

Meet the Instruments

Fact Sheet



Violin

Family: Strings

Size:	Smaller than the viola, cello, and bass the average length of a violin body is 13-14 inches.
Material:	Different types of finely shaped wood held together with glue. 4 strings which are synthetic, steel or made from animal gut.
How to Play:	Held between the chin and collarbone, the violinist plucks the strings using their fingertips or rubs a slightly curved wooden bow, often made with horsehair, across the strings.
Sound:	The vibrations from the strings reverberate within the hollow wooden body of the violin.
Sounds Like:	Can be bright, soft and sweet to dark, muted and shrill. The violin can play more than 1 note if using more than 1 string. The hollow body of the violin resonates and helps create its characteristic sound.
Fun Facts:	There are over 70 separate pieces of wood in a violin. The part of the bow you grip is called the Frog. A violin and a fiddle are the same instrument. In medieval Europe, fiddles emerged concurrently with ancestors of the modern violin. As the violin took its present form, it became the primary medium for "fiddling." Fiddle music existed throughout Europe, but it holds an iconic place in traditional Irish music. Immigration brought fiddle music to the US, where a distinctly American musical genre called bluegrass evolved.



Viola

Family: Strings

Size:	Like an oversized violin, the viola is around 16-1/2 inches long.
Material:	Different types of finely shaped wood held together with glue. 4 strings which are synthetic, steel or made from animal gut.
How to Play:	Held between the chin and collarbone, the violist plucks the strings using their fingertips or rubs a slightly curved wooden bow, often made with horse-hair, across the strings. Pitch is controlled by pressing down on a string with the fingertips of the left hand on the fingerboard.
Sound:	Sound is produced by moving the bow over the string or by plucking with the right hand.
Sounds Like:	From rich and dark to clear and pleasing to harsh and forceful. Between violin and cello in pitch, the viola is a full octave above the cello and one fifth below with violin, with a mellower tone which helps achieve balance and harmony in the string section.
Fun Facts:	The MacDonald Stradivarius Viola is included in the top 10 most expensive musical instruments in the world. It was played by Amadeus Quartet co-founder, Peter Schidlof, until his death in 1987. Valued at auction for \$45 million, in 2014, the instrument has never actually sold. This one-off, musical treasure is still on the market, it's a wonder why!



Cello

Family: Strings

Size:	The cello is 30 inches tall.
Material:	Different types of finely shaped wood held together with glue and 4 strings which are synthetic, steel or made from animal gut.
How to Play:	Played in a seated position and steadied between the knees; the left hand moves over the fingerboard pressing down on the strings and the right-hand plucks using fingertips or rubs a slightly curved wooden bow, often made with horsehair, across the strings. Pitch is controlled by pressing down on a string with the fingertips of the left hand on the fingerboard.
Sound:	Between viola and double bass in pitch. The vibrations from the strings reverberate within the hollow wooden body of the cello.
Sounds Like:	Can be dark and powerful, soulful, and warm, or bright and gentle.
Fun Facts:	Yo-Yo Ma is one of the most famous and one of the greatest living cellists today. He started performing in front of an audience when he was five years old and by the time he was seven he had performed in front of President John F. Kennedy.



Double Bass

Family: Strings

Size:	Like an enormous, elongated violin, about 6 feet tall!
Material:	Different types of finely shaped wood held together with glue and 4 strings which are synthetic, Steel, or made from animal gut.
How to Play:	Stand or sit on a high stool the player leans the instrument against their body. Its shoulders slope, unlike the those of other members of the string family, allow musicians to have more room to move. Pluck the strings using fingertips or rub a slightly curved wooden bow, often made with horse-hair, the strings. Pitch is controlled by pressing down on a string with the fingertips of the left hand on the fingerboard.
Sound:	The double bass produces the lowest pitch in the string family. The vibrations from the strings reverberate within the hollow wooden body.
Sounds Like:	Full, dark, deep and mellow.
Fun Facts:	The double bass is one of the most flexible and yet distinctive instruments available. It is common across many musical genres, such as jazz, rockabilly, blues, swing, rock, bluegrass, country music, tango, and many more. The double bass is sometimes called the upright bass because it's played upright and because of its size, loud notes can reverberate for as long as 10 seconds.



