



REGINA
SYMPHONY
ORCHESTRA

Gordon Gerrard
Music Director

R S O I N S C H O O L S T E A C H E R S ' G U I D E



PRESENTED BY



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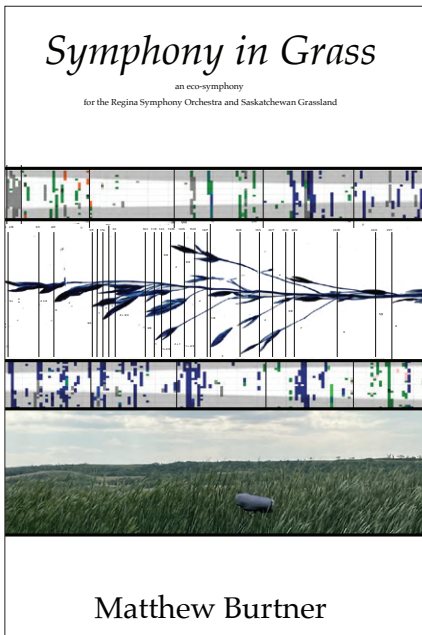
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The Regina Symphony Orchestra acknowledges that we are on Treaty 4 Territory, which is the traditional territory of the Cree, Saulteaux, Dakota, Nakoda, and Lakota Peoples, and the homeland of the Métis. In the spirit of reconciliation and collaboration, we commit to moving forward in partnership with the Indigenous people who live here and across Canada.

Introduction



About the Music

Symphony in Grass is an eco-symphonic composition resounding the unique environment of Saskatchewan through music and eco-acoustics. The piece begins with a symphonic transcription of a single blade of grass and builds into a sonic grassland that is blown by the wind. The middle section features texts composed by residents of Saskatchewan who reflect on their personal experience with the landscape, and during this section the orchestra performs a data sonification of one year of light, temperature and weather data from Regina.

About the Project

Award-winning environmental music composer, Matthew Burtner, created a major new work for the Regina Symphony Orchestra under the Direction of Gordon Gerrard. The new piece was composed for the Regina Symphony and the Saskatchewan environment, bringing the landscape of shifting winds and grasses into dialog with the human sonic imagination. The music includes recorded sounds of the prairie environment such as wind, grass, and water which the musicians enhance, imitate, and develops throughout the piece. This project allows students to explore orchestral artistic expression that is connected to the world they live in while also providing a global perspective. Students will have the opportunity to explore the intersections of science, music, and culture.

History of the RSO

Conexus Arts Centre
Chris Graham Photography



Long before Regina had gained its status as a city, the cultural arts were beginning to flourish. As good fortune would have it, many of Regina's early settlers, including members of the North West Mounted Police, were talented musicians and vocalists. However, that talent needed the stimulation provided by Scottish immigrant Franklin L. Laubach.

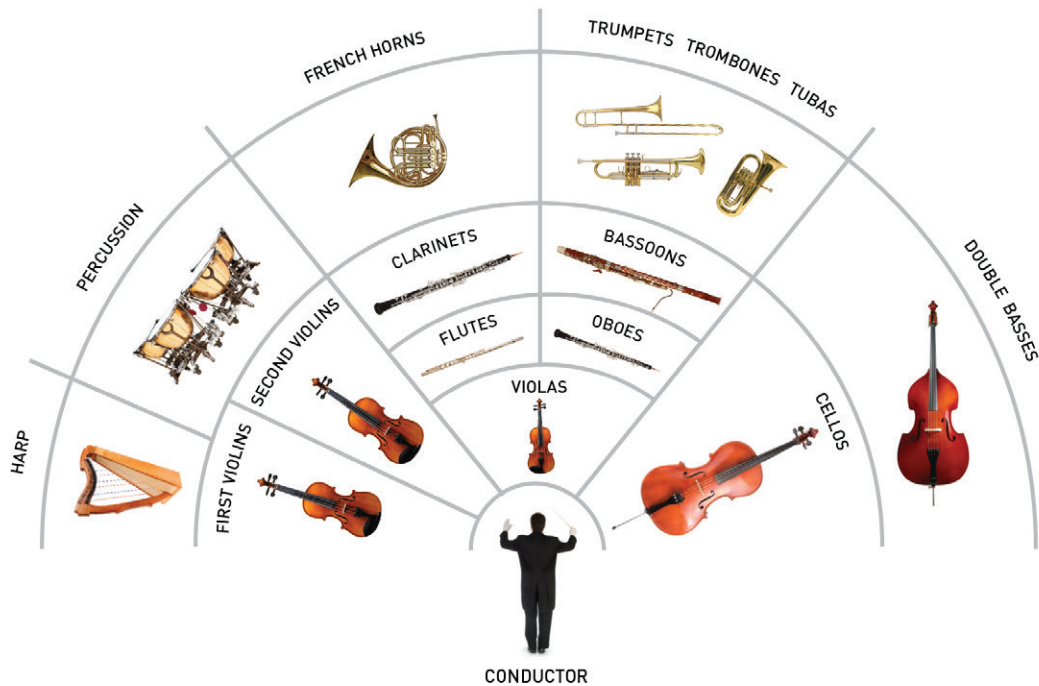
Upon realizing that farming was not for him, Franklin Laubach moved with his family to Regina, where he turned his attention back to his original career in music. By 1904 he had organized the Regina Philharmonic Society, and in 1906 conducted Haydn's Creation at Knox Metropolitan United Church with a chorus of 67 voices and an orchestra of 13 musicians. By 1908 the Orchestral Society was formed, and its inaugural concert was presented in the City Hall Auditorium on December 3 of that year. The evolution of the orchestra continued when in 1923 the Regina Choral and Orchestral Society became the Regina Symphony Orchestra, the Regina Choral Society, and the Regina Male Voice Choir. Darke Hall, on College Avenue, was

formally opened in 1929, giving the orchestra its first home after years of playing in various buildings in the city.

