

THE WOODWINDS

BACKGROUND: The woodwind family is composed of individuals. Each instrument sounds very different, and contributes its own individual tone color to the sound of the orchestra.

Originally, all woodwinds were made of wood. Today, other materials are used, especially in making flutes; some are even made of gold. The flute's sound is produced by blowing over a hole in the end of an instrument, like blowing over the top of a soda pop bottle.

There are single reed woodwind instruments, such as the clarinet, and double-reed ones such as the oboe and bassoon. Playing a double-reed instrument is not something just anyone can do; it's like pinching one end of a straw and blowing into it to get a sound, only harder.

Each member of the woodwind family has a cousin sitting next to it in the orchestra. The flute has the piccolo, to play high, piercing notes. The clarinet has the bass clarinet, the oboe has the English horn, and the bassoon has the contrabassoon; these all play lower notes than the cousin with the same basic tone color. The clarinet also has a higher cousin, the E-flat clarinet, and there is a lower, more mellow sounding flute called the alto flute. An instrument's tone color is its own characteristic sound, like your own particular voice. The musical term for this is *timbre* (pronounced TAM-ber).

***NOTE TO TEACHERS:** You may wish to bring several empty bottles into the classroom. Ask a student to blow gently across the top of a bottle to see what sound this makes. If bottles are filled with different amounts of water, the pitch will vary from low to high. This exercise will help children discover the relationships of size to pitch on various woodwind instruments.

WOODWIND VOCABULARY:

embouchure (om-bo-shur) -	a player's lips and mouth technique or position
mouthpiece -	the section of the wind instrument that is blown across or into
keys -	buttons, rings or pads which the player covers with his or her fingers to change the pitch of the notes
air column -	length of air contained in a pipe, which vibrates to make a sound

Woodwind Instruments

Flute



- Highest sounding woodwind instruments
- Held sideways when played
- Flute is 26 inches long and has a light, lovely sound
- Originally made of wood and dates back 1000s of years
- Metal flutes with padded keys established in 1700s
- Piccolo is half the length of a flute and has a very high, clear, piercing sound

Piccolo



- Double reed is used in the mouthpiece
- Medium high range
- Creates a thin, plaintive sound
- Requires great breath control
- Developed from the shawm by the 1700s
- English Horn is a larger form of the oboe, has a lower pitch

Oboe



Early Woodwind Instruments: The first woodwinds were probably made from hollowed out bamboo. In time, the simple bored holes were covered by a system of keys, thus making them easier to cover.

Orchestral Woodwind Instruments: Some woodwind instruments have been in use for many hundreds of years while others were invented within the last 150 years.

Bassoon



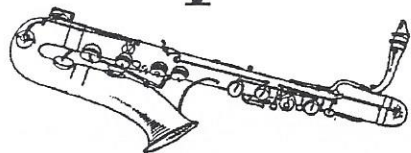
- Double reed is used in the mouthpiece
- Low range
- Sounds like a low oboe
- Would be 9 ft. 2 in. long if stretched out straight
- Early bassoons had only 2 keys; more keys were added in the 1800s providing extra notes
- Contra Bassoon reaches even lower pitches

Clarinet



- Single reed is used in the mouthpiece
- Wide range from high to low
- Sounds hollow and melodic
- Easily handles changes in speed and volume
- Dates back to 1700s
- First included in orchestra regularly by Mozart
- Bass Clarinet reaches lower pitches and curves up at the bottom like a saxophone
- Single reed is used in the mouthpiece
- Sounds sweet, haunting, or screeching
- Most recent orchestral instrument: invented in 1840
- Plays jazz and classical music
- Tenor and alto saxophone are most common
- Soprano, baritone, bass saxophone are also played

Saxophone



Sound Production: Woodwinds produce their sound by setting into vibration a column of air within a pipe. The single and double reed instrumentalists create sound by means of a vibrating reed activating a column of air. The flutist blows across a hole at the end of the pipe. As the moving air strikes the edge of the hole it sets the air column into vibration.

Pitches are determined by the length of the column of air. The air column extends from the mouthpiece to the furthest open hole and varies as the player opens and closes keys. The longer the column of air, the lower the pitch.

Woodwind instruments add distinctive color to the orchestral sound

