

# The Brass Family

## Teaching Objective:

Students will demonstrate an understanding that musicians produce sound on instruments in the brass family by buzzing their lips.

## Vocabulary:

Vibration - rapid movement of an object up and down, or back and forth

Buzzing - the sound that is caused by blowing air between closed lips, causing them to vibrate together, into the mouthpiece. This sound is the basic sound for all brass instruments.

## Resources:

- Bottles of various sizes
- A picture of the brass family
- A picture of the orchestra

## Pre-Assessment:

Determine if students are familiar with the brass family of instruments by showing them a picture and asking the students if they recognize the instruments in the picture. Ask students to speculate about how they make their sound.

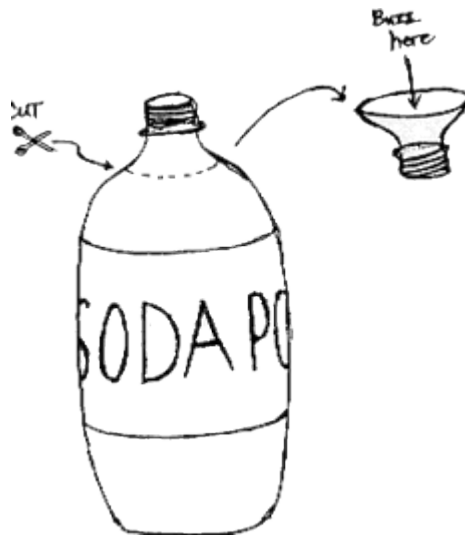
## Teaching Sequence:

1. Tell students that all sounds are produced by vibration. Vibration is when something moves up and down, or back and forth rapidly. For example, if you hold a ruler on a flat surface with a few inches of it extending off the side, you can cause the end of the ruler to vibrate by plucking it with your finger. The sound that you hear is the result of the vibration.
2. Tell students that instruments of the orchestra are grouped together according to how their sounds are produced. These groups are called instrument families. Instrument families are a lot like families of people. Meeting them is easy, but getting to know them takes a little longer. Tell them that today they will meet the brass family. Show students a picture of an orchestra and point out the brass section. Have students discuss the visual appearance of the instruments.
3. Tell students that brass players play their instruments by blowing air between their closed lips causing them to vibrate together into their mouthpiece. When the lips vibrate in this way, it is called "buzzing." This "buzzing" sound is the basic sound for all brass instruments.
4. Show students a picture of the brass family, paying particular attention to the mouthpiece. Tell students that when a musician buzzes into the mouthpiece, the sound is made louder by the bell on the end of the instrument much like cheerleaders' voices are made louder when they yell into a megaphone. (If you want

to, you can make a megaphone out of poster board to demonstrate the idea that a cone amplifies a sound by focusing it in a specific direction.) Allow students to practice buzzing, noting that with a little practice, higher and lower pitches can be achieved by making their lips vibrate faster or slower.

### **Culminating Activity:**

Make a mouthpiece by cutting the top off a plastic coke bottle (Be sure to leave enough of the bottle so that it flares out, making a place for you to buzz into. See drawing below.) Then create a "brass" instrument by inverting it into the top of a larger bottle or jug from which the bottom has been cut out. Experiment with putting your mouthpiece into various jugs and containers to see what kind of sound is produced. Allow students to try.



### **Evaluation:**

Did students demonstrate an understanding that musicians produce sound on instruments in the brass family by buzzing their lips?

### **Extension Activities:**

1. Let older students create a "brass band" and perform for the class.
2. Conduct a discussion using the following questions:
  - How are instruments like people?
  - Why are certain groups of instruments like families?
  - Why is getting to know an instrument like getting to know a person?
  - What are some ways that you could get to know an instrument? (Suggest: holding it, taking lessons, practicing, etc.)