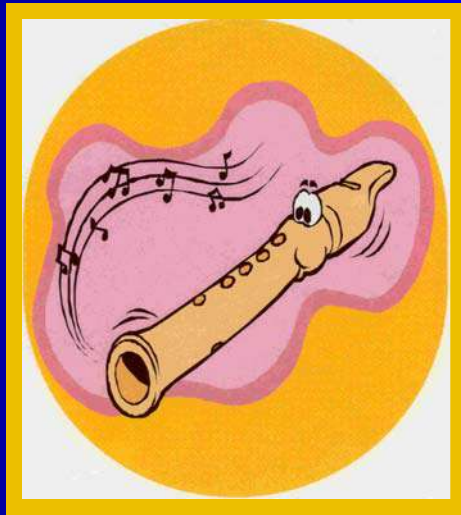





# Hardeman Roadrunners



# MUSICAL INSTRUMENTS

Instruments are  
classified or grouped into

**Families.**




**Brass**



**Woodwind**



**Percussion**



**String**

# These are my awesome children, Kelley and Jake!



Kelley

Jake

## How are they alike?

- \* Cute pug nose!

- \* Hair color.

- \* Beautiful smile!

- \* Sound of voice.

Instruments are classified into families based on things they have in common.

1. The materials from which they are made,
2. The manner in which sound is produced on the instruments,
3. The ways the instruments produce different pitches,
4. The sound quality or timbre of the instruments – (voice),
5. The function of the instrument within the band or orchestra.



**Woodwind Family**

# Meet the woodwind family!





# Meet the woodwind family!



**Bassoon Reed**

**Bassoon**



# Meet the woodwind family!



**Oboe Reed**

**Oboe**

# Meet the woodwind family!



**Clarinet**

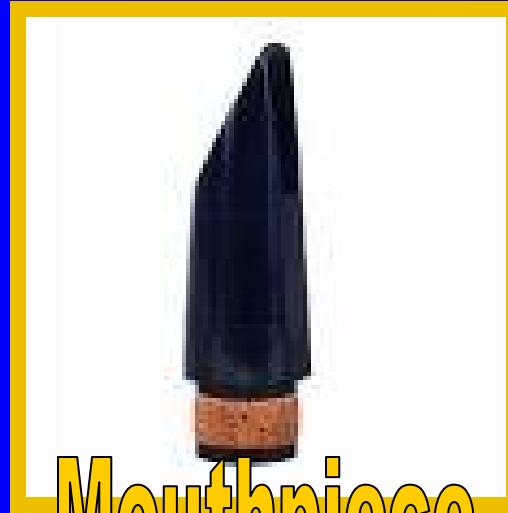


**Mouthpiece**



**Clarinet  
Reed**

# Meet the woodwind family!



Mouthpiece



Saxophone  
**Reed**

# Saxophone

# Meet the woodwind family!



**Flute Mouthpiece**

**Flute**

# How are woodwind instruments alike?

## 1. Materials

The bassoon, clarinet, and oboe are made of wood.



# How are woodwind instruments alike?

## 1. Materials

The saxophone and the flute are made of metal.



# How are woodwind instruments alike?



## 1. Materials

**Originally made of wood, the flute is now made from silver or gold metal.**



# How are woodwind instruments alike?



## 1. Materials

**The saxophone is also made of metal.**

# How are woodwind instruments alike?

## 2. Appearance

Woodwind instruments look like long tubes.



# How are woodwind instruments alike?

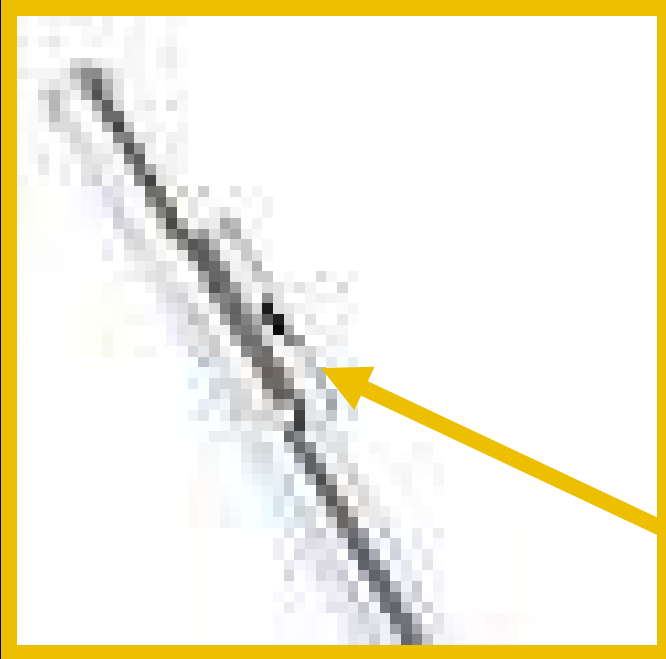


## 2. Appearance

Woodwinds have keys along the body of the instruments.