Flute

Family: Woodwinds

Size:	About 26 inches long.
Material:	Originally made of wood like a recorder, the flute is now made from silver, gold, or even platinum.
How to Play:	Held horizontally, the flutist blows across the mouthpiece and changes notes using fingers to press on the keys.
Sound:	A flute makes sound when air is blown across a hole in its mouthpiece.
Sounds Like:	Ranges from hollow and melancholy to round and mellow, to bright and rich, to brilliant and shrill.
Fun Facts:	Flutists sometimes select a special crown for their flute (the domed shaped “plug” at the top end of the flute) with gemstones and other precious materials.



Oboe

Family: Woodwinds

Size:	About 2 feet long.
Material:	Typically made from granadilla wood or plastic.
How to Play:	Two reeds tied together are clamped to a mouthpiece at the top of the instrument and the oboists' lips provide pressure that controls the tone. Notes are changed using keys on the body of the instrument
Sound:	Air pressure vibrates the double reed.
Sounds Like:	From heavy and melancholy to bright and expressive.
Fun Facts:	In an orchestral performance, the first thing you hear is the oboe's A note so the entire orchestra can tune with each other. This moment announces the start of the concert.



Clarinet

Family: Woodwinds

Size:	About 26 inches.
Material:	Usually wood or plastic.
How to Play:	A single reed is clamped to a mouthpiece at the top of the instrument and the clarinetists' lips provide pressure that controls the tone of the instrument. Notes are changed using keys on the body of the instrument. Its metal keys are played with both hands giving the musician the ability to play a wide range of notes quickly.
Sound:	Air pressure vibrates the single reed.
Sounds Like:	Dark, full, warm, and mellow to brilliant, sometimes comparable to a human voice.
Fun Facts:	The clarinet is one of the orchestra's newest instruments, arriving on the scene in the early 18th Century. However, its distinctive sound and power of expression has inspired composers from Mozart to Benny Goodman.



Bassoon

Family: Woodwinds

Size:	About 4-1/2 feet.
Material:	Maple, sometimes plastic.
How to Play:	The bassoon is played seated, as upright as possible. Two reeds tied together are clamped to a mouthpiece at the top of the instrument and the musicians' lips provide pressure that controls the tone of the instrument. Notes are changed using keys on the body of the instrument.
Sound:	Air pressure vibrates the double reed.
Sounds Like:	The bassoon can produce a range of sounds from bright and cheerful to expressive or eerie. The bassoon is often used to achieve rich tonal blends with other instruments.
Fun Facts:	If you uncoiled the bassoon's inner tubing, it would be 8 feet long!



French Horn

Family: Brass

Size:	About 8-12 feet long.
Material:	Nickel-silver or yellow brass.
How to Play:	Held in the lap with lips on the mouthpiece, the right hand is placed on the valves and the left hand inside the bell of horn. Valves can be opened or closed to change pitch.
Sound:	The French horn produces sound when the player buzzes their lips while blowing air into its mouthpiece.
Sounds Like:	From low and mellow to intense and brilliant.
Fun Facts:	If you straightened the tubing from a French horn, it would be up to 18 feet long!



Trumpet

Family: Brass

Size:	About 2 feet long.
Material:	Yellow brass.
How to Play:	Held horizontally while the musician buzzes their lips on the mouthpiece and blows and fingers of the right hand on the valves.
Sound:	The trumpet has the highest pitch in the brass family. Buzzing lips while blowing air into the mouthpiece produces sound.
Sounds Like:	From dark and heroic to brilliant, full, and rounded, to shrill and vivid.
Fun Facts:	It's widely believed that the first ever trumpeter was in Egypt in the 1500's, where it was mainly used for military purposes.



Trombone

Family: Brass

Size:	With its slide stretched out straight a trombone is about 9 feet long.
Material:	Yellow, gold, or rose brass and/or nickel silver.
How to Play:	Held horizontally while the musician buzzes their lips on the mouthpiece and blows. The right hand is on the movable metal slide which changes the pitch.
Sound:	Between trumpet and tuba in pitch. Buzzing lips while blowing air into the mouthpiece produces sound.
Sounds Like:	From weighty and somber to mighty and heroic to mellow, playful, or magical.
Fun Facts:	One early version of the trombone was called a sackbut. The name was derived from the French words saquer (to pull) and bouter (to push).



