



# MISSION IMAGINATION!

**Additional Activities and Resources**



# The Orchestra

In this packet, you will find:

- Hello, from the orchestra!
- Orchestral Introduction
- Meet the Orchestra!
- Instrument Family Quiz

OMAHA  
SYMPHONY

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# Orchestral Introduction

What is an Orchestra?

An orchestra is a large group of musicians made up of different instruments that play music under the direction of a conductor.

Instrument Families

There are 4 instrument families in the orchestra. Each instrument in the orchestra belongs to one of the following families:

Strings, Woodwinds, Brass, or Percussion

How do Instruments Make Sound?

Instruments make sound through vibration. When something vibrates it makes a sound, and sends the vibrations out in all directions, like a wave. Because it is the air that is vibrating, you can't see it—but you can hear it! The rate of vibration is what causes instruments to have different pitch.



# Meet the Orchestra!



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# Meet the Strings Family!

- There are four instruments in the strings family: the violin, viola, cello and bass. They look similar with their curvy wooden bodies and long necks, but they are all different sizes.
- String players use a bow, drawn across the strings, to make them vibrate. The vibrations echo within the body and produce sound. String players can also pluck the strings with their fingers.
- The harp is sometimes considered a part of the strings family because it has so many strings!

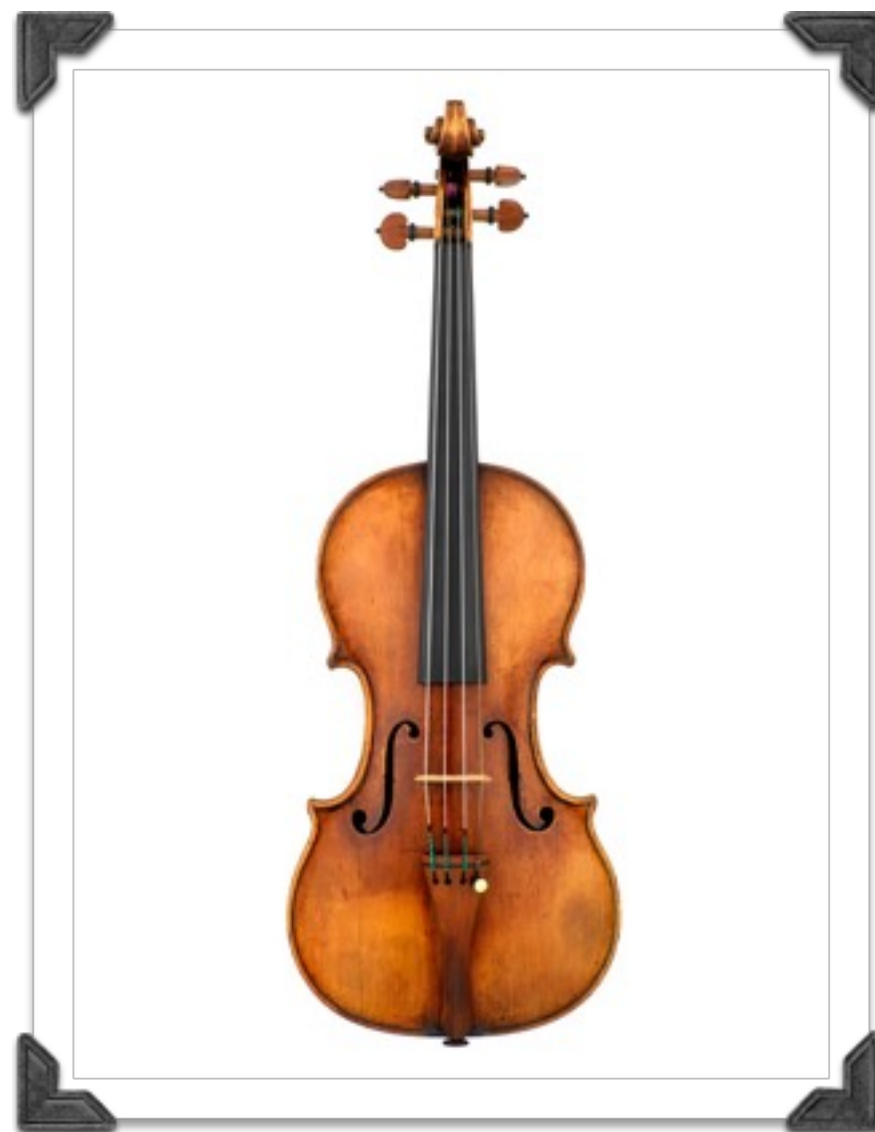




# Meet the Strings Family!

## Violin

- This is a violin!
- There are more violins in the orchestra than any other instrument!