# How are woodwind instruments alike?

## Flute



## 3. Sound Production

Musicians produce sound on some woodwind instruments by blowing across a hole at the top.

# How are woodwind instruments alike?

## Pan Pipes Flute

### 3. Sound Production



Musicians produce sound on some woodwind instruments by blowing across holes at the top.

# How are woodwind instruments alike?



## 3. Sound Production

**Musicians produce sound on the clarinet and the saxophone by blowing across a single reed.**

# How are woodwind instruments alike?



## 3. Sound Production

**Musicians produce sound on the oboe and the bassoon by blowing across two reeds.**

**(Double reed instruments)**



# How are woodwind instruments alike?

## 4. Pitch Production



**Keys**

Woodwind players produce high and low pitches by placing their fingers down on a row of holes covered by keys.

# How are woodwind instruments alike?

## 4. Pitch Production



**Keys**

**Covering more holes makes the air in the instrument vibrate slower, producing a lower pitch.**

# How are woodwind instruments alike?



## 5. Timbre or Voice (Sound of Instrument)

Woodwind instruments have voices with the same quality or timbre of sound.

**The saxophone is made of brass, as are the brass family instruments?  
Why are saxophones considered a woodwind family instrument?**



**Saxophone**

## **5. Timbre or Voice (Sound of Instrument)**

**The reed in the saxophone causes it to sound more like a woodwind than a brass instrument. Also, the high and low pitches of a saxophone are created with keys rather than valves.**



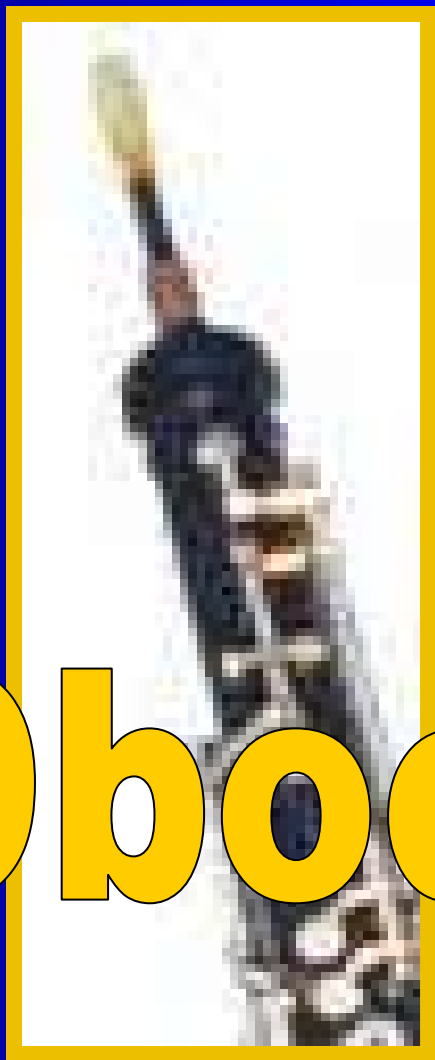
**The oboe and clarinet look similar.  
How can you tell them apart?**



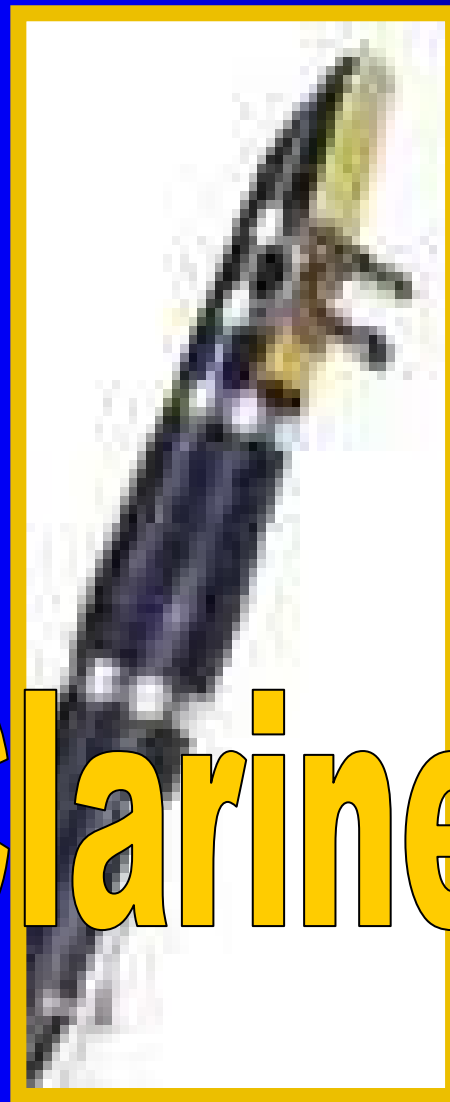
**The clarinet has one reed and the oboe has two reeds. The clarinet mouthpiece is wider.**







