

Rock-it Science Observations For Winter Lessons 2010

Woodwinds(Younger Groups)

The students did up to three experiments and may have observed:

Part 1: The Flame Tube (Rubens' Tube)

- Propane gas smells bad!
- Sound waves inside a stove pipe pushes air out the holes.
- Low tones push out a lot more air than high tones.
- Some tones resonate and others don't.
- When the pipe is filled with propane, each hole makes a small yellow flame.
- When the sound is added, some flames begin to 'dance' but others don't.
- As the tone becomes lower, the flames are pushed higher.
- When the tone gets to its lowest, the flames are blown out.

Part 2: Singing Wine Glasses

The students had wine glasses mounted on motors and may have observed:

- A wet finger placed on the rim of the spinning glass does practically nothing at first.
- After awhile, their finger begins to vibrate.
- With luck, they get just the right force to make the wine glass ring with a pure clear tone.
- Some of the wine glasses worked better than others.
- The ones that worked well, rang a long time when tapped.
- When water was added to the glasses, the tone changed.
- More water produced a lower tone.
- Wine glasses break very easily!

Part 3: An ocarina:

- When you chew on a straw, it gets flat.
- If air is blown through the flat end at a hole in the film can, it is possible to make a tone.
- People were able to make tones with the straw pointing all sorts of directions but having it nearly parallel to the surface worked best.
- Using the round end of the straw didn't work very well.
- Other notes could be sounded by covering other holes on the film can.
- Some people were able to make sounds with the straw alone.