Minnesota Sinfonia: 2018/19 Music in the Schools
Introducing the Orchestra
Teacher's Guide

Dear Teachers,

I am excited to work with you this year and present ***Introducing the Orchestra***, the Minnesota Sinfonia's Music in the Schools offering for 2018-2019.

This year's program focuses on "the science of the sound behind the orchestra"—how we as musicians create the lovely sounds that you hear in the audience. ***Introducing the Orchestra*** relates our music to the core subject of science, and the materials to relevant state standards.

By definition, sound is vibrations that are heard by our ears. When the wind blows, we don't actually hear the wind. Instead, we hear the result of the wind (air waves) moving among the trees, leaves, etc., or in other instances, whistles, dog barking and even car tires screeching. Each object has its own unique character. If we think in terms of instruments, wind blown (air vibrating) through a metal flute, a wooden oboe, clarinet or bassoon (even though they are wood, they all have different shapes), buzzing in brass, or vibrating air in violins, violas, cellos and basses – all produce unique sounds because of their individual makeup and character.

I will explain the above with demonstrations in the program.

Music to be performed will be selected from:

• Antonin Dvorak – *Slavonic Dance No. 7*
• Peter Tchaikovsky –*Pizzicato* opening from the movement III of *Symphony No. 4*
• Benjamin Britten – *Sentimental Sarabande* from *Simple Symphony*
• John Williams – *The Imperial March* from *Star Wars*
• Manuel Ponce (Mexican composer)– *Mazurka*
• Joseph Bologne Saint-Georges (African descent composer) – *Symphony No. 1, opus 11*
[NOT on CD – not available]
• Edvard Grieg - *March of the Trolls* from the *Lyric Pieces op. 54*
• Jay and Bernard Fishman – *The Lesson* **[not on CD]**
• Scott Joplin – *Roseleaf Rag*

Songs for students to sing:

• *The More We Get Together*
• *The Orchestra Song*

This packet contains helpful teaching materials for ***Introducing the Orchestra***:

- **Science standards and activities:** This curriculum was created using appropriate required state science standards and suggested activities for grade levels K-8. The Sinfonia welcomes new ideas, so please send us any materials or ideas you think we could include next time we use this curriculum.

- **A listening CD** that includes full renditions of the music from which the Sinfonia will play excerpts, and recordings of songs the students should learn to sing with the orchestra on concert day. Please use this CD in your classroom daily, so the students become very familiar with the music.

- **Music for student choirs to sing, orchestras to play:** ***The More We Get Together*** and ***The Orchestra Song.*** These are songs that your school choir will perform on concert day with the orchestra. For the schools without choirs, students in one or two grades can/should serve as the choir. Included are simple accompaniments for teachers who can play piano, and for those who do not, there are computer-generated accompaniments on the CD. For school orchestras, please contact Jay directly for the parts for the student orchestra piece to learn.

- **Teacher survey**. After the concert day, please fill out the enclosed surveys, and mail them to the Sinfonia office or please do the surveys on line at www.mnsinfonia.org. We will use your suggestions to improve the program for next year.

If at any time you have questions about the curriculum, the music, or how to get started with the activities, please call or e-mail me, and I will be happy to help you. I can be reached through the Sinfonia office (612-871-1701), my home telephone number (614-236-0472) or personal email

jfishmanmusic@gmailcom

This is a program that has several terrific pieces for the Sinfonia to play, and for the children to hear. It is imperative that the children hear these pieces played in class every day.

On the Sinfonia website

https://www.mnsinfonia.org/education/music-in-the-schools

some additional worksheets can be found to use at your discretion.

Sinfonia Needs for the Concert Day

• 32 straight back (folding chairs)
• 1 speaking pa system for Jay to talk to the students
• Choral risers (optional) for the student choirs
• 22 music stands for the Sinfonia's use (if available)
• For morning performances – please good strong coffee and treats…..