Oboe



Clarinet

**Can you name this woodwind instrument?**



**ANSWER**

**Clarinet**



**Can you name this woodwind instrument?**





**ANSWER**

**Bassoon**

**Can you name this woodwind instrument?**



**ANSWER**



**Oboe**



**Can you name this woodwind instrument?**



# ANSWER



# Flute

**Can you name this woodwind instrument?**

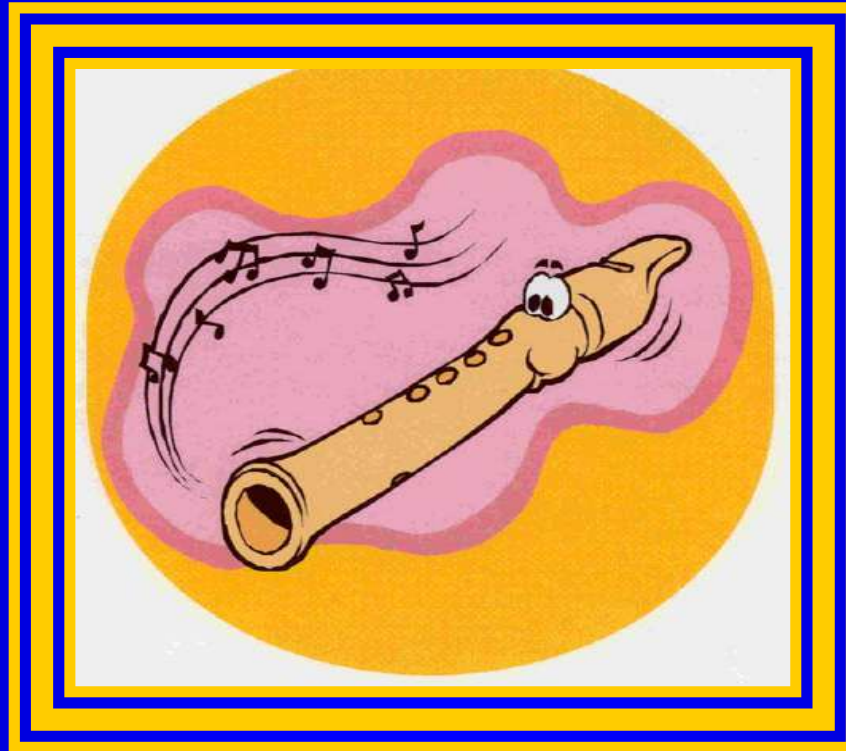




**ANSWER**

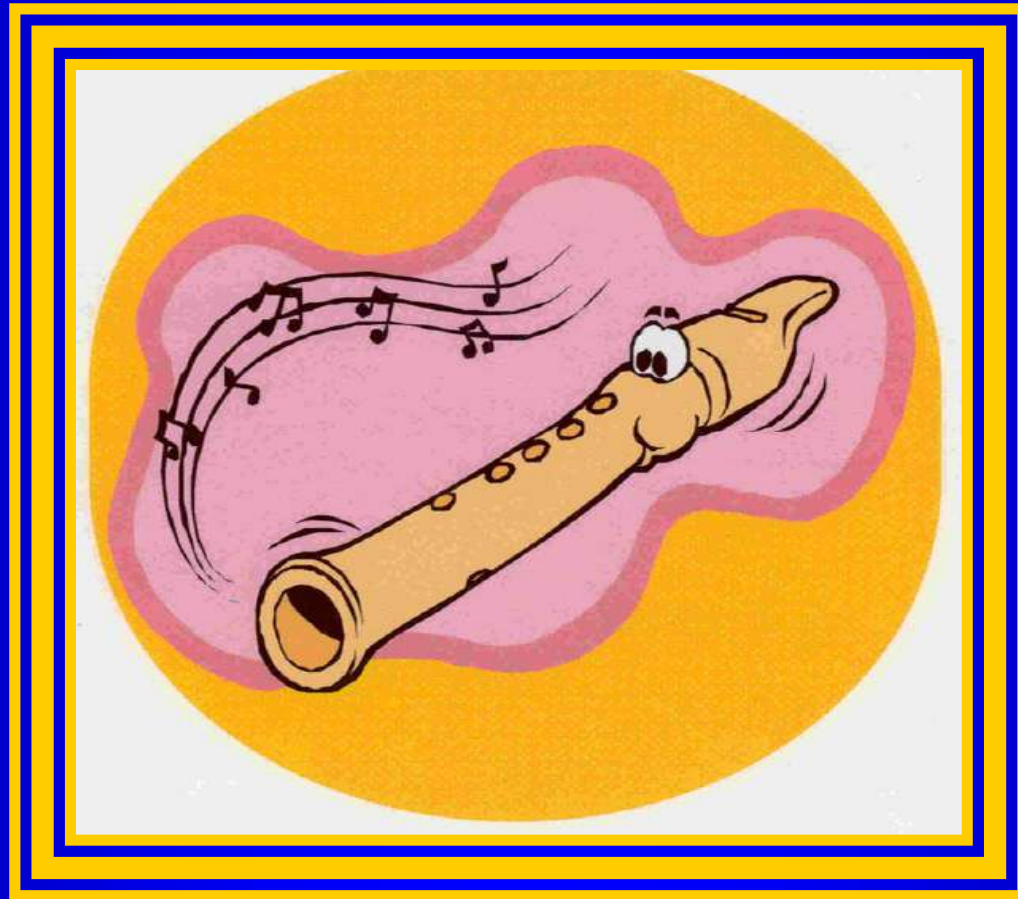