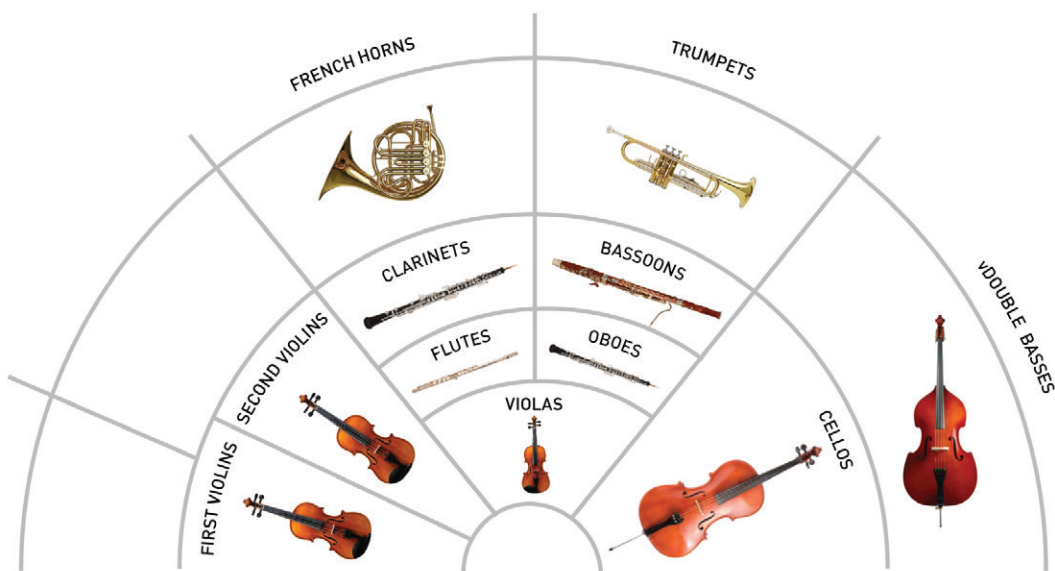
Today the RSO is a full-scale, fully professional orchestra. As well, the Regina Symphony Chamber Players present dozens of school concerts each season, perform concerts in southern Saskatchewan communities, and offer free concerts in venues throughout the City of Regina.

The RSO plays an important role in the cultural fabric of southern Saskatchewan. By continuing to strive for excellence in performance and by remaining relevant to its audiences, the orchestra will continue to grow and enrich life in southern Saskatchewan.

Instruments of the Orchestra



INSTRUMENTS OF THE REGINA SYMPHONY ORCHESTRA



INSTRUMENTS OF THE REGINA SYMPHONY CHAMBER PLAYERS

Instruments of the Orchestra

STRINGS – String instruments have metal strings stretched across the length of the instrument. Sound is created by bowing, plucking, or striking the strings. Most commonly a bow, made of horsehair, is drawn across the strings to make them vibrate. Different pitches are created by bowing different strings or shortening their length by placing fingers on the string. This instrument family is the largest section of the orchestra and includes instruments that play very high like the violin and very low like the double bass.



Violin – The violin is the smallest and highest string instrument in the orchestra. In an orchestra, there are more violin players than any other instrument. Violins are divided into two groups: first violins and second violins. The first violins often play the melody and very high. The second violins play a supporting role as harmony. The violin has four strings that are tuned in fifths to the notes G, D, A, E.



Viola – The viola is larger and lower than the violin and has a dark mellow tone. The viola section is smaller than the violins, but they also play an important role in the orchestra as harmony and supporting the melody. Violas play lower than the violin in the alto clef. There are 4 strings on a viola that are tuned in fifths to the notes C, G, D, A.



Cello – The cello looks like a large violin turned on its end. While the violin and viola are held under the musician's chin, the cello is so large that it rests on the floor, using a metal pole called an endpin. Cellists must sit down to play their instrument. The cello plays in the bass clef which is lower than the violin and viola. The sound of the cello is even more mellow, dark, and deep than the viola. The cello has four strings that are tuned in fifths to the notes C, G, D, A.



Bass – The bass is the largest and lowest of all the string instruments. The bass looks like a large cello, and also uses an endpin to rest the bass on the ground. The bass is so large that the musician must stand or sit on a stool. The bass is the foundation of the orchestra playing the lowest notes in the string section and helps to keep time. The bass has four strings which are tuned in fourths, rather than fifths like the other string instruments in the orchestra, to the notes E, A, D, G.

Instruments of the Orchestra

WOODWIND – Woodwind instruments were traditionally made of wood which is how they received their family name. Today woodwind instruments are made of metal, wood, and plastic. These instruments are tubes with holes that can be covered or opened to change the pitch. Most woodwind instruments use a small piece of cane, called a reed, that is filed to be very thin at the tip. When the musician blows air across the reed it vibrates creating sound. The flute is the only woodwind instrument in the orchestra that does not use a reed to create sound. Instead, they blow air across a hole in the instrument. Woodwind instruments are among the highest-pitched in the orchestra.



Flute – The flute is the only woodwind instrument in the orchestra that does not use a reed. Instead, sound is created by blowing across a hole at the end of the instrument - like blowing across the top of a soda bottle. The flute is a metal tube with holes in it. When a musician covers the holes with their fingers, the pitch changes. The flute is the highest of the woodwind instruments and has a bright and shimmering sound that can sing over the whole orchestra.



Piccolo – Often flute players will also play the **piccolo**. The piccolo is a small flute that plays an octave higher. The piccolo plays very high and very loud. Despite its small size, the piccolo can project its sound over the full orchestra.



Oboe – The oboe is a long wood tube with holes and uses two reeds to create sound. Instruments that use two reeds to create sound are called “double reed” instruments. To change notes, the musician covers and uncovers the holes with their fingers. The oboe has a nasal sound and can play very high.



English Horn – Oboe players will often play the English horn as well. The English horn is a larger lower sounding oboe. The English horn plays a fifth lower than the oboe and has a bulbous bell, called a d’amour bell, which helps to give the English horn a mellow and round sound. A larger double reed is used for the English horn.

Instruments of the Orchestra

WOODWIND CONTINUED



Clarinet – Like the oboe, the clarinet is also a wooden tube with holes. The clarinet uses a single reed placed against a mouthpiece to create sound. Instruments that use one reed and a mouthpiece are called “single reed” instruments. The musician covers and uncovers holes with their fingers to change notes. The clarinet has a mellow, dark sound, and can play very high and low. The clarinet is a B-flat transposing instrument and sounds a major second lower than written.



Bass Clarinet – Clarinet players perform on bass clarinet as repertoire demands. The bass clarinet plays an octave lower than the soprano clarinet. The bass clarinet plays in the treble clef and has a deep, dark sound, and uses a reed twice the size of a soprano clarinet.