While the Minnesota Sinfonia provides our services without charge to the schools or the students, the actual operating cost of each concert is $7,000.

Please remember to ask your PTO to help support Music in the Schools with a financial contribution.

Contributions of any amount help to defray some of the costs.

THANK YOU!

Jay Fishman,
Minnesota Sinfonia Artistic Director

Concert Day Activities

Musician Visits. Prior to the (first) concert, one or two students from each classroom should come to the gym/auditorium to escort a musician back to their classroom for a 10-15 minute visit. Normally we can send 20-22 musicians to the classrooms. During this time, the students can ask questions and get to know their musician. Please let the musicians and students interact with as little coaxing from you as possible. We have found that after an initial shyness, the kids tend to open up and really enjoy this time.

Choir/Orchestra Rehearsal. During the classroom visits, students in the choir should report to the gym/auditorium to rehearse for the concert. Mr. Fishman and a few Sinfonia musicians will rehearse with them prior to the assemblies. For schools with a string orchestra program, string students should also report to the performance space during classroom visits, so they can rehearse with Mr. Fishman and the Sinfonia string players. In this case, just the 8 Sinfonia wind players will do the classroom visits.

Concerts. After classroom visits, the orchestra will perform two times—once for each half of the student body. If possible, students should be grouped by age, with the younger students in one group and older students in the second.

Evaluations. During the concert, please remember to keep notes on the reactions of your students for the follow-up evaluation. Gather feedback from them after the concert as well.

The concert program - Full Orchestra first:

Antonin Dvorak (1841-1904) – *Slavonic Dance No. 7*
• Czech romantic and nationalist composer who remains one of the most popular composers of his generation.
• Incorporated Czech harmonies, rhythms and music forms in his music.
• Created some of the most lovely, sing-able music in the entire romantic repertoire.

Slavonic Dance No. 7
• Originally, the Slavonic Dances were composed for two piano players, both musicians playing on the same piano.
• The dances became so popular that Dvorak orchestrated them for full orchestra.
• The full orchestra versions became so popular that they have since been arranged for many instrumental combinations, including for Chamber Orchestra.
• Dvorak incorporated many of his native (Czech) harmonies and folk rhythms into his music, giving it a unique character and sound.
• Dance number 7 is a *skocna,* which is a leaping dance.

Strings: violins, violas, cellos and basses

• All instruments have strings that vibrate to create their sounds.
• Sounds can be generated by plucking the strings (pizzicato), or by drawing the bow across the strings.
• The bows are made of wood and horse tail hair. The hair has little barbs on them that grab the string, hence making the strings vibrate.
• Rosin (the same thing that baseball pitchers use to better their grip on the ball) is placed on the bow hair to make it stickier, thus allowing it to "grab" the strings better.
• The smaller the instruments, the shorter the strings, hence the higher the sounds.

Pizzicato [plucking]

Peter Tchaikovsky (1840 – 1893) - Symphony No. 4 opening to Third Movement

• Is considered to be one of the greatest "romantic" (lush beautiful melodies) and nationalistic (incorporated some of his native folk songs and harmonies in his music) composers.
• Famous for symphonies, concertos chamber music, music that tells stories including *Fantasy Overture on Romeo and Juliet,* and the ballets *The Nutcracker* and *Sleeping Beauty* (used by Walt Disney in a very good full length animated film).
• His Fourth Symphony is now considered to be the first of his most popular symphonies, which also include numbers five and six.
• In the opening section of the Fourth Symphony's third movement, the strings are plucked with the right hand (pizzicato), instead of the more common using the bow.

Bowing

Benjamin Britten (1913 -1976) – *Sentimentale Sarabande* from *The Simple Symphony*

• English composer, generally considered to be the most important British composer of his generation.
• Composed nearly 800 works in all genres – orchestral, chamber music and opera, but is probably best known for his *War Requiem* (composed for the consecration of the newly reconstructed Coventry Cathedral), and his operas *Billy Bud, The Turn of the Screw* (based on Shakespeare) and *Peter Grimes*.
• *The Simple Symphony* was composed when Britten was 20 years old, but all of the themes were written when he was between the ages of 9 and 12.