Tuba

Family: Brass

Size:	About 3-1/2 feet tall.
Material:	Yellow brass, sometimes nickel-silver, and sometimes silver-plated.
How to Play:	Held seated in the lap semi-vertically bell up, the left arm hugs the instrument, and the hand grips a tuning slide or the furthest pipe while the fingers of the right hand control the valves.
Sound:	The tuba has the lowest pitch in the brass family. Buzzing lips while blowing air into the mouthpiece produces sound.
Sounds Like:	From very soft to full and powerful.
Fun Facts:	The main tube of a tuba is 18 feet long and gets progressively wider toward the end. Tubas can be difficult to carry; they weigh around 30 lbs! Some tubas can reach over 50 lbs. This is why people play the tuba sitting down. A chair allows the player to sit in an upright position, which provides them with the breath support they need.



Timpani

Family: Percussion

Size:	Timpani are large semi-spherical drums that look like big shiny bowls or upside-down tea-kettles. They're about 32 inches tall and come in diameters of 23, 26, 29, or 32 inches.
Material:	Copper or brass body, steel hoop, and calfskin or plastic head.
How to Play:	Timpani can be tuned to notes using a pedal and are struck with mallets.
Sound:	The body of the timpani resonates for 2 to 4 seconds when its head is struck.
Sounds Like:	A wide variety of tones, from dull to thunderous, powerful to mellow, velvety to resonant, rumbling to dry.
Fun Facts:	Timpani started as military drums. They date as far back as the 13th century when they were introduced to Europe by crusaders who returned from war with the similar, but somewhat smaller Arabian Naqqara. Timpani were used during the U.S. Civil war where they were played by musicians on horseback. A classical percussion section would never be complete without timpani. Timpani can sometimes be called kettledrums.



Snare Drum

Family: Percussion

Size:	14 inches round and 5 or 6 inches deep.
Material:	Metal and wood hollow cylinder with calfskin or plastic drumheads.
How to Play:	By striking the drumhead with drumsticks, mallets, or brushes.
Sound:	The wires, or the “snare,” at the bottom of drumhead produce the drum’s unique rattling sound.
Sounds Like:	The snare drum crackles rather than booms, and its rumble is hollow. It can also ring, pop, and thump.
Fun Facts:	While snare drums are part of the orchestra, you can also find them in concert bands, marching bands, parades, drumlines, drum corps, and in many musical genres.



Harp

Family: Percussion

Size:	Modern concert harps stand about 6 feet tall, 21 inches wide, and weigh around 70-90lbs. The harp has 47 strings, ranging in size from a few inches to several feet in length.
Material:	The harp's frame is made of wood, typically maple. The strings can be made from a variety of materials including, wire, gut, or nylon.
How to Play:	The harp is played using four fingers on each hand plucking its strings and the harpist's feet press the harp's 7 pedals to alter the pitch of the strings.
Sound:	A harp's note, especially in the lower register can resonate for a long time
Sounds Like:	Ranges from gentle to metallic, dull to full sounding, glittering to mellow, and perhaps most famously of all, cascading.
Fun Facts:	The harp is believed to have existed since around 3,000 BC, making it one of the oldest instruments in the world. The word "harp" originates from German, Old Norse and Anglo-Saxon words meaning "to pluck." Images of it can be seen on ancient Egyptian tombs and in Mesopotamian culture.



Piano

Family: Percussion

Size:	Ranges from a small spinet to a concert grand 9 feet long.
Material:	Primarily hardwood and cast iron.
How to Play:	The piano's sound is made when the pianist presses its keys causing felt-covered hammers to strike the strings inside making them vibrate. Dampers to stop the strings from ringing are controlled with a pedal.
Sound:	Strings vibrate in response to being struck by felt-covered hammers.
Sounds Like:	Ranges from thick and melancholy, to clear, bright, and forceful, to shrill or bell-like. Can stand out with its bright, singing sound.
Fun Facts:	Pianos have the largest range of notes of all the instruments. In typical 88-key pianos, there are 7 octaves, compared to the four octaves found on a cello or violin. The piano falls into the percussion family because the piano's strings are hit by a hammer, BUT it can also be classified as a string instrument.