Bassoon – The bassoon is a bass instrument and uses a double reed like the oboe. The bassoon is a collection of wooden tubes. The musician covers and uncovers holes in the side of the bassoon with their fingers to change the pitch. The bassoon has a mellow, nasal sound, and plays in the bass and tenor clef.



Contrabassoon – Bassoon players double on the contrabassoon when repertoire requires. The contrabassoon is a very large bassoon. The contrabassoon plays an octave lower than the bassoon and the sound is very raspy and is often physically felt more than heard. The contrabassoon uses a very large double reed.

Instruments of the Orchestra

BRASS – Brass instruments are tubes made of brass. A musician creates sound on a brass instrument by buzzing their lips into a mouthpiece. The pitch can be changed by changing the speed of lip vibration and opening and closing valves which lengthen and shorten the instrument. These instruments range in size from small and high like the trumpet, to very large and low like the tuba.



Horn – The horn (sometimes called the French Horn) is a very long (12 feet!) brass tube that is wound into a circle. A metal narrow mouthpiece is inserted into the end of the horn and the musician buzzes their lips on the mouthpiece to create sound. The musician uses their fingers to open and close a series of 4 valves that open and close different sections of short and long tubing. In an orchestra, you will often see two or four horns. The horn is an F transposing instrument sounding a perfect fifth lower than written.



Trumpet – The trumpet is a metal series of tubes that are joined by three valves. The musician buzzes into a cupped mouthpiece at the end of the instrument. The musician changes notes by increasing and decreasing the speed of their lip vibration and using their fingers to open and close a series of 3 valves. These valves open and close different sections of the tube making the trumpet longer and shorter. The trumpet is the highest brass instrument and plays in the treble clef. The trumpet is a B-flat transposing instrument and sounds a major second lower than written.



Trombone – The trombone is a long metal tube with a cupped metal mouthpiece. The trombone is larger than the trumpet and horn and uses a slide. The slide is used to make the instrument longer and shorter. When the trombone is short it plays high; when the slide is extended making the instrument long, the pitch is low. The slide also allows this instrument to smoothly glide between notes creating an effect called glissando. The trombone has a low sound and plays in the bass clef.



Tuba – The tuba is the largest and lowest brass instrument. It is a very large brass tube that is wrapped in an oval shape. This instrument is so large that the musician must rest it on their chair or a special stand. The tuba has 3 valves that open and close different lengths of the tube changing the pitch. The tuba plays in bass clef and can play very low and loud.

Instruments of the Orchestra

PERCUSSION – Percussion instruments are struck or hit to create sound. A percussion instrument can be struck with a mallet, beater, or stick depending on the instrument. These instruments fall into two general categories: pitched and non-pitched instruments. There are many different percussion instruments. Almost anything can be a percussion instrument, as long as it makes a sound when you strike it. There is even music where percussionists perform on kitchen pots and pans!



Timpani – Timpani, or Kettle Drums, are a set of 5 drums that range in size. The timpani is played by striking the top of the drum which is covered by a tightly stretched skin called a drumhead. A mallet is used to hit the drumhead. Mallets are usually sticks with ends that are wrapped in yarn. Each timpani drum has a foot pedal that is attached to the drumhead. This pedal is used to tighten and loosen the drumhead creating different pitches. Timpani drums are low instruments and play in the bass clef.



Snare Drum – The snare drum is a medium size drum with a metal body and two drumheads attached to the top and bottom of the drum. The bottom drumhead has metal wires called snares resting on it which vibrate when the drum is struck. The percussionist strikes the top drumhead with a wooden drumstick to create a sharp staccato attack.



Marimba – The marimba is a pitched keyboard percussion instrument that is made of wood bars positioned in the same formation as piano keyboard. Below each wooden bar there is a pipe called a resonator which amplifies the sound of each bar. The musician uses a mallet to strike the bars to create sound. Percussionist often play the marimba with four mallets, two in each hand, so they can play four notes at the same time. The marimba plays very high and very low in treble and bass clef.



Triangle – The triangle is a small unpitched percussion instrument. The triangle is a metal bar in the shape of a triangle. The percussionist hangs the triangle from a piece of string and strikes the side of the metal bar with a metal beater. The sound is bright and metallic and can pierce through the full orchestra.

Grassland

RSO In Schools Teachers Guide

The following unit is comprised of four lessons inspired by composer Matthew Butner's *Symphony in Grass*. This composition marries naturalistic elements from local grasslands in conjunction with the orchestral sounds of the Regina Symphony Orchestra. Throughout the lessons, students will learn how to analyze music, investigate found sounds, and use technology to notate their own compositions. The teacher's guide will help facilitate meaningful learning, as students connect their exploration to the Saskatchewan curriculum and what it means to reside in this prairie landscape.



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Lesson 1: Analyzing and Interpreting the Music

OBJECTIVE

Students will be able to analyze elements of the composition and how it relates to the Saskatchewan landscape. They will be able to communicate their ideas through an arts expression.

LESSON OVERVIEW

Students will listen to the composition and participate in a guided discussion surrounding the musical elements and themes presented in the music. This will lead into a poetry writing activity using the “Where I’m From” prompt by George Ella Lyon.

SASKATCHEWAN MINISTRY OF EDUCATION CURRICULUM LINKS

CR7.1, CR7.2, CR8.1, CH8.4,
CR9.1, CH9.4, CR10.1,
CR20.2, CR30.2

Cross-curricular
Competencies:

- English Language Arts

CONTEXT

“Symphony in Grass” combines a multitude of artistic expressions. While composing, Matthew Butner used sound recordings, music inspired by local data, and spoken text from individuals living in the grassland ecosystem. The text conveys a strong sense of place, and contextualizes the musical choices made.

MATERIALS

- Internet connection, speakers, and projector
- Images of Saskatchewan landscapes, both rural and urban

Note: There are many Saskatchewan landscape videos on YouTube that could be used.