Wind Instruments: Woodwinds

• All wind players blow into the instruments, which makes the wind vibrate inside the instruments to create the sound.
• Woodwinds are all made out of wood (the flute is now silver, but used to be wood), which helps to define the type of sound.
• Woodwind instruments all have holes that can be covered by keys. When the musician blows into the instrument, s/he controls the pitch by pressing down or lifting up the keys, thereby covering or uncovering the holes. The pitches are defined by how far the air has to travel before escaping via the uncovered holes. The longer the journey, the lower the pitch.
• Oboes, clarinets, saxophones and bassoons all use reeds – pieces of cane that are specially shaped so that they can be placed into the mouth. The player then blows into the reed, which makes the reed vibrate, after which the air proceeds into the shafts.

Manuel Maria Ponce (1882-1948) - ***Mazurka***

• One of Mexico's great romantic composers.
• Born in Zacatecas, he showed great talent, and then studied in Italy, Germany and Paris.
• Had strong interest in folk, popular and classical music, and was one of a few composers who could bridge all three genres.
• Composed for all musical genres but was particularly well known for songs and works for guitar.

Wind Instrument: Brass

• Brass instruments are made out of brass, which also defines the sound.
• Brass instruments are long pipes that are wrapped up so they can be easily managed – the longer the pipe, the lower the sound.
• Trumpets generally are shorter (4 feet) in length than French horns (8 feet), which in turn are shorter in length than tubas.
• Musicians blow into their instruments, and the sound reverberates around the brass tube.

Percussion:
• Percussion players tap, hit and strike a variety of objects (instruments) that have different compositions (some are metal, some have coverings, other are wood, etc.) to create a wide range of sounds.

John Williams (b. 1932) – *The Imperial March* from *Star Wars*
• American composer and conductor.
• Best known for his critically acclaimed music for the movies – *Star Wars, Superman, Indiana Jones, Shindler's List, Harry Potter, Toy Story, Shrek, Despicable Me, etc*.
• Has earned several of the most prestigious arts and music awards including several Academy Awards for Best Original Music, AFL Lifetime Achievement Award, Golden Globes, Grammys, Kennedy Center Honors, Critics' Choice, etc.
• *The Imperial March* from *Star Wars* is one of John Williams' most recognizable marches and is from the movie *Star Wars*.

Chamber Orchestra

• The Chamber Orchestra is smaller than a symphony orchestra – generally 18-30 musicians, versus 55-100 for the Symphony.
• The Chamber Orchestra has fewer types of instruments than the symphony orchestra. The Chamber Orchestra generally does not have trombones, tubas, etc.
• Most of the music for chamber orchestra was composed in the 17th and 18th centuries, with some (more romantic) in the 19th and a bit more in the 20th centuries.
• Because of the small in size of the Chamber Orchestra, its sound is also small(er), when compared to that of the symphony orchestra.

Joseph Bologne, Chevalier de Saint-Georges (1745-1799) – *Symphony No. 1, opus 11* [NOT on CD – out of print]
• Composer and violinist who is generally considered to be the first classical composer of African descent
• Was born in Bailiff, Basse-Terre, the son of a wealthy white planter and Nanon, a woman who he enslaved.
• In 1753 the family moved to France, where Joseph received his education, including study of the violin.
• He was an expert fencer, dancer, violinist and composer.
• He was concertmaster and conductor of the *Le Concert des Amateurs,* which under his direction became one of the most prestigious orchestras in the land, and commissioned and premiered Franz Joseph Haydn's six Paris Symphonies.
• He composed chamber music, two symphonies, twelve violin concertos, eight symphony-concertantes (concertos for two instruments), six comic operas, and several songs.

