Instruments

The following section was taken from a Teacher’s Guide and discusses all of the major instruments of the orchestra. The first page shows the “official” seating chart for the CSO as of the year 2001 with Daniel Barenboim conducting. But I am sure you have noticed that our orchestra does not always sit in this configuration. The large seating chart you received when you became a docent shows the old Solti arrangement.

You can use these two charts to illustrate to the students how the seating can vary, and you can challenge them to look for themselves when they go to the concert. If you plan to do a follow-up visit, this makes a good assignment.

If you personally have any trouble recognizing the sound of any of the instruments, I would like to recommend a 2-CD set put out by Vanguard Classic (OVC 8096/97) with the Vienna Staatsoper Orchestra demonstrating all of the instruments and finishing up with a performance of Benjamin Britten’s Young Person’s Guide to the Orchestra.
SECTIONS OF THE ORCHESTRA

The diagram below shows the sections of the Chicago Symphony Orchestra as they are arranged at Symphony Center. On the following pages you will find drawings and brief explanations about each of the instruments in the four sections of the orchestra: strings, woodwinds, brass and percussion. The string section is the largest section in the orchestra. It contains the violins, violas, cellos, basses, and sometimes the harps. Flutes, oboes, clarinets, and bassoons make up the woodwind section. The brass section is comprised of horns, trumpets, trombones, and tuba. The percussion section contains the largest variety of instruments (too many to mention here!). The instruments in the percussion section are divided into two types: the instruments with no definite pitch, such as the snare drum, bass drum, and cymbals, and the pitched instruments like the timpani, chimes, bells, and the xylophone.

On the following pages, the possible ranges of sound which the illustrated instruments can play are shown on a piano keyboard.
All string instruments have a warm, singing tone quality.

**VIOLA**
2nd highest sounding of the string instruments (comparable to the alto voice in a choir)
Instrument held under the chin
Can be played with or without a bow

**VIOLIN**
Highest sounding of all string instruments
Instrument held under the chin
Can be played with or without a bow

**BASS**
Lowest (deepest) sounding of all string instruments
Very large—must be played with the peg balancing on the floor and the neck balanced on the bassist's left hand
Can be played with or without a bow

**CELLO**
2nd deepest sounding string instruments
Played by balancing the instrument's peg on the floor, body between the knees, and neck on the cellist's left hand
Can be played with or without a bow
WOODWINDS

OBOE
Highest of the double reed instruments (which include bassoon, English horn, and contrabassoon)
Somewhat nasal in tone
Requires great breath control

FLUTE
2nd highest of the woodwinds (only piccolo is higher)
Tone of the instrument becomes progressively brighter as it plays higher
Does not use a reed

B-FLAT CLARINET
Single reed instrument
A transposing instrument, the note played sounds one step lower than written
Capable of a wide variety of tonal color and dynamics
A very flexible instrument

BASSOON
Low double reed instrument
Tone is much less nasal than that of the oboe; much more “blendable”
Dark, full tones at the bottom of its register; progressively thinner as the bassoonist plays higher in its range

Most woodwinds are played using a reed, a thin piece of dried grass which produces sound by vibration from the performer’s airstream.
Brass instruments are played by forcing air into a brass mouthpiece with lips tightly pursed to create a buzzing sound.

**Tuba**
The largest and lowest pitched brass instrument
Requires great breath control
Deep "round" tone
Often used to support the harmony of the orchestra

**Trombone**
A deep sounding brass instrument
Distinguished by a slide with which the performer changes pitch by lengthening or shortening the "tube"
Dark, full sound

**Trumpet**
The highest sounding of the brass instruments
A transposing valve instrument which sounds lower than the notes written
An agile, brilliant sounding instrument

**Horn**
A transposing valve instrument which sounds lower than the notes played
A very warm tone quality
Quick, fast passages are difficult on this instrument
Percussion instruments are either capable of matching a definite pitch or untuned.

**UNTUNED**

Other untuned percussion instruments:

- Triangle
- Cymbals
- Tambourine
- Gong
- Woodblock
- Castanets

**TUNED**

Other percussion instrument with definite pitch:

- Xylophone
- Marimba
- Glockenspiel
- Vibraphone
- Chimes

**SNARE DRUM**

Important rhythm instrument
played with sticks
Relatively high tone
Played with sticks or brushes

**BASS DRUM**

Very large
Slow response
Played with a large mallet
Deep sound with long resonance

**TIMPANI**

"Kettle drums" usually are seen in groups of four: the largest plays the lowest five notes of the range, the smallest plays the highest

Played with mallets