- Printed “I Am From” Poetry Prompt

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Lesson 1: Analyzing and Interpreting the Music

ACTIVITY

1. Invite students to listen to “Symphony in Grass”. Display the images of Saskatchewan Landscapes while listening to the music.
2. After listening to the composition, open up the space for discussion surrounding first impressions of the music. Use the following questions as a means to guide the discussion:
 - a. *What natural and manmade sounds did you hear in the music?*
 - b. *How does the composer imitate sounds found in nature?*
 - c. *Did different sections of the music make you feel or think of different things?*
 - d. *What could a change in the music (dynamic, tempo, rhythm) represent in nature? Ex: A loud cymbal crash could represent a prairie thunderstorm.*
 - e. *How does the spoken text aid in our understanding of the music?*
3. Explain that this symphony was composed using elements from the prairie grasslands. The first section of the piece is based on the dimensions of a blade of grass from Wascana trails, and the later section uses one year of weather, light and temperature data to guide the composers writing. Discuss with students the relationship between self and place, and how our environment impacts who we are. Use the following questions as a means to guide the discussion:
 - a. *What types of environments can we experience in Saskatchewan? Ex: Rural vs. Urban*
 - b. *How does our physical environment impact who we are?*
 - c. *Do we make assumptions about others based on where they are from?*
 - d. *How does our grassland biome support different ways of living and knowing, both past and present?*
4. Hand out the “Where I’m From” poetry prompt to each student. Explain that the composer used text to convey meaning in the symphony, and similarly, students will be using the poem “Where I’m From” by George Ella Lyon to convey their own sense of place. Read the original poem out loud to students, then have them read the “inspired” poem in their heads. Using the think, pair, share method (or another discussion tool) have students analyze the poem. Some questions to consider are:
 - a. *What are the similarities and differences between the two pieces of writing?*
 - b. *What lines had strong imagery? What senses were engaged?*
 - c. *What images could you relate to?*
 - d. *How could someone’s experience of Saskatchewan change the meaning of the poem?*
 - e. *What type of music would you score the poems to? Would they work with Symphony in Grass?*

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Lesson 1: Analyzing and Interpreting the Music

5. Allow students time in class to compose their poems. If comfortable, give students a chance to share their work, speaking while “Symphony in Grass” is playing. After sharing, some questions to consider are:
- Did the music change the meaning of your poem or vice versa?*
 - Does the music convey the sense of place in your poem? Why or why not?*
 - What other music or sounds could support the meaning in your poem?*

Extensions and Adaptations:

- Depending on students comfort level with writing, they can choose to use the written poetry prompt, or expand on the original poem format without it.
- For students who struggle with writing, there is an “I Am From” poetry generator that can be used. Note: The format is slightly different than that of the prompt for this lesson.

Resources:

- I Am From Project: <https://iamfromproject.com/>
- I Am From Poetry Generator: <https://freeology.com/worksheet-creator/poetry/i-am-from-poem/>



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I Am From

A Poem Inspired by George Ella Lyon

I am from _____.

(specific ordinary item relating to now)

From _____ & _____.

(two specific ordinary items relating to the past)

I am from the _____.

(description of "home" – a place of importance)

_____, _____, _____.

(adjective, adjective, sensory detail about "home")

I am from _____.

(a natural item – plant, stone, animal, landscape, etc.)

_____.

(two sentences about that natural item)

I'm from _____ & _____.

(family tradition, family trait)

From _____ & _____.

(a good family memory, a bad family memory)

I am from _____.

(something you have heard or been told over and over again)

I am from _____.

(lyric, song title, prayer, or saying that is important to you)

I am from _____.

(place of birth)

_____ & _____.

(two foods that are important to you)

From the _____.

(describe a special moment you had with someone you care about)

I am from _____.

(symbolic description of you that related to what you have shared so far)

_____.

(repeat a previous line or make reference to one)

I am from _____.

(another lyric, song title or saying that is important to you)

AUTHOR: _____

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Original Poem Where I'm From by George Ella Lyon	Model Poem Where I'm From by Anonymous
I am from clothespins, from Clorox and carbon-tetrachloride. I am from the dirt under the back porch. (Black, glistening, it tasted like beets.) I am from the forsythia bush the Dutch elm whose long-gone limbs I remember as if they were my own. I'm from fudge and eyeglasses, from Imogene and Alafair. I'm from the know-it-alls and the pass-it-ons, from Perk up! and Pipe down! I'm from He restoreth my soul with a cottonball lamb and ten verses I can say myself. I'm from Artemus and Billie's Branch, fried corn and strong coffee. From the finger my grandfather lost to the auger, the eye my father shut to keep his sight. Under my bed was a dress box spilling old pictures, a sift of lost faces to drift beneath my dreams. I am from those moments-- snapped before I budded -- leaf-fall from the family tree.	I am from apple boxes, from autumn and awning covers. I am from the room below my bed. (Vibrating, earthy, the music travelled up the stairs.) I am from the raspberry bush overflowing in the summer heat like the swollen belly carrying my son. I'm from handwritten cards and wide hips, From the backseat driver and the silent treatment. I'm from watch your lip there're birds around. I'm from sunshine makes me happy when skies are grey. I am from a pile of bones, buttered bread and beet soup. From my sister's tooth lost to the pavement, and the time it took to see her grin. I am from apples and Eve's. From berry picking with bears, And not batting an eye. I am from the spine of a book, the women who couldn't read it, and their bending over breaking.

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Lesson 2 - *Comparing Found Sounds*

OBJECTIVE

Students will be able to compare and contrast two pieces of music that use found sound.

LESSON OVERVIEW

Students will choose a piece of music to compare and contrast with "Symphony in Grass". Students will use a Venn diagram to show their understanding of the two compositions.

SASKATCHEWAN MINISTRY OF EDUCATION CURRICULUM LINKS

CH7.1, CH8.3, CH9.3,
CR10.1, CR20.1, CR30.2

CONTEXT

Composer Matthew Butner recorded hours-worth of grassland sounds in order to compose "Symphony in Grass". These recordings can be heard throughout the performance of the piece. Found sound is integral to his creative process, and provides both inspiration and context for his compositions.

MATERIALS

- Internet connection, speakers, and projector
- Devices for students (school laptops, tablets or personal cellphones depending on classroom protocol)
- Printed Venn Diagram Worksheet
- Pencil

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Lesson 2 - *Comparing Found Sounds*

ACTIVITY

1. Begin the lesson by asking students to take out a pencil. Ask them how many sounds they can create using the pencil. This can be done from their spots or moving around the space. After, explain the concept of “found sound”.

