal is given, the Stray Cats’ mission is to tag as many Songbirds as possible (signifying injuring a bird in the neighbourhood while roaming outdoors).
9. Note that Songbirds can “rest” by placing at least one foot inside the safe haven. While resting, they cannot be caught (tagged) by a Stray Cat.
10. Explain that each time a cat is tagged, they move to the sidelines to decompose.
11. Remind the class that stray cats face many dangers. As your review these threats, designate the three remaining students as Threats: 1 Car, 1 Disease/Parasite/Poison, and 1 Predator.
12. Then explain after a few minutes of play, another signal will be given to the Threats to start trying to tag Stray Cats. When tagged, Stray Cats go to the sideline to decompose.



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Lesson 3: Songbird Threats Game (continued)

Procedure: Cats and Birds Game (continued)

Playing the Game!

Rounds with Threats

1. Ask all the Songbirds to go to one end zone (Roosting and Nesting Habitat), with Stray Cats and Threats in one corner of the playing area (Foraging Habitat). Signal the Songbirds to start foraging and moving toward the opposite end zone of the 'Neighbourhood' / play area.
2. Once the Songbirds have spread out somewhat, signal for the Stray Cats to start hunting. After a minute or two of play, signal for the Threats to enter the game.
3. When all (or almost all) the Songbirds have either reached the other end of the Neighbourhood or are decomposing on the sidelines, stop the play.
4. Check to see if all Songbirds in the end zone have three food tokens. If they do not, they join the others on the sidelines to decompose.
5. Ask the Investigators to record the number of Songbirds and Stray Cats still in play. Once done, those on the sidelines can rejoin the Songbird population (due to successful breeding!); same with Stray Cats. Return the food tokens to the foraging area and ensure Songbirds have the appropriate number of Life Cards; Stray Cats should start with no Life Cards.
6. Play another few rounds, noting numbers for each round. As appropriate for your class, you can alter variables to explore additional concepts (see Game Variations below).

Final round with Helpful Humans

1. For the last round of this game, the students that were Threats now become Helpful Humans (change around players as desired). Ask your students, what can humans do to help keeps cats safe, while saving bird lives?
2. For this final round, play the game as before, instructing the Helpful Humans to look for Stray Cats to adopt. Once they tag (adopt) a Stray Cat, instruct them to bring the Stray Cat over to you.
3. Allow the Songbirds to complete their foraging journey from one end to the other.
4. Discuss with the class the differences they noticed between communities with or without Helpful Humans. Summarize which is better and why. Review possible actions students can take to keep cats safe and save bird lives. Optional: Provide students with the Helpful Human cards to read aloud (See below).
5. Game Variations:
 - Increase or decrease the number of cats and or threats
 - Place food items in a concentrated area away from the safe havens, representing feeders

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Helpful Human Cards

Take your cat on a leash walk just like a dog.	Build an outdoor enclosure or “catio”.
Talk to your parents about keeping your cat safe from roaming at large.	Help your cat play. Make sure they are having fun and getting enough exercise indoors by playing with them.
Tell a friend why too many outdoor cats can mean bad things for the cats, birds, and us.	Instead of buying a kitten at a pet store, adopt a kitten from your local humane society.
Get your cat spayed or neutered.	Ask your parents to let a neighbor who owns a cat know about the issues you learned in school.