Symphony No 1, opus 11

• This was one of his two symphonies, and was composed in the light, "rococo style," similar to the early symphonies of Mozart and Haydn.
• This is a three movement work, with the movements being fast, slow and fast similar to other symphonies of the time.
• The orchestra was relatively small – two oboes, two French Horns, one bassoon and strings, again, similar to the orchestra sizes of the times.

Symphony Orchestra Music (but arranged for the Sinfonia' size)

Edvard Grieg (1843-1907)
• One of Norway's most important composers.
• Composed works for solo piano, a very popular piano concerto and some orchestral works – many of which were orchestrations of his earlier piano works.
• One of his most popular works is the incidental music to the Henrik Ibsen's play, *Peer Gynt,* from which two pieces, *Morning* and *In the Hall of the Mountain King* have been used as background music for cartoons.

***March of the Trolls* from the *Lyric Pieces* op. 54**
• Although this was composed for a full symphony orchestra (lots of instruments not found in a chamber orchestra), Mr. Fishman arranged the work so that it could be played by the Sinfonia.
• This music has "nationalistic" tendencies – "trolls," which is part of the title is also part of the folk heritage of Norway.
• This is one of Grieg's most famous pieces, which is part of a five movement suite of *Lyric Pieces,* all of which were originally composed for piano, and later arranged for orchestra by the composer.

Scott Joplin (between 1867/68 – 1917)
• African-American composer known mostly for his piano music, composing in the style of "ragtime."
• Most of his rags were composed in a format similar to the march, but were distinguished by a constant syncopated rhythmic pattern (also to be found in jazz).
• As jazz, swing and beebop gained in popularity, ragtime suffered, and for a long time, lost favor with the public.
• Thanks to the efforts of musicians such as Eubie Blake and Joshua Rifkin, and movies such as *The Sting,* ragtime and Scott Joplin have made a comeback in popularity.

Roseleaf Rag
• One of many piano rags that have been transcribed/arranged for orchestra and or other ensembles.

JAY FISHMAN & BERNARD FISHMAN:
• Bernard Fishman (born 1982)
• Grew up in Columbus, Ohio where as a child studied piano, and developed an interest in working with children.
• At age sixteen started developing an interest in vinyl records and popular music including hip hop, jazz and psychology.
• Started writing children's stories to be set to music for the Sinfonia when he was in his twenties, and to date has authored and published seven stories, including contemporary versions or *Cinderella Updated! The Ugly Duckling,* and new stories such as *The Life and Times of Benjamin Franklin, Bears* as well as several others.
• Now lives in San Diego, CA where he owns Beat Box Records, DJ's and creates CD's.

Jay Fishman (born 1947)
• Conductor and composer who was born and raised on the north side of Minneapolis.
• Founded the Minnesota Sinfonia with the expressed purpose of serving the public and children, with special emphasis given to those with limited financial means and inner-city children.
• Conducts the Minnesota Sinfonia that works with 20 public schools and more than 10,000 children every year.

Science standards:

Grade K
1. Some objects occur in nature, others have been designed and processed by people. Objects can be described in terms of materials they are made of and their physical properties.

Activities:
Using the pictures (sent separately as color pictures), distinguish instruments made of wood (nature) – violins, violas, cellos, basses, oboes, clarinets and bassoon, and those made of brass (man made) trumpets and French Horns. Then sort by colors:
• Violins, violas, cellos and bass are reddish brown.
• Flute is silver.
• Oboes and clarinets are black.
• Bassoon is reddish brown.
• Trumpet and French Horns are gold.

Then sort by shapes -strings are all curvy, woodwinds are all straight, and brass are all twisted and wrapped around.

Grade I
1. Scientists work as individuals and in groups to investigate the natural world, emphasizing evidence and communicating with others.

Activity:
Experiment: Fill three glass small neck bottles with different levels water. Blow into each of them to create sound. How is the sound made? Which bottle has the higher sound – the one with more or less water?