Found sounds are created from the world around us. They can be anything - a ball hitting the floor, the sound of a phone ringing, or a train coming down the tracks. This technique is called sampling as the musician is taking a sound recording (sample) of something else and using it in their work.

2. If students have not already listened to “Symphony in Grass”, begin by having them listen to it as a class.
3. While listening, have students use the Listening Brainstorm side of the worksheet to write down what found sounds they hear. They can complete this task individually, in partners or as a class.
4. Explain to students that they will be choosing a piece of music to compare and contrast with “Symphony in Grass”. They will be listening for similarities and differences in the types of found sounds used and musical elements between the two pieces. This can be done individually or in pairs – adapt to what works for your students and classroom space.
5. Students can choose from the listening guide on page 19.

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Lesson 2 - Comparing Found Sounds

ACTIVITY

SONG TITLE	COMPOSER	YEAR
<i>Etude aux chemins de fer</i>	Pierre Schaeffer	1948
<i>The Typewriter</i>	Leroy Anderson	1950
<i>9 to 5</i>	Dolly Parton	1980
<i>Music From a Dry Cleaner</i>	Diego Stocco <i>Note: This is on YouTube and worth watching with students as it shows the sounds being created and recorded</i>	2011
<i>Money</i>	Pink Floyd	1973
<i>Pools</i>	Glass Animals	2014
<i>Little Talks (Cover)</i>	Kurt Hugo Schneider and Kevin Olusola	2013
<i>Green Knight</i>	Memory Tapes	2009

Note: There is a Spotify playlist containing more found sound music. The link can be found below:

<https://open.spotify.com/playlist/7GHWSqy9Gv0LCR0fS1o57l?si=622b1ab27f764108>

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Lesson 2 - *Comparing Found Sounds*

6. Have students listen to their chosen piece on their device, and complete the Venn Diagram. Encourage them to listen for the found sounds and try to identify what was used to make it. They should focus on identifying the similarities and differences between the pieces; found sounds, dynamics, rhythm, texture, tempo, etc.
7. Once completed, students who chose the same music can group together to discuss their findings. This can aid in filling in any gaps on their diagram, and allowing for discourse on their interpretations.
8. Student groupings can then share their findings with the class as a whole. Allow them to play their piece of music, and share their collective observations from their Venn diagrams.

Extensions and Adaptations:

- This lesson allows students to work independently, in pairs, or small groups. Allow for flexibility within your classroom climate, and adjust groupings as necessary depending on the levels of support your students need. Alternatively, this activity could be done as a whole class, using one piece of music and completing the diagram on the board together.
- If students struggle to write their findings down, allow them to share their ideas orally.

Resources:

Themes and Variation Podcast about found sound:

<https://player.captivate.fm/episode/219b9d99-ae3-49c6-9f4e-db02904ca58c>

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Lesson 3 - *Comparing and Contrasting Music*

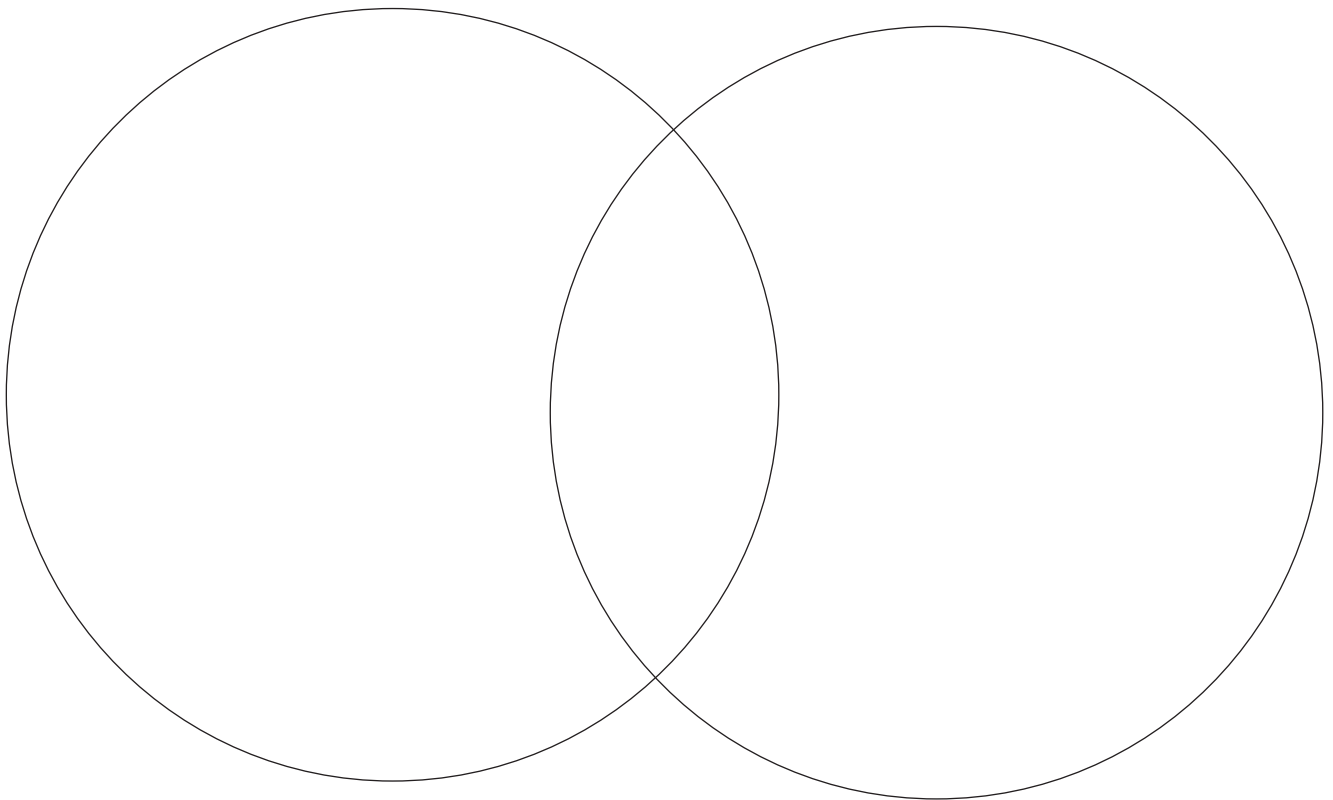
COMPARING AND CONTRASTING MUSIC

SYMPHONY IN GRASS

MY CHOICE:

Title: _____

Composer: _____



LISTENING BRAINSTORM:

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Lesson 4 - *Creating Soundscapes*

OBJECTIVE

Students will be able to create a composition using found sounds.