# Meet the Strings Family!

## Viola

- ❑ This is a viola! It looks a lot like the violin, but it is actually bigger!
- ❑ Because it's bigger, it can play low notes that the violin can't.



# Meet the Strings Family!

## Cello

- ❑ This is a cello!  
Doesn't it look a little bit like the violin, too? It is much bigger though.
- ❑ Musicians have to sit down to play the cello.

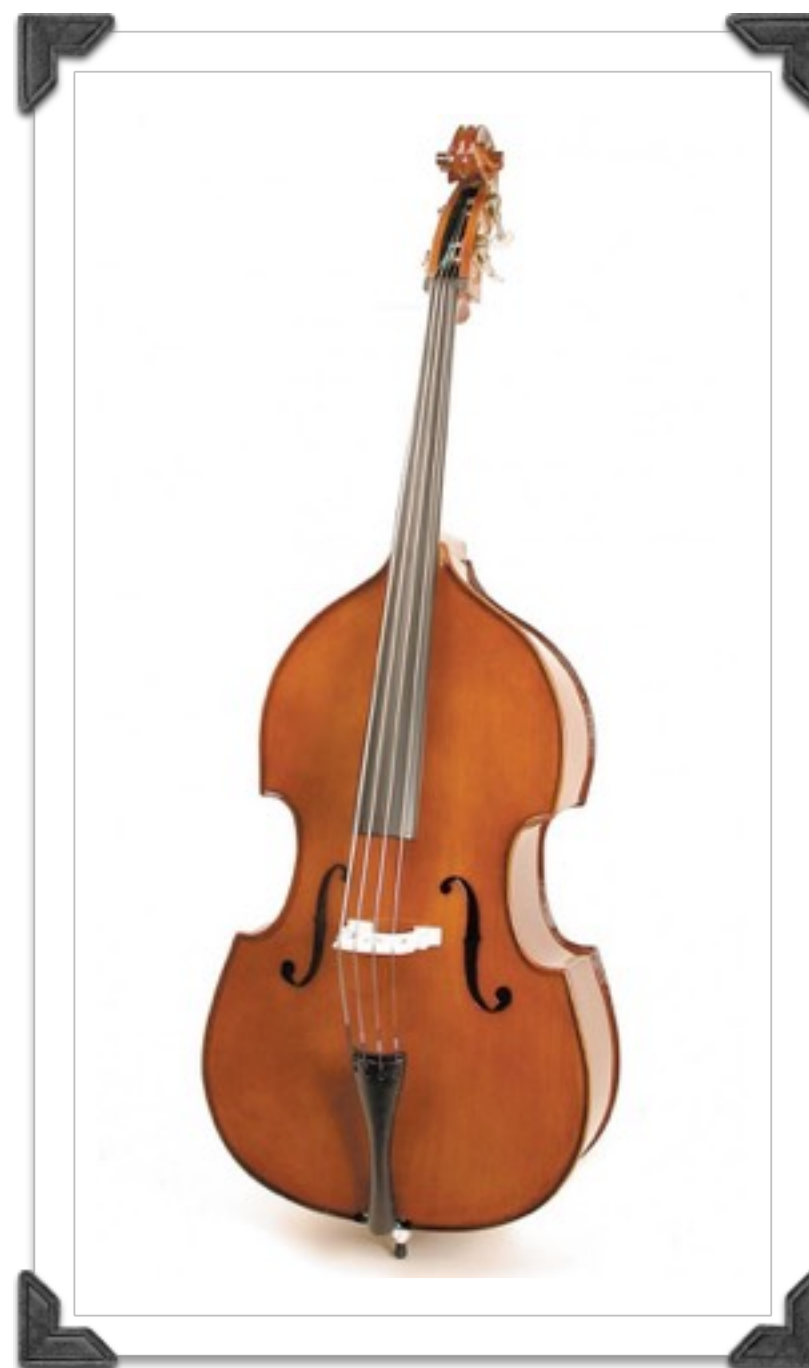




# Meet the Strings Family!

## Bass

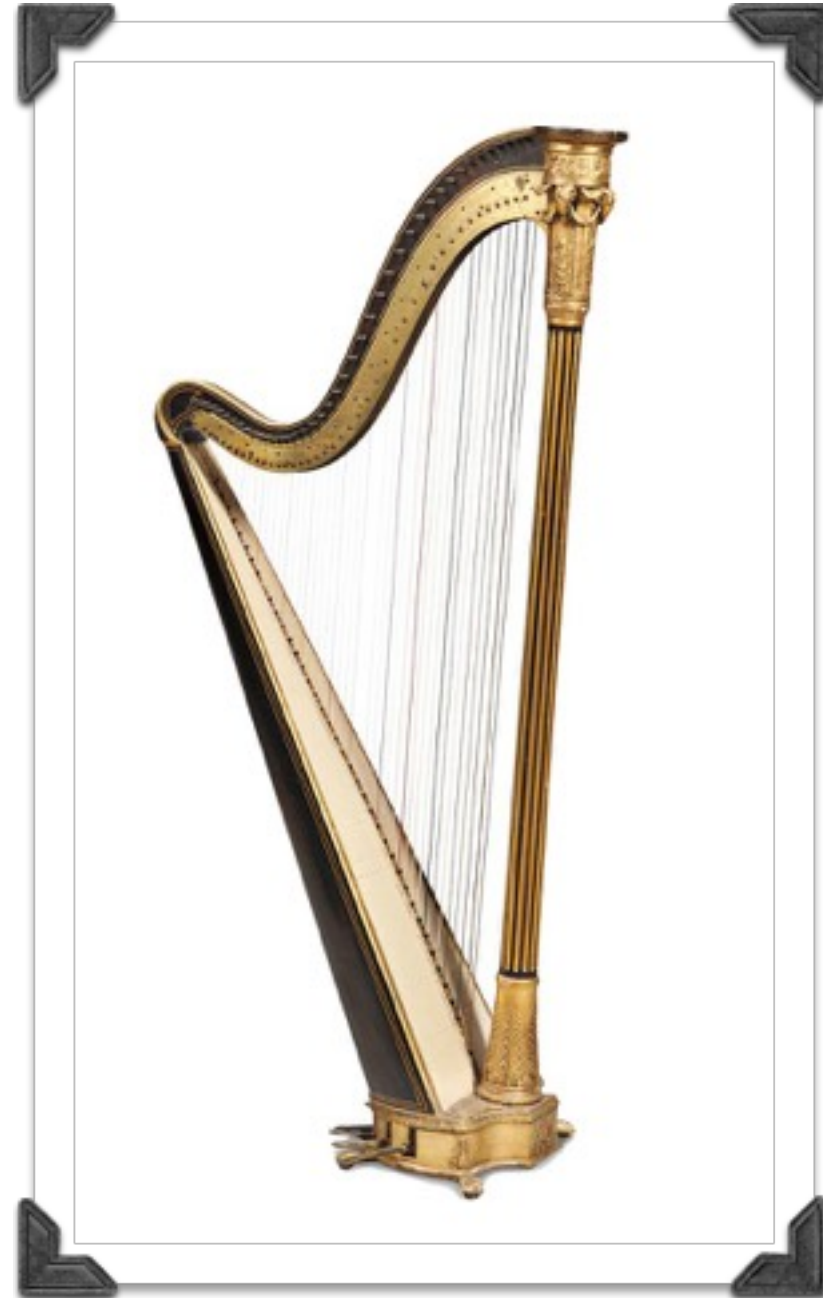
- This is a bass! It's really big, probably bigger than you!
- The bass is so tall that it can only be played standing up.