**Saxophone**

# Hardeman Elementary Presents:



**Woodwind instruments created by our famous fifth grade music students!**

# How To Make a Woodwind Instrument



# PVC Pipes

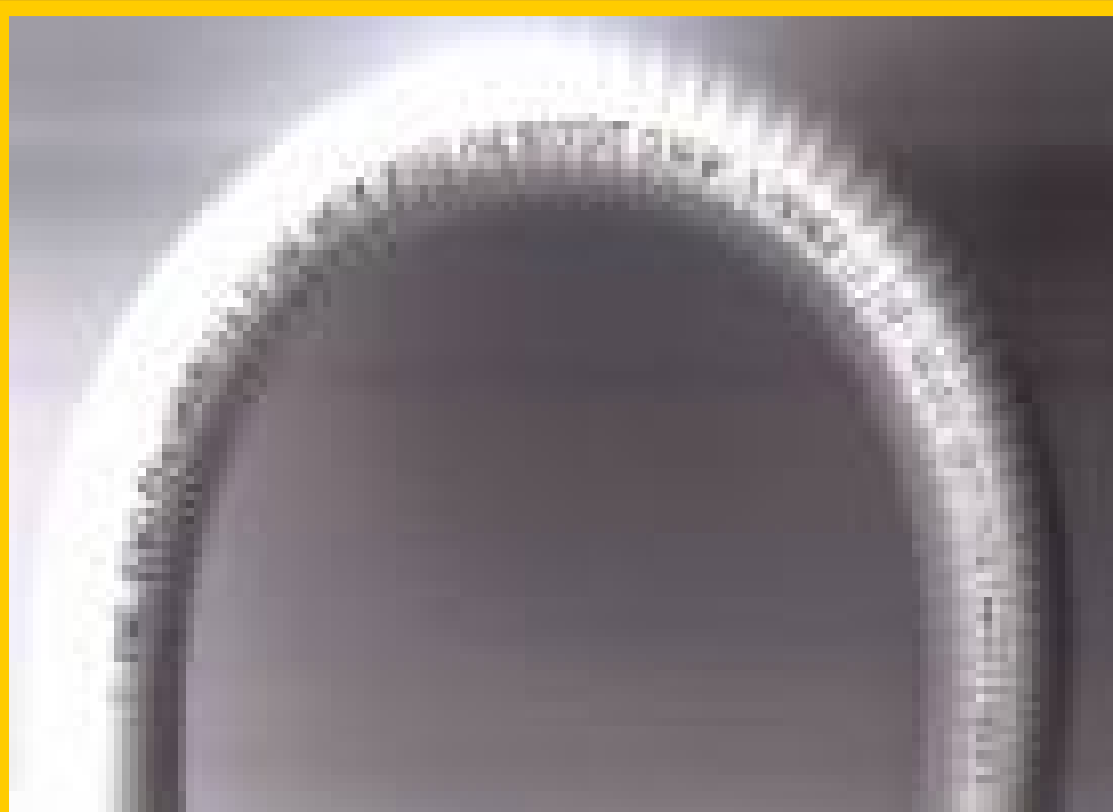


**Pipe Cap**



The bodies of woodwind instruments can be made using PVC pipes, which can be purchased in the plumbing sections at hardware stores like Lowe's and Home Depot.