SASKATCHEWAN MINISTRY OF EDUCATION CURRICULUM LINKS

CP7.7, CP8.8, CP9.8,
CP10.1, CP20.1, CP30.1

MATERIALS

- Internet connection, speakers, and projector
- Found objects
- *Note: Depending on class ability, students can find their objects from their desk, the classroom as a whole, be allowed to explore the school, or ideally, explore outside.*

LESSON OVERVIEW

Students will explore sound making with both natural and manmade objects from their environment. They will use these objects to create a collaborative composition.

CONTEXT

In order to compose “Symphony in Grass”, composer Matthew Burtner started with a field recording from Wascana Trails. He set up a microphone, and took in the sounds of the natural landscape. He then used these sounds as a backdrop for the composition. He based the notes off of two pieces of data. The first, being a blade of grass from the trails, and secondly, a year of weather and temperature data from Regina. All of these elements together created the piece the music.

Grassland

Lesson 4 - *Creating Soundscapes*

ACTIVITY

1. Begin the lesson by reiterating to students what found sound is. Discuss how composer Matthew Burtner wrote "Symphony in Grass".
2. Following the discussion, watch "Household Percussion Jam" by Brigham on YouTube:
[Link: https://www.youtube.com/watch?v=S8Cqi5WxSU&t=78s](https://www.youtube.com/watch?v=S8Cqi5WxSU&t=78s)
3. Discuss with students the different types of sounds heard. Use the following questions to guide discussion:
 - a. What types of sound did you hear?
 - b. Were objects being played in the way you thought they would be?
 - c. What rhythms and sounds worked well together? Why?
 - d. How is this piece similar and/or different to "Symphony in Grass"?
 - e. How does the addition of an instrument change the music?
4. Send students around to collect their object. Allow them time to explore the space, see what's available to them, and experiment with all the ways the object could potentially make sound.
5. Once students have decided on their object, have them group together.

Note: Groups of 4-5 would work best. Make sure each student in the group has a different object.
6. Groups will compose a short piece of music together. On page 24, there are guidelines to focus the students learning objectives:

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Lesson 4 - *Creating Soundscapes*

Musical Ideas:	Students should demonstrate multiple variations within their composition. It should not sound the same from beginning to end.
Musical Elements:	In conjunction with Musical Ideas, there should be changes in tempo, rhythm and dynamics. Students should be encouraged to feature different objects, layer different sounds, and create variety within their composition.
Object Use:	Students should show multiple ways of accessing sounds from their object. For example, hitting and water bottle and shaking it.
Collaboration:	Students should be able to work collaboratively, highlighting each found sound to create a complete composition.

7. Give students time in class to work on their compositions.

Note: Students should focus on the creative process of the composition, not the notation. Encourage students to record their ideas in a way that makes sense to them.

8. Depending on the comfort level of students, they can perform their piece directly to the teacher, for another group, or to the whole class.

Extensions and Adaptations:

- Extend this lesson by having students find music that could fit with their composition. They can adapt their piece to fit with the tempo, rhythm, dynamics and other musical elements of a pre-recorded piece. Have students justify their reasoning for picking a specific song, using the musical terms found throughout the lesson.
- This assignment could be done independently, with support. Ask students to find a piece of music to play along to with their object. Encourage them to match the tempo, rhythm and dynamics within the pre-recorded song.

Grassland

Lesson 5 - *Composing With Nature*

OBJECTIVE

Students will be able to write a composition using multidisciplinary processes.

SASKATCHEWAN MINISTRY OF EDUCATION CURRICULUM LINKS

CP7.8, CP8.8, CP9.8,
CP10.2, CP20.2, CP30.2

CROSS-CURRICULAR COMPETENCIES:

Math
Science

LESSON OVERVIEW

Students will compose a piece of music based off of an ecological phenomenon. They will use Chrome Music Lab to notate, document their musical choices, and share their composition.

CONTEXT

While writing “Symphony in Grass”, composer Matthew Butner took inspiration from the prairie grasslands landscape. He charted a single blade of grass, and used the data to create music. Moreover, he took readings from weather and temperature data to inspire the second half of the symphony. By exploring alternative means of composition, he was able to create a multifaceted arts expression that combined both ecological and symphonic elements.

MATERIALS

- Internet connection, speakers, and projector
- Devices for students (laptops or tablets will work best - depending on classroom protocol, cellphones will also work).
- *Note: Teachers should review how to use Chrome Music Lab prior to teaching this lesson. There is a comprehensive video under “Resources” to help guide you.*

ACTIVITY

1. Begin by taking students through how to use Chrome Music Lab – this can be done as a class. Project the program onto the board, and have students follow along on their device. Students should understand how to:
 - Plot notes on the grid, including harmonies
 - Plot rhythms
 - Change instruments sounds
 - Adjust beats, length and tonality

Chrome Music Lab:

<https://musiclab.chromeexperiments.com/Song-Maker/>

2. Have students choose an ecological phenomenon to base their musical creation on. Below are two examples, with composition ideas:

Grassland

Lesson 5 - *Composing With Nature*

PHENOMENON	EXAMPLES IN NATURE	COMPOSITION IDEAS
Fibonacci Sequence	Flower petals, pinecone rows, shapes of shells, formations of hurricanes	The Fibonacci sequence is a mathematical pattern that adds the two previous numbers to get the next (1, 1, 2, 3, 5, 8, etc.). Use the Fibonacci sequence to inspire your rhythm or melody. Consider how musical elements like tempo and key would change if it was inspired by a flower vs. a hurricane.
Waves	Ocean surf, tsunamis, deep water waves	Scientists use height and length to measure wavelengths. Use forms of measurement to inspire your rhythm or melody. Consider how a wavelength would both sound and look, notated on Chrome Music Lab.

Other Phenomenon/Ideas: Fractals, Concentric circles, Hexagons

Note: Most of these are math based concepts. Students are welcome to explore other ecological elements such as weather, plant life cycles, metamorphosis, etc.