# Meet the Strings Family!

## Harp

- ❑ This is a harp! The harp is different because it can belong to the string family AND the percussion family!
- ❑ The harp doesn't use a bow to make sound - harpists use their hands.





# MISSION IMAGINATION! Meet the Woodwind Family!

- The instruments in the woodwind family used to be made of wood, which is how they got their name. Today many of them are still made from wood, but some are also made of metal. These instruments have lots of different keys that help change the pitch and sound that the instruments make.
- Each woodwind instrument makes sound in a special way, but they all use wind - or air - to do it!
- Check out the woodwind instruments!



# Flute

- The flute is played by blowing air across the hole in the mouth piece. This makes the air inside the flute vibrate and make sound.





# Oboe

- The oboe is played by blowing through the tip, where two reeds are tied together. These reeds vibrate and make sound.



## Clarinet

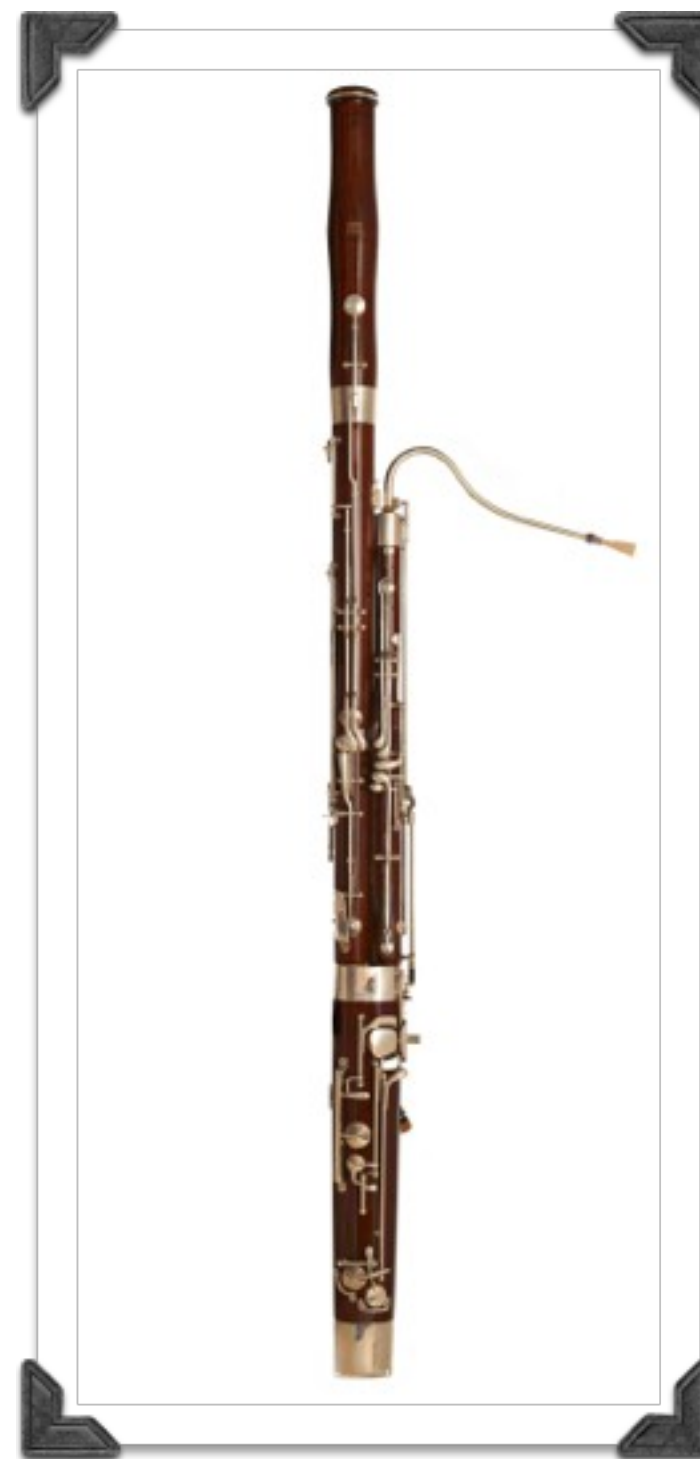
- The clarinet is played like the oboe. Instead of two reeds, it uses only one reed to make sound.