Second part of the experiment. Blow into two different sized penny whistles. Which whistle makes the higher sound – the smaller or larger whistle?

From these 2 experiments, determine what causes the sounds. Is it the water in the bottles, or the air in the bottles? Is it the size of the penny whistle, and how does the size affect the sound?

Transfer this information to the instruments. Would you expect the violin to produce a higher or lower sound than the cello and why?

Grade 2

1. Objects can be described in terms of materials they are made of and their physical properties.

Activity:
Start with the same experiment as for grade one, then put different food coloring in each of the bottles. Does the color affect the sound in the bottles? From this, would you expect the color of the string instruments to affect the sound? Ask the same question about the winds, and brass.

Note the different materials that the instruments are made of – the strings wood, the winds, wood, the brass, brass.

Activity:
Take two bowls of water. Fill them both half way with dark colored water. Put a popsicle stick in one, and a metal soup can without the label in the other. Let them soak for a day. Take out the popsicle stick and note that it changed color. What happened to the soup can? Why would the wood absorb the colored water, and the can not? The wood is not as dense, and the can is very dense.

Transferring this information to our instruments, how does the wood of violins make the sound different from the brass of the trumpet? The wood of the violin, like the wood of the popsicle stick is porous (less dense), and just like the popsicle stick absorbs some of the water (which in this case would be similar to the wind) the violin absorbs some of the sound as it reverberates around in the belly of the violin. When the sound comes out of the violin, we hear influence of the wood, just like we see the influence of the colored water on the popsicle stick

Brass on the other hand is much denser, and similar to the metal soup can, does not absorb sound (water for the can). Hence, the air that is blown into the trumpet does not get absorbed by the brass, and it simply bounces around, causing the brass to vibrate, and producing the "brassy" sound.

Grade 3
1. Scientific inquiry is a set of interrelated processes incorporating multiple approaches that are used to pose questions about the natural world and investigate phenomena.

Activity:
Observe that when a science investigation is done the way it was done before, even in a different place, a similar result is expected.

Repeat the experiments above, using different colors for the water, and different amounts of water in the bottles. Keep a log of the different observations, and come up with good explanations to the changes and the non-changes.

Grade 4
1. Identify and investigate a design solution and describe how it was used to solve an everyday problem.

Activity:
Can you make an instrument from every day materials? Find different size metal cans, metal lids to cans, etc. Also, find plastic cans, etc. Suspend (hang) the "instruments" and then strike them with a drumstick or some other object - a non-lethal club. Note the

changes in pitch. Why? Is the difference caused by the size of the "instrument," or its composition?

Grade 5
1. Science is a way of knowing about the natural world, is done by individuals and groups, and is characterized by empirical criteria, logical argument and skeptical review.

Activity:
Do the same experiment as grade 4, but do an in-depth analysis as to what and why. Use other materials, and compare sizes of the instruments, versus the materials. Use the same size instruments made out of the same materials, but different thicknesses.

Grade 6
1. Forces have magnitude and direction and govern the motion of objects.

Activity:
Stretch a good rubber band and pluck it. Note that you can see it vibrate. Stretch it more, and pluck again. Note that the pitch gets higher. Why? Now think of a violin, versus a cello. Violin strings are thinner and shorter than cello strings. They are stretched tighter, yielding a higher pitch. The cello strings are thicker and longer - they will vibrate more slowly than the violin strings.

Grade 7
2. Scientific inquiry uses multiple interrelated processes to investigate questions and propose explanations about the natural world.

Activity:
Take the activity of Grade 6, and instead of using a rubber band, find other types of "strings," and investigate what kind of (if any sounds) can be created, heard, and if yes, why and if not, why not?

Grade 8
1. Science is a way of knowing about the natural world and is characterized by empirical criteria, logical argument and skeptical review.

Note that the standards for several of the grades are similar, and that as the students get older, the analysis and experiments they undertake, even if they start from the same place, must be done with a broader and more encompassing scope.