- Allow students time in class to work on their compositions. While they are composing, have them document their thought process and rationale for their musical choices. This can be done with jot notes or a formal paragraph – adjust to the students ability level. Questions to guide their process include:
 - What musical elements were manipulated? What do they represent?
 - What auditory or visual clues did you include in your composition?
 - Does your composition have different sections? Why?
- Once completed, invite students to share their compositions. This could be done in small groups, or to the class as a whole. Allow students to share their thought process behind compositional choices. Encourage feedback from the class – 2 positive statements and a question for the “composer”.

Extensions and Adaptations:

- Turn the sharing portion of the lesson into a game. Can students guess the ecological phenomenon/element by listening to the composition first?
- There is a mic option on Chrome Music Lab - it registers vocal tones and turns them into notes. This could be adapted to support students with varying abilities.

Resources:

Chrome Music Lab Tutorial: <https://www.youtube.com/watch?v=9L-GMmooT0A>

Texts by Glenn Sutter and Ryan Fisher

Having this opportunity to spend time in the grasslands is a privilege that not many people have. It allows me to be immersed in the heart of the Saskatchewan landscape...

Waking up at sunrise, standing in a pasture that is about as far away from the city as you can get...

At times I was alone, the only member of my species as far as the land and impossibly blue sky reached in each direction. But I was never lonely. The nature of my visit made it clear that life was teeming all around, often on a very small scale, if I would only take the time to notice. And I did.

The loggerhead shrike that landed on my knee as I was resting after a long morning of counting other grassland birds and searching for their nests.

Standing quietly and respectfully inside a big circle of stones, one of many that had secured bison-hide tipis and marked this hilltop as a special spot for thousands of years.

It is easy to imagine people travelling across the province today being oblivious to this, especially if they pass through on the #1. Most of that highway cuts across flat land that has been almost completely altered by industrialized agriculture and other colonial activities. Through much of the 1800s, travelers making that same trip would have had a very different experience. Before the railways came through in the 1880s, people traveled mostly on foot or horseback, more exposed to the elements and potential threats, including grizzlies and wolves. A safe trip meant being aware and equipped with the tools and information required for survival. Indigenous people were especially well prepared, with a deep traditional knowledge of medicinal plants, game animals, and how to predict weather.

Hearing the dawn chorus of the birds that call this part of the province home is truly an amazing experience.

My perspective on Saskatchewan prairie landscapes developed more like the slow

push of a seedling as it moves towards the light, breaks the surface, and becomes an ever-growing and recognizable plant.

It's these times when it really hits home how special this part of the province is and how we all need to do our part to protect and manage this important area.

Watching smoke rise ahead of a fast-moving storm as I looked towards the horizon and into the wind, thankful for the rain that quickly doused a lightning-sparked grass fire.

Looking back, what did make a difference was the odd coolness of a flax plant as it channeled whatever water it could find to its leaves and all-important flowers on a hot day. The clouds of mosquitoes that emerged from nowhere and felt like a hungry blanket until the usually relentless wind returned and blew them mercifully away. The dive-bombing pair of eagles that tried to separate fawn from doe, coordinating their moves as the scared deer scrambled along the steep edge of a coulee. Almost tripping over another, younger fawn, mottled and instinctively frozen in wide-eyed worry, temporarily abandoned by a nearby parent who trusted that a mix of camouflage and behaviour would save the day.

listening to the slight breeze through the grass and cows mooing in the background...

All of these experiences and others helped me reach the surface and unfurl until, gradually and with some humility, I felt a sense of familiarity, awareness, and affection for those landscapes.

The natural prairie landscapes in Saskatchewan are like natural landscapes everywhere. There is rawness and power to them, an effortless and abiding sense of time and certainty that speaks to how beautiful and unforgiving nature can be, how necessary it is, and where humanity fits on its larger, ever-evolving canvas.

Overall, compared to the settled sameness of today, the prairie landscapes of the 1800s were incredibly diverse and untamed. A sense of this still comes across on large pieces

of grassland that have never been plowed, especially expansive, breath-taking pastures in southwest Saskatchewan.

These areas continue to support iconic animals, like Plains Bison, Black-tailed Prairie Dogs, Pronghorns, and Burrowing Owls. They also contain stone medicine wheels and teepee rings, tangible evidence of long-term human use. These carefully-placed stones make it clear that the natural prairie landscapes of Saskatchewan have never been uninhabited, wilderness areas. They have been co-evolving with Indigenous people since the end of the last Ice Age and are now missing that piece of their natural history.

The stands of trees that travelers encountered in the parklands were likely smaller, their spread limited by wildfires. During the warm months, any treed valley or upland offered potential breeding habitat for wildlife, migratory songbirds, and the superabundant Passenger Pigeon, now extinct.

Prolonged dry spells would increase the risk of prairie fire or massive swarms of the Rocky Mountain Locust, also extinct. In wet years, wetlands would dot the rolling prairie, attracting large flocks of shorebirds, cranes, and waterfowl, and providing water for other thirsty animals.

Except for areas mown down by rodents or large grazers, including bison, upland areas would be a flowing sea of different grasses, including big and little bluestems, grammas, fescues, and wheat, rye and spear grasses, along with sedges, small shrubs, and flowering plants that gave the land different seasonal hues.

The wide open prairie will always be welcoming and comforting, because of these moments.

Composer Biography



MATTHEW BURTNER

Matthew Burtner is an Alaskan-born composer, sound artist and eco-acoustician whose work explores embodiment, ecology, polytemporality and noise. His music has been performed in concerts around the world and featured by organizations such as NASA, PBS NewsHour, the American Geophysical Union (AGU), the BBC, the U.S. State Department under President Obama, and National Geographic. He has published three intermedia climate change works including the IDEA Award-winning telematic opera, *Auksalaq*. In 2020 he received an Emmy Award for "Composing Music with Snow and Glaciers" a feature on his *Glacier Music* by Alaska Public Media. His music has also received international honors and awards from the *Musica Nova* (Czech Republic), *Bourges* (France), *Gaudeamus* (Netherlands), *Darmstadt* (Germany), and *The Russolo* (Italy) international music competitions. He is the recipient of a National Endowment for the Arts Award for *The Ceiling Floats Away*, a large-scale collaborative work with US Poet Laureate and Pulitzer Prize-winning writer, Rita Dove. Burtner holds the position of Eleanor Shea Professor of Music at the University of Virginia (www.virginia.edu) where he Co-Directs the Coastal Future Conservatory (<http://www.coastalconservatory.org>). He also is founder and director of the Alaska-based environmental music non-profit organization

EcoSono (www.ecosono.org). His new album *Icefield* is out now on Ravello Records.