## Bassoon

- ❑ Just like the oboe, the bassoon uses two reeds to make vibrations.
- ❑ Because it is so big, the bassoon makes a deep sound.



# Meet the Brass Family!

- The instruments in the brass family are all made of a shiny metal, called brass - which is how they got their name! The instruments are made by twisting the metal into all sorts of shapes and sizes.
- Brass instruments have a mouthpiece that they use with their instruments. When the player blows air through the instrument using the mouthpiece, their lips vibrate. These vibrations travel through the metal of the instrument, which makes sound.
- Check out the brass instruments!





# Meet the Brass Family!

## Trumpet

- ❑ The trumpet is the brass instrument that you can always hear!
- ❑ It makes a higher sound than the other brass instruments.



# Meet the Brass Family!

## Trombone

- ❑ Trombones are played by sliding part of the brass “slide” in and out.
- ❑ This makes the instrument play higher and lower notes.



# Meet the Brass Family!

## Horn

- ❑ The french horn is a round, curled-up instrument.
- ❑ The end of it is shaped like a large funnel and called the bell.





# Meet the Brass Family!

## Tuba

- ❑ The tuba is the lowest and biggest brass instrument.
- ❑ It supports the rest of the orchestra!



# Meet the Percussion Family!

- The percussion family has a lot of different instruments in different shapes and sizes. Percussion instruments can either be pitched or non-pitched. Pitched instruments are able to play many types of notes. The piano, timpani, and xylophone are examples of pitched instruments. Non-pitched instruments can only play one note. The snare drum, bass drum, cymbals, and triangle are all non-pitched instruments.
- Percussion instruments can be played in many different ways, but the most common is to strike them with something. Usually percussionists use drum sticks, mallets, and even their own hands!
- Check out the percussion instruments!



# Meet the Percussion Family!

## Bass Drum

- This is a bass drum. It makes a loud, low sound!





# Meet the Percussion Family!

## Gong

- The gong! This makes a loud, low sound when struck.



# Meet the Percussion Family!

## Piano

- The piano! The piano is played with your hands. When you play the “keys” on the piano, there are strings inside that get hit by hammers. This is how it makes sound.



# Meet the Percussion Family!

## Timpani

- The timpani are a pitched instruments, which means they can make sounds that are both high and low.