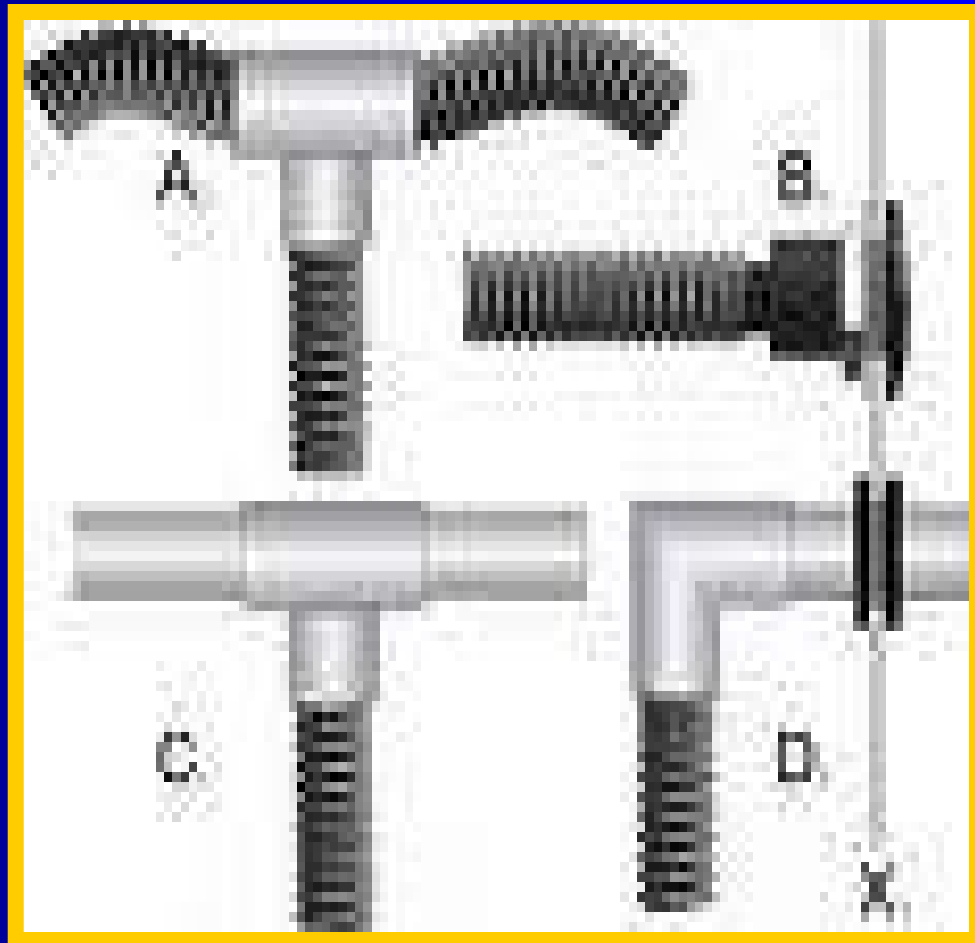
# PVC Pipes



**Corrugated PVC  
pipes bend easily to  
go around in a  
circle.**



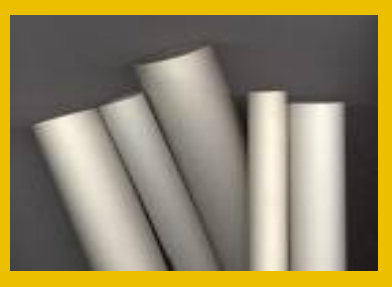
# PVC Fittings



These fittings in various sizes and shapes can be used to change the direction of the pipes, make 90 degree angles, or connect several pipes.



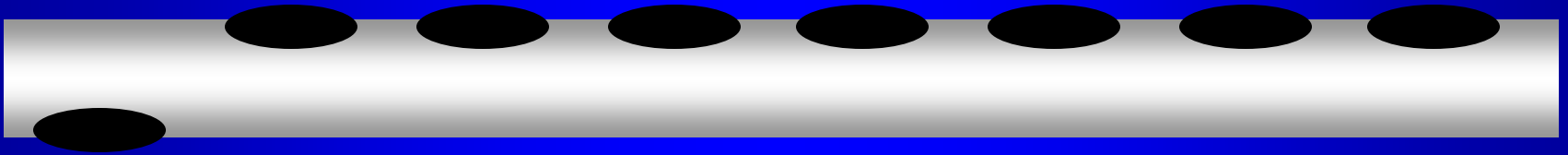
# Painting PVC Pipes



After the instrument is finished, painting the project can make it look great! If you use any kind of paint and a paint brush, the paint will almost always flake off. Spray paint works well as it will stick to the PVC pipes.

