

ACO MUSIC & ART

Lesson Two: Instruments of the Orchestra

Additional Notes for teachers, parents and students

Instruments of the Orchestra

There are four broad types of instruments that make up a traditional orchestra – they are grouped into ‘families’ as they share common traits. There are four instrument families:

STRINGS

String instruments are made from wood (sometimes hundreds of years old), with four strings. Sound is made on string instruments by dragging a bow across any of the four strings or by plucking them. This causes the strings to vibrate, creating sound. The string family includes:

Violin: the highest sounding string instrument that usually plays the melody. It is played by resting it on your left shoulder and holding a bow in your right hand.

Viola: the slightly bigger version of the violin that is also played by resting it on your left shoulder. The viola is a lower sounding instrument that plays the harmony.

Cello: the second lowest instrument that is played by resting it between your legs. It is known for its beautiful, mellow sound and often plays the melody.

Double bass: the lowest sounding string instrument in the orchestra. It is also the largest string instrument and is played by

standing up or sitting on a high stool. It is often taller than the player, it's so big!

WOODWIND

Woodwind instruments are often made from wood, but can also be made out of various metals. By blowing air into the instrument at an angle through a hole or through a reed, the air vibrates inside the mouthpiece creating sound. Different notes can be created by pressing down metal keys. The woodwind family includes:

Flute: the highest sounding instrument in the woodwind family. Flutes are most often made out of silver or gold, and are known for having a beautiful soaring tone. Sound is created by blowing air across a small hole in the mouthpiece – similar to blowing air across the top of an empty bottle.

Oboe: the oboe is known for playing hauntingly beautiful melodies and being able to soar across the top of the orchestra. Sound is created by blowing air through the double reed, which is two pieces of finely cut bamboo that vibrate together when air passes through.

Clarinet: the clarinet has quite a piercing texture, but is also known to be able to play incredibly softly. The clarinet uses a single reed, which vibrates against the mouthpiece of the clarinet which is often made of plastic. The rest of the instrument however is usually made of wood.

Bassoon: the bassoon is the largest instrument of the woodwind family. If all of its tubing were stretched out in one long line it would be almost 2 and a half metres in length. Like the oboe, it also uses a double reed but a much larger one.

BRASS

Like their name suggests, brass instruments are made predominantly out of brass, but sometimes other softer metals. This is what gives them their piercing, round and very warm sound. Brass instruments are known for their ability to create very thick textures in orchestral music. They make their sound by pursing their lips and making a 'buzz' sound into a small round mouthpiece. The brass family includes:

Trumpet: the trumpet is the highest and smallest instrument in the brass family. Trumpets use three piston valves to play different notes, and by adjusting the shape of their lips.

Trombone: the trombone has a slightly larger mouthpiece than a trumpet, and they use a slide to change notes. To play a low note, they pull the valve the whole way out, and to play high notes they pull it all the way in. The note changes due to the length of the 'tube' being altered.

Tuba: the tuba is the lowest and largest instrument in the orchestra, and can weigh as much as an average medium sized dog, at almost 14 kilograms. The tuba has quite a booming texture and is often used during dramatic moments in music.

French Horn: the French horn is arguably one of the most difficult instruments to play, due to its incredibly large range and numerous tubes and valves. It can also play as high as a trumpet and almost as low as a tuba,

despite having a much smaller mouthpiece. If you were to lay out the French horn tubes in a straight line it would stretch almost 5 and a half meters. It is also known for being able to play using a variety of tone colours.

PERCUSSION

The percussion section of the orchestra contains the most instruments compared to all other sections. The average orchestra piece could call for up to 20 different instruments, often played by only 3-4 people. Most percussion instruments make a sound by hitting the instrument with a hammer, itself or mallets. Mallets come in many different shapes and forms, and each one is designed for use with a particular instrument. Some examples of very common percussion instruments include:

Timpani: Timpani are sets of four large drums of different sizes with a stretchy skin over the top. The musician playing these instruments can press down on a pedal to tighten or loosen the tension on each of these drums altering the pitch. They then use special wooden mallets with felt on the end to hit the drums to create sound.

Glockenspiel: The glockenspiel is a percussion instrument composed of a set of tuned keys arranged like the keys of the piano. The notes are played by hitting the metal keys with mallets made out of plastic sticks with a plastic ball on the end.

Snare Drum: the snare drum is a small round drum covered in a skin with stiff metal wires lining the bottom of the drum. This creates the effect of short, sharp notes when played with wooden sticks. It is often used in military or marching bands to help people keep time.

Crash Cymbals: Crash cymbals are two large metal discs with handles that are crashed against each other with force, causing both cymbals to intensely vibrate. This creates a magnificent loud sound that cuts across the entire orchestra.

Learn more about the instruments of the orchestra by watching this video series made by the London Philharmonia Orchestra:

► [Instrument Guides](#)

String Instrument