# Meet the Percussion Family!

## Xylophone

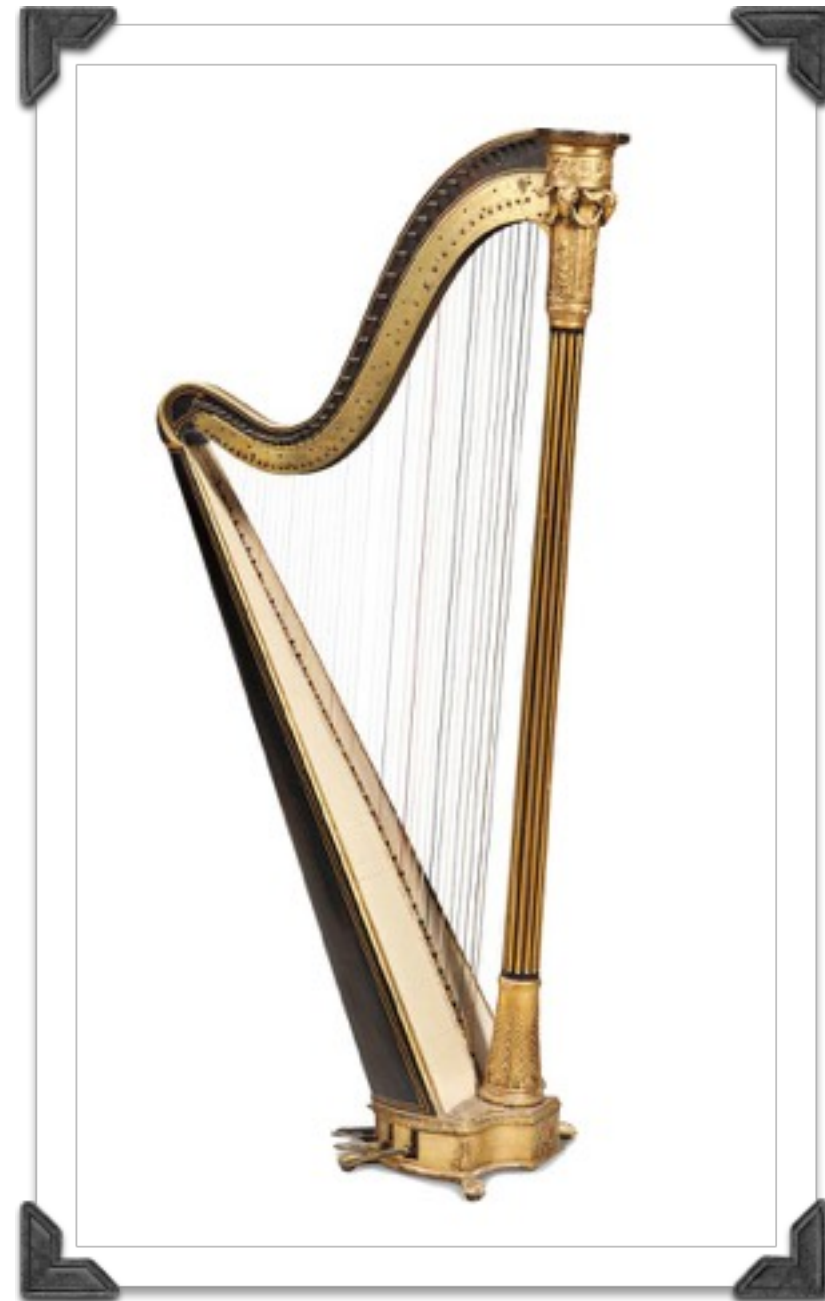
- The xylophone is played with mallets. Like a piano, it can play lots of high and low notes.



# Meet the Percussion Family!

## Harp

- The Harp, again!  
The Harp can be considered a percussion instrument, because it is played with your hands!



## Instrument Family Quiz

I'm a violin.  
What family do I belong to?

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- A.** Brass
- B.** Strings
- C.** Percussion
- D.** Woodwind



# Instrument Family Quiz

I'm a snare drum.  
What family do I belong to?

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- A.** Brass
- B.** Strings
- C.** Percussion
- D.** Woodwind





# Instrument Family Quiz

I'm a trombone.  
What family do I belong to?

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- A.** Brass
- B.** Strings
- C.** Percussion
- D.** Woodwind



# Instrument Family Quiz

I'm an oboe.  
What family do I belong to?

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- A.** Brass
- B.** Strings
- C.** Percussion
- D.** Woodwind



# Instrument Family Quiz

I'm a xylophone.  
What family do I belong to?

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- A.** Brass
- B.** Strings
- C.** Percussion
- D.** Woodwind





## Chapter 2

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# Additional Resources

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In this chapter, you will find:

- Conducting 101
- Arts Education Websites





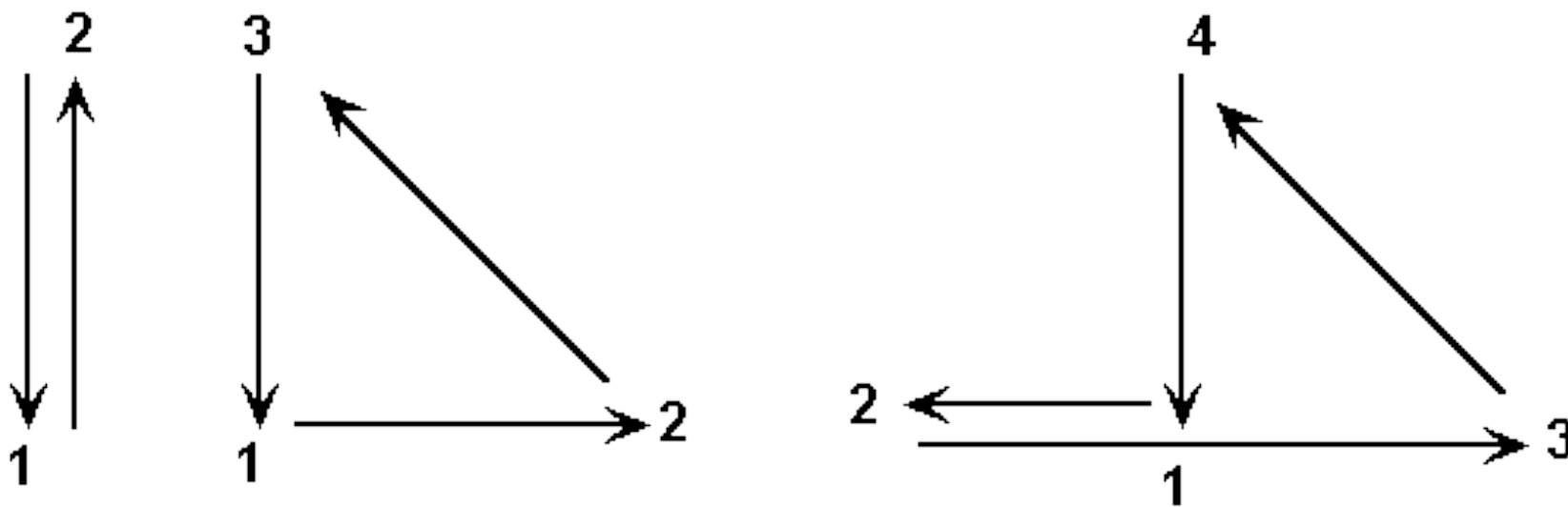
## Conducting 101

Have you ever put on music and pretended that you're leading the orchestra? Wouldn't it be fun to be a conductor?

A conductor leads the orchestra. Conductors need to know how the composer wanted the music to sound. The conductor must be a trained musician, know how to work with people in a group, and must be able to tell the musicians what he or she wants them to do by using a series of gestures.

To show the musicians what he or she wants them to do, a conductor 'draws' special shapes in the air with his or her baton, the stick used by the conductor to give musical directions, according to the number of beats in a bar.

Try drawing these shapes!



But a conductor does more than just beat time. What else might a conductor need to show the musicians with his/her gestures?

How fast or slow the music is.  
How loud or soft the music is or if the music should get louder or softer.  
When to start and stop playing.

Conductors also use their faces to show if the music should be happy, sad, scary, or even angry.

# How to Conduct an Orchestra

## Preparation:

Assemble enough “instruments” for each student. These can be simple percussion instruments, kazoos, or anything homemade or brought from home that will make a sound. You can also have students choose their own imaginary instrument to play and have them sing a song while they “play.”

You will also need something to use as a conducting “baton” - a pencil, pointer or short stick of some kind.

## Procedures:

1. Gather students together and have each select an instrument.
2. Seat the students in a semi-circle.
3. Ask for a volunteer to conduct the group. Let the volunteer arrange various instruments together in sections if he or she likes.
4. As the student is conducting, have him or her experiment with the following:
  - Have different parts of the group play at certain times.
  - Have the group play louder or softer, faster, or slower.
5. Have students take turns playing instruments and conducting.



## Discussion Questions:

1. What signals did the conductor use to communicate with the musicians?
2. What did it feel like to be a musician? Was it easy or difficult to understand what the conductor wanted?
3. What did it feel like to be the conductor? Was it easy or difficult to communicate with the musicians?  
Did they do what you wanted them to do?



# Arts Education Websites

**We believe these are great resources for additional activities and information about  
the orchestra, its families, and music in general.**

The Dallas Symphony Orchestra's award winning site for kids.

Carnegie Hall's Online Resource Center - Games and Listening Guides.

Arts Edge - The Kennedy Center's Site for arts educators.

The New York Philharmonic's educational website for children.

The San Francisco Symphony's educational website.

The Nashville Symphony's educational website.

Fine Art Standards - Nebraska Department of Education

National Core Arts Standards

Fine Arts Alignment with Iowa Core Universal Constructs