**Ask an adult to help you with spray painting!**

# Woodwind Body

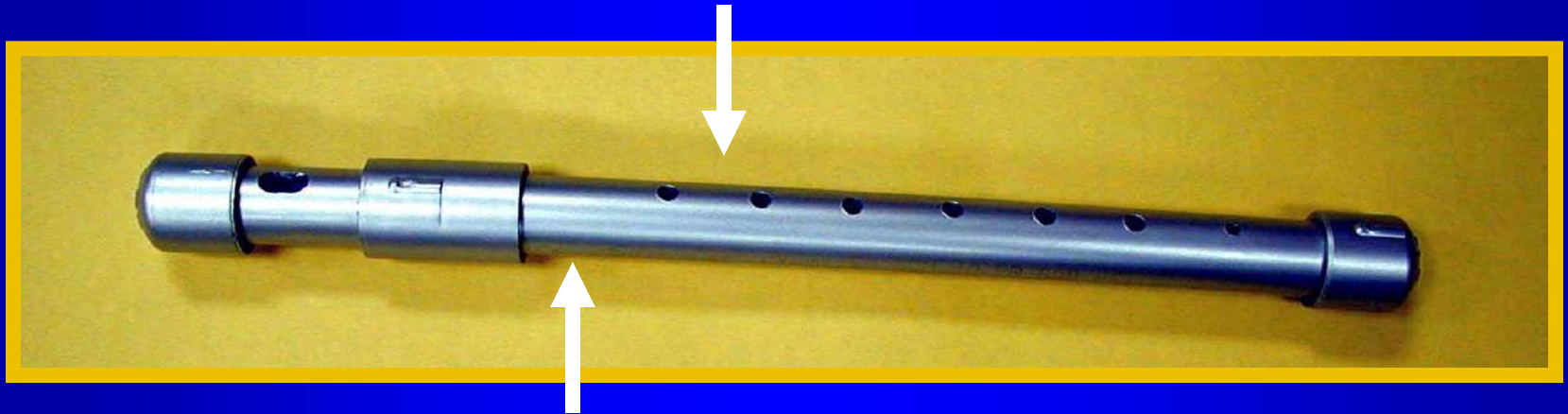


The mouthpiece will be discussed later in this slide show. The body of the woodwind instrument should have holes drilled in the top of the tube and one hole on the underneath side of the tube for your thumb.

# Woodwinds- Silver Flute

This flute was made out of PVC Pipe.

Drill 3, 4, 5, 6, or 7 top holes for fingers.



Drill 1 hole underneath for your thumb.

# Woodwinds- Silver Flute



The hole for the mouthpiece must be large, or it will be difficult to produce sound on your flute. Notice that the finger holes are smaller than the hole you blow across.

# Woodwinds- Silver Flute

Cap or plug this end.



You can also cap this end. Capping the ends produces more volume.

# Woodwinds-Flute



# PVC Mouthpieces



These fittings in various sizes and shapes can also be used to make oboe or bassoon mouthpieces. They can be purchased in the plumbing sections at hardware stores.



# Woodwinds- Oboe



**This student used real oboe reeds. She drilled a hole in a cork, put the reeds in the hole, and placed the cork in a PVC fitting. It sounded like an oboe!**

# Woodwinds- Oboe



Here is a close-up picture of her oboe mouthpiece.



# Woodwinds-Bassoon

**This student used real bassoon reeds. It is secured in a PVC fitting.**



# Woodwinds-Bassoon



The body of this bassoon was created with PVC pipe. Holes were drilled on the top of the pipe for the fingers and one thumb hole was drilled on the underneath side of the tube. PVC fittings were used to turn the corner and go the opposite direction toward the bell. A funnel was used for the bell.

# Woodwinds-Bassoon



**This bassoon was painted with silver spray-paint.**

# Woodwinds-Bamboo Flute

Cap or plug this end and the opposite end!



Make the hole you blow across large!



# Woodwinds



**This roadrunner used a thin piece of rolled up sheet metal to make her soprano saxophone. She used a real sax mouthpiece! This girl also drilled holes along the top of the body of the instrument and one thumb hole on the underneath side.**

# Woodwinds-PVC Pan Pipes



These pan pipes are made of PVC pipes and secured with yarn. Bamboo tubes can also be used to make pan pipes. Some students use leather to tie the tubes together and some use hot glue guns. Regular Elmer's glue does not hold well.



# Woodwinds-PVC Pan Pipes



The end she blows across makes a flat surface. The tubes are cut in different lengths and capped at the bottom. The air in the short tubes vibrates faster than the air in the long tubes, producing a high pitch. The long tubes vibrate slower than the short tubes, which results in lower pitches.

# Woodwinds-Pan Pipes

Cap or plug this end!



Blow across the tubes here at the uncapped end.

# **Woodwinds-Bamboo Pan Pipes**



**The bamboo pan pipe has a little different timbre of sound than the PVC pan pipes.**

# Woodwinds-Flute

**Cap or plug this end!**



**The mouthpiece hole needs to be larger than the finger holes.**

# Woodwinds-Red Flute



**This flute is made from a metal  
mop handle!**

# Woodwinds



This student used glass bottles to make her woodwind instrument. Each bottle is filled with colored water in different amounts. She experimented with the water levels until she got perfectly tuned notes (D, E, F#, G, A, B, and C). She could play the notes do, re, mi, fa, so, la, and ti in the key of D.



