Orchestra Families

The symphony orchestra can be divided into four or five instrument families. Instruments are ‘related’ by the similar ways in which they produce sound. The four families in the orchestra are: the percussion family, the woodwinds, the string family, the brass family and in some concerts, the keyboard family.

THE PERCUSSION FAMILY

Percussion instruments developed thousands of years ago when early people struck objects together to bring out the rhythms of dancing and song. The name percussion means hitting one body against another. All instruments of the percussion family are played by being struck, shaken or scraped. In the orchestra, the percussion section provides a variety of rhythms, textures and tone colours.

Percussion instruments can be classified as pitched or non-pitched. Pitched percussion instruments can play specific notes and thus melodies and harmonies. They include instruments like xylophones, chimes, and glockenspiels. You might play some of these in school Orff orchestras. Non-pitched percussion can play different timbres but not specific notes. You might play instruments like these: sticks, drums, and tambourines, in your classroom rhythm band.

Draw the following:
- cymbals (non-pitched)
- glockenspiel (pitched)

THE WOODWIND FAMILY

Each of the three branches of the woodwind family has a different source of sound. Vibrations begin when air is blown across the top of an instrument, across a single reed or across two reeds. The player makes different notes by changing the length of the tubing. Covering the holes in the instrument with the fingers or using ‘keys’ can accomplish this.
Reeds are small pieces of cane. A single reed is clamped to a mouthpiece at the top of the instrument and vibrates against the mouthpiece when air is blown between the reed and the mouthpiece. The double reed is two reeds tied together. The double reed fits into a tube at the top of the instrument and vibrates when air is forced between the two reeds.

The flute and the recorder are woodwinds that use air alone to create the vibrations. A woodwind that uses a single reed is the clarinet. Two double-reed woodwinds are the oboe and the bassoon.

You might be surprised to find the saxophone in the woodwind family. It may look like a brass instrument but it has a single reed in the mouthpiece that vibrates to make the sound.

Woodwind instruments make music when the player blows into them. Fingers cover holes in the instrument to change the notes or the player uses keys. Except for the recorder and the flute, most woodwinds have a reed (or reeds) in the mouthpiece to vibrate and make the sound. Some woodwinds are:

- clarinet
- saxophone

Draw the following:
- recorder
- flute

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**THE STRING FAMILY**

The String Family is named for the gut, wire or nylon cords that are stretched over or attached to a hollow sound box. Striking, bowing, plucking or strumming the strings produce musical sounds that are amplified acoustically or electronically.

In the orchestra, the string family is represented by the violin family, the harp and though not always in the orchestra, the guitar. The violin family is the largest section in the orchestra.

Instruments in the violin family - the violin, viola, cello and bass — have four strings, each tuned to a different note. The four pegs at the top of the instruments allow the player to loosen or tighten the strings to keep them in tune. The player’s left hand is in charge of playing the correct notes. Because each string is only one note, the player must change the length of the string by pressing it to change the pitch. The right hand produces sound by pulling the bow across the strings or by plucking them.
Violin
Both a solo instrument and an important member of the orchestra, the violin has a lovely tone that can be soft and expressive or exciting and brilliant.

Viola
Very much like the violin, the viola is tuned five notes lower than the violin, is slightly larger and has a more mellow voice. The viola is an important player of harmony in the orchestra.

Cello
The cello’s full name is violoncello and it has a rich and mellow tone. While shaped like a violin, the cello is much larger and is held between the player’s knees. At the bottom of the instrument is the endpin that the player sets on the floor.

Double Bass
The largest of the string family, the bass must be played while standing up, and has sloping shoulders instead of square shoulders like the other members of the violin family.

Harp
Another member of the string family is the orchestral harp, which has about 45 strings stretched across a triangular frame perpendicular to the sound box. The strings are plucked by hand while seven pedals at the bottom of the harp adjust the length of the strings to produce additional notes. There may be one or two harpists in the orchestra depending upon the demands of the music.

Guitar
The guitar is a hollow sound box with six strings stretched across it. The guitar player presses the strings, to change the length and the pitch, like the members of the violin family. The guitar player plucks or strums the instrument to make the strings vibrate. The guitar sound is amplified either acoustically or electronically.

