

## BRASS

**BACKGROUND:** The brass section is a source of brilliant, impressive, powerful sound. In most pieces of music, the brass instruments don't play all the time but add a touch of color here or an exclamation there. The brass instruments are often called on for a striking opening or a big finish.

Brass instruments have no reeds, the sound is made entirely by the vibration of the player's lips placed on the mouthpiece. By tightening and loosening the lips, and by using different valves or sliding on the instrument, the player can make different notes.

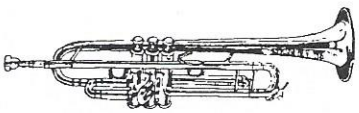
The brass section in the orchestra usually consists of three or four trumpets, four or five horns, three trombones, and a tuba. The brass section is not large but creates a huge sound.

### BRASS VOCABULARY

- bell - widening out of the tube at the end farthest from the player. Sound comes out of the bell - loud or soft, according to how hard the player is blowing through the instrument.
- brass - a yellowish metal that is essentially an alloy of copper and zinc
- water key - a spring lever which, when opened, allows moisture to be drained from a brass instrument through a small hole
- tonguing - starting a note with a tongue action, like saying "ta"

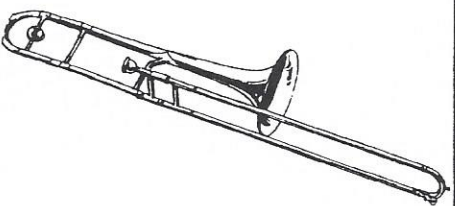
# Brass Instruments

## Trumpet



- Highest of the brasses
- Similar to soprano voice in a choir
- Trumpets date back to at least 1350 BC
- Straight trumpets were found in the tomb of Pharaoh Tutankhamen
- Sounds brilliant and strong
- Mute (cork-shaped object) can be used to muffle the sound
- Length uncoiled is 6 feet!

## Trombone



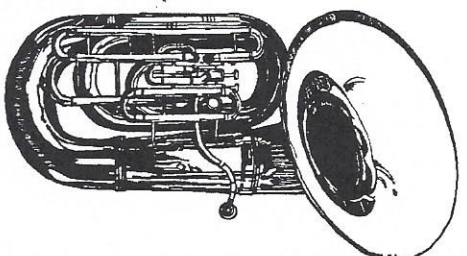
- Medium low range
- Similar to tenor voice in a choir
- Trombone design has been the same for 500 years
- It was called a sackbut (French for "pull-push") in medieval days
- Sounds powerful and majestic
- Most trombones retain slide design, valve trombone sounds less majestic
- Length uncoiled is 9 feet!

## Horn



- Medium low range
- Similar to alto voice in a choir
- Hunting horn originally, then inner coils of tubing were added to produce more pitches
- Right hand is placed in bell to control pitches and tone
- Sounds warm and rich
- Length uncoiled is 16 feet!

## Tuba



- Lowest of the brasses
- Similar to bass voice in a choir
- Developed in the 1800s
- Sounds deep
- Length uncoiled is 16-18 feet!

**History of Brass Instruments:** Brass instruments have their origin in natural items such as conch shells, hollowed branches, and animal horns. Instrument makers experimented with extra tubing and created "crooks"; detachable U-shaped arms of tubing, that could be interchanged to allow for various ranges of notes. Brass players became skilled at substituting crooks as needed and composers were careful to write in rests when a crook change was required. Valves, invented in the 1800's, eliminated the need for crooks by mechanically directing the air into the appropriate length tubing.

**Sound Production:** Brass players make sounds by buzzing the lips into the mouthpiece which causes an air column inside the tubing to vibrate.

**Pitch:** The slacker the player's lips, the more slowly they vibrate, thus producing a lower pitch. Conversely, the tighter the player's lips, the faster the vibration, thus producing a higher pitch.

**Tone quality** of the brass instruments depends on the type of mouthpiece used, the width of the tube, and the flare of the bell.

Brass instruments add **power, color, and depth** to the sound