# Woodwinds



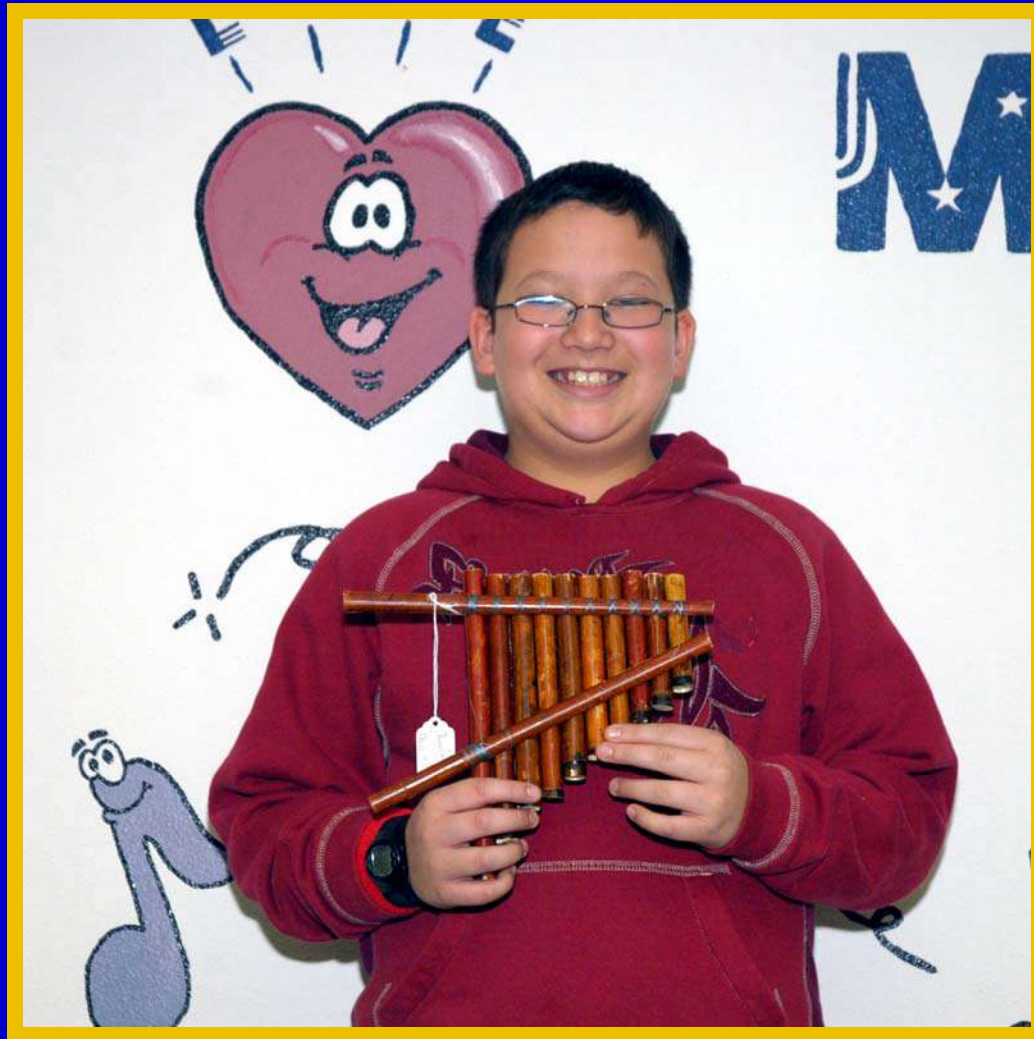
**This student used a whistle for a mouthpiece on his woodwind instrument.**