Burtner's compositions bring performers and listeners into interactive relationships with the environment through the use of musical ecoacoustics, a field he pioneered in the 1990s to imbed environmental energy within musical forms. Born and raised in Alaska, Burtner experienced the early dire effects of global warming in his home and he dedicated his early musical exploration to the study of snow, ice, ocean and atmosphere, examining the acute impacts of global warming through sound and music. National Public Radio's *Here on Earth's* Jean Ferraca described his work as "Fog, Ice, Snow, Cold, Sand, Lava, Wind: These are the elements out of which sound artist Matthew Burtner creates his eerily effective electroacoustic soundscapes, music that draws from both beauty and horror. He calls his music ecoacoustics. I say it's the world song." He studied music as a field in close dialog with science and technology, a blend of scientific inquiry, engineering and imaginative aesthetic expression that applies scientific methods as new forms of music theory.

Conductor Biography



KARL HIRZER, CONDUCTOR

Canadian conductor Karl Hirzer can't remember a time when he didn't want to be a musician. He was "composing" at the family's upright piano at age four, taking piano lessons at 6. At 12 he started playing guitar in heavy metal bands. He earned his ARCT at 17.

Today he's Associate Conductor of the Calgary Philharmonic and has led orchestras from Vancouver to Halifax, from the Gstaad Festival to educational programs in Warsaw. Karl studied piano performance at the University of Victoria and got his master's at McGill University in Montreal.

He's especially committed to programming music by living composers and offering concerts for young audiences. In November of 2022 he was awarded the Heinz Unger Award, recognizing Canada's most promising emerging conductor. He's also beginning to compose his own music - his first album of original material will be released in the fall of 2023.

Musicians of the RSO



CHRISTIAN ROBINSON, VIOLIN AND CONCERTMASTER

Christian was told by his parents that he had to learn the violin from the age 3-16, and he hated it! At age 13 Christian played a Mozart String Quartet. He loved playing Mozart so much, that it convinced him to keep playing the violin, and he learned to love it.



CARMEN CONSTANTINESCU, VIOLIN

Carmen fell in love with the sound of the violin. She associates the sound of the violin with the colour gold. She believes the violin, played physically close to her heart, expresses love and romance.



JOHNATHAN WARD, VIOLA

Jonathan prefers the unique, warm sound of the viola. He likes that the viola hides in the middle of the orchestra and has the role of keeping all the sounds of the orchestra glued together.



SIMON FRYER, CELLO

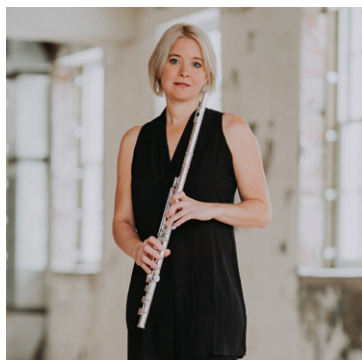
Simon's father really liked the cello, and this motivated Simon to ask for a cello for his 5th birthday! Simon likes the sound of the cello because it has similar qualities to the human voice.



CHRISTOPHER JONES, BASS

Before the bass, Chris began his musical journey with the guitar after deciding he was going to be a rock star! He felt, however, that his hands were too big for the guitar, so he decided to try out the bass instead. Behind the bass, Chris felt at ease: he could really express himself, and he loved how low the deep-sounding notes of the bass could go. Most of all, Chris loved that he could really feel the low vibrations of the bass more than any other instrument.

Musicians of the RSO



**MARIE-NOELLE
BERTHELET, FLUTE**

Marie-Noelle loves the silver sound quality of the flute. The sound of the flute reminds her of the moon, nighttime, and fairies.



HYONSUK KIM, CLARINET

Hyonsuk wasn't quite sure she liked the clarinet at first. She thought that the sound was bland and had no personality. When Hyonsuk discovered how versatile the sound of the clarinet could be, she started to love it. Hyonsuk thought the clarinet had a white sound like a blank canvas where colours could be added to make it shine! This discovery inspired her to be creative and love the clarinet.



MILES NEWMAN, TRUMPET

Miles loves the shimmering sound of the trumpet! It can soar above all the other sounds of the orchestra with its majestic, dominant, and powerful tone quality.



TAMSIN JOHNSTON, OBOE

When Tamsin was young, she tried the trombone and had no success playing it. Then she was given an oboe reed, but no oboe. For an entire year, she practiced with only the reed. When she finally put her reed on the oboe she fell in love. Tamsin loves the bittersweet tone quality of the oboe. It can express sadness, melancholy, and the consciousness of the human soul.



RICHARD BURDICK, HORN

Richard likes the mysterious tone of the horn. He feels like the horn is the glue that holds all the other sounds in the orchestra together. Richard describes the horn as being like the mist.

Musicians of the RSO



HENG HAN HOU

Hailing from Taiwan, Heng-Han Hou is a violinist who has been a part of the RSO family since September 2020. Heng-Han received his Doctor of Musical Arts from the University of Toronto. He might not be helpful when you have a medical emergency, but he can for sure cure your soul with his violin playing.



DARCY GINGRAS

Darcy began playing percussion at age 12 because he thought hitting things with sticks would be more fun than playing piano. He was right and has loved playing percussion ever since. Aside from that, Darcy really likes that percussionists get to be at the back of the orchestra and have the ability to create beautiful and sometimes frightening sounds.



KATELIN COLEMAN

Katelin started off playing the saxophone in grade 7 band. She chose saxophone. One day, her band teacher took her aside one day and informed her that she would now be playing the bassoon. The bassoon's huge range and unique sound allowed her to express her feelings, ideas, and sense of humour much better than she ever could on the saxophone. Now she enjoys being the bass, the heroic tenor, and even the clown of the orchestra in a way that only the bassoon can allow her to be.

TEACHERS GUIDE DESIGNED BY
BRADBURY BRAND + DESIGN EXPERTS

LESSONS DEVELOPED BY KRISTEN HINZ



**REGINA
SYMPHONY
ORCHESTRA**

Gordon Gerrard
Music Director

PRESENTED BY