All stringed instruments have strings that are attached to a hollow sound box. The strings can be played by plucking, bowing or strumming. Some members of the string family are:

Draw the following:
cello
guitar

violin
harp
THE BRASS FAMILY

Early people buzzed their lips against animal horns or seashells to create sound. Brass instruments also need buzzing lips to make them sound but they have mouthpieces to make it easier on the lips. The mouthpiece is put in a long brass tube, which is wound around to make it easier to hold. The tube ends with a ‘bell’ – the longer the tube, the deeper the voice.

Many brass instruments have valves, however the trombone uses a slide to lengthen and shorten the brass tube to change the notes. All brass players must use their lips as well to control the pitches.

Brass instruments have a very big sound so you will see them at the back of the orchestra. They are also popular instruments in school and marching bands.

All stringed instruments have strings that are attached to a hollow sound box. The strings can be played by plucking, bowing or strumming. Some members of the string family are:

Draw the following:
- trombone
- french horn

THE KEYBOARD FAMILY

A family not always seen with the orchestra but used in some concerts is the keyboard family.

Keyboard instruments are often classified as percussion instruments because many of them use percussive ways to make sound. However, not all keyboard instruments are true members of the percussion family.

Sound is produced on the piano by small hammers striking strings. The hammers are controlled mechanically and strike the strings when the player’s hands press the piano keys. On the harpsichord the sound is produced when quills pluck the strings as the player presses the keys. In the organ, air is pushed through different length pipes to make the notes. Electronic keyboards are similar to organs but have loudspeakers instead of pipes.
The members of the keyboard family all use a keyboard to make sound in different ways. When the keys are pressed on the piano, levers cause hammers to hit the strings. On the harpsichord the strings are plucked. On the organ, air is forced through different sized pipes. The electronic keyboard uses electricity. Some members of the keyboard family are:

- harpsichord
- small pipe organ
- electronic keyboard

Draw the following:
- piano
- electronic keyboard
Musical Instrument Riddles

Can you solve these music instrument riddles?

1. I sit on the floor and you sit in a chair.
   I make music sing with a bow of horsehair.
   I’m played in an orchestra; my tone is quite mellow,
   My name has five letters, they call me a _________. (ELOCL)

2. I’m silver and narrow – now guess if you can.
   I’m not made of wood but a woodwind I am.
   A play sweet, high melodies - to you I might suit.
   A piccolo’s cousin, but I am a _________. (ELFUT)

3. I’m held in your hand and I’m often round.
   I’m shaken or hit by the hand to make sound.
   I jingle and jangle the best that you’ve seen.
   I’m not jingle bells – I’m a ___________________. (UTEAMBROIN)

4. I come with a slide but I’m not at the park.
   Bands and orchestras have me, my sound hits the mark!
   I’m brassy they say, and I have a big tone.
   But you can’t help but love me, I am a ____________. (TEBRNOMO)

5. Some children have played me at school and had fun.
   In orchestra sections, I’m taller - for one.
   You play on my bars with some mallets! Hear the tone!
   My family’s percussion - I’m a ___________________. (XPONEYLHO)

6. You can beat me and it’s not in a race!
   I come in all sizes from snare down to bass.
   In orchestras I like to be the one who has fun.
   Timpani or conga – I still am a ___________. (MRDU)

7. We come as a pair and we sound big and brassy.
   We’re shiny and loud – some folks may say ‘crash-y’.
   We come in all sizes from big ones to thimbles.
   You won’t miss our sound because we are the ___________. (LYSMBASC)

8. I have four short strings but you can’t tie a knot.
   In the orchestra, my section will play quite a lot.
   My music is lovely and will have you smilin’.
   I’m played with a bow. I am the ____________. (LIVNIO)

9. If you ask for the keys, please – you won’t get a car.
   My bench has held many a fabulous star.
   My name means soft/loud - which maybe you know.
   I like black and white. Call me a ____________. (OPAIN)

10. A ‘licorice stick’ is my just-for-fun name.
    A reed in my mouthpiece makes music my game.
    I play in the woodwinds and you all can bet -
    My sound is quite mellow from the ____________. (ELATNICR)