# Woodwinds-Indian





# Woodwinds-Bamboo Pan Pipes



# Woodwinds-Bamboo Pan Pipes



# Woodwinds



# Woodwinds





# Woodwinds



# Woodwinds



# Woodwinds



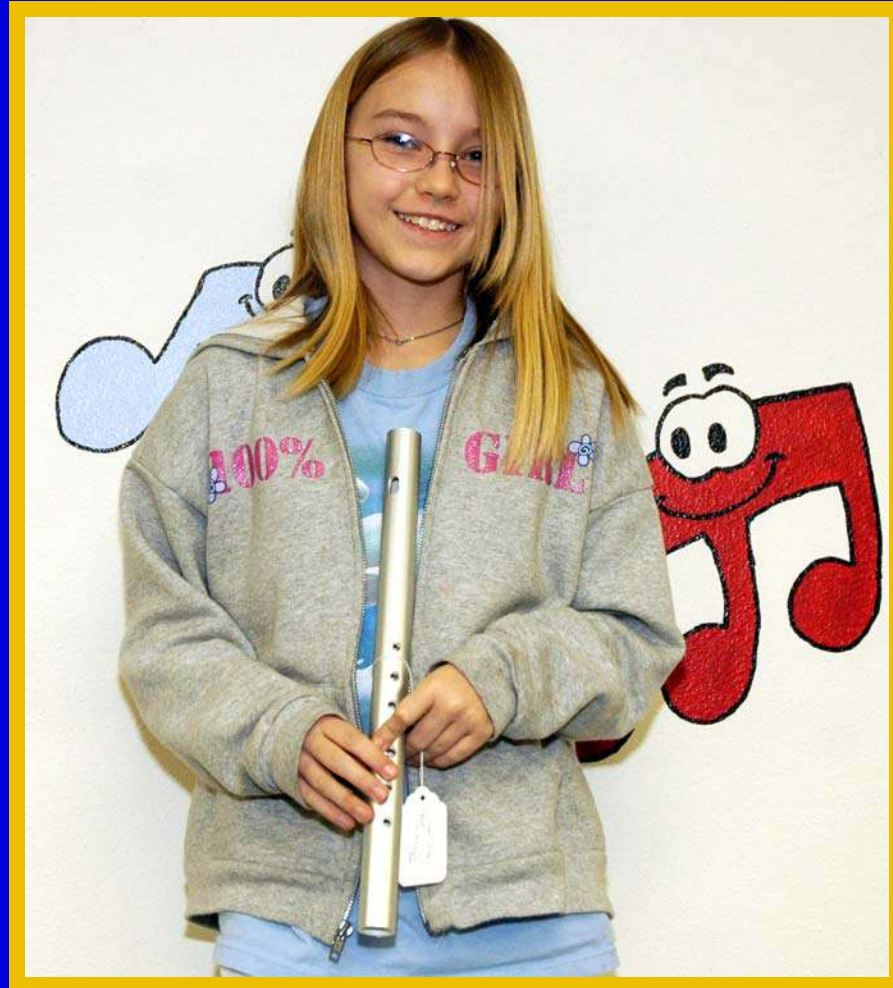


# Woodwinds

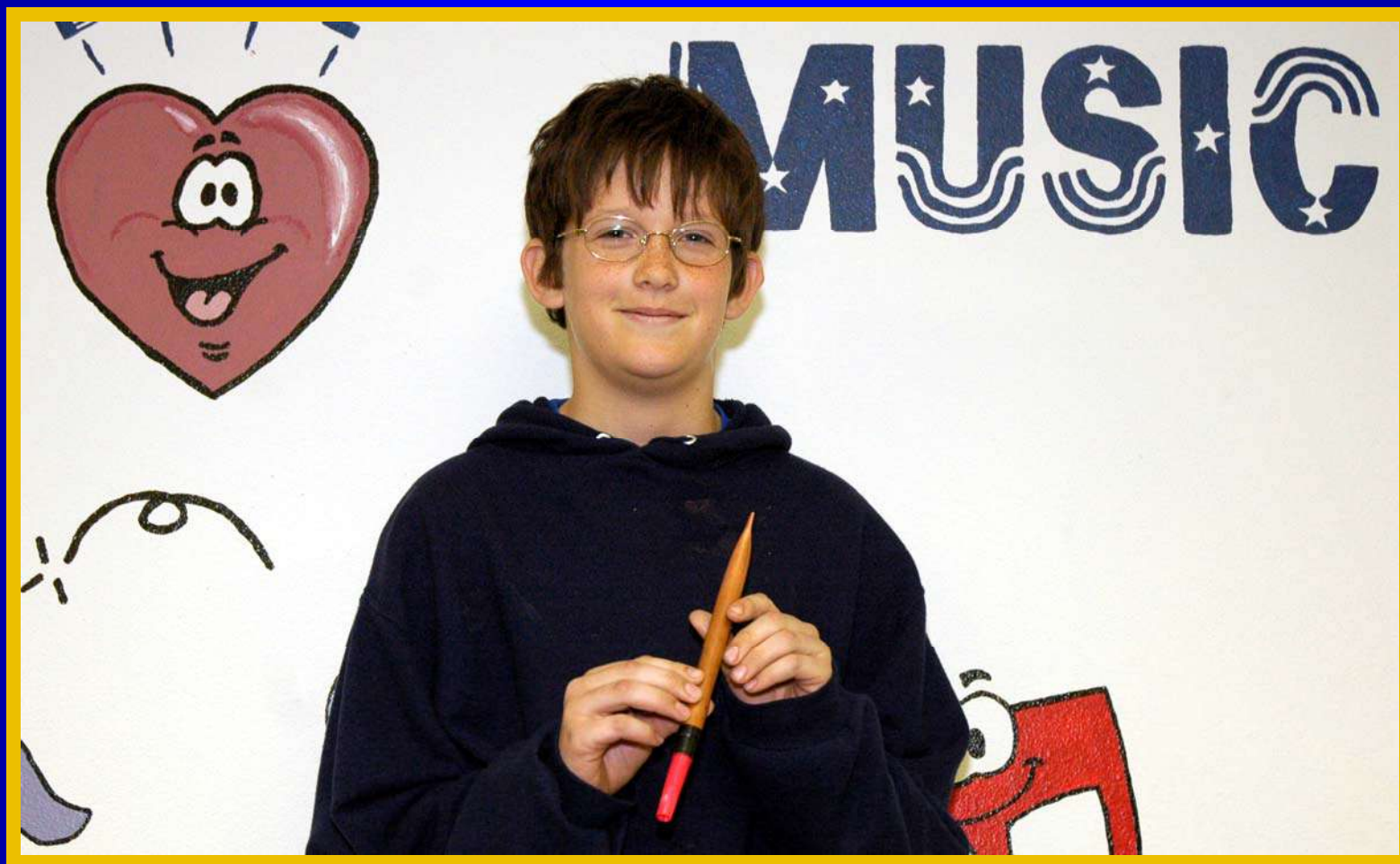




# Woodwinds



# Woodwinds



# Woodwinds









# **Awesome Instrument Creations!**