

**Project FOCUS  
Best Lessons  
FIRST GRADE**

**Title of Lesson:** Sound and Vibrations

**Theme:** Physical Science

**Unit Number:** 5      **Unit Title:** Sound

**Performance Standard(s) Covered (enter code):**

S1CS4

S1P1

**Enduring Standards (objectives of activity):**

**Habits of Mind**

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

**Content (key terms and topics covered):**

Sound, vibrations, pitch

**Learning Activity (Description in Steps)**

**Abstract(limit 100 characters):** This activity helps to explain the role of vibrations in sound.

**Details:** This activity is best for people with musical background. It would work best after a demonstration of the instrument that the kids will be making. My roommate came in with me on this day and we played a song for the children; I played acoustic guitar and sang while he played electric bass guitar. I also brought in my Alto Saxophone and showed them how it worked. Any string instrument would be good to demonstrate (violin, cello, etc.). The children are able to actually see and feel the vibrations of the strings and hear the sounds they make. You can show them how different size strings sound different and show them that shortening the strings can also make the pitch higher. Then send them to work on their own rubber band guitars. First I gave them a pre-made cutout pattern to decorate and tape around their guitar. They used markers to color and draw on the paper. After they finished coloring I gave them rubber bands varying in size. The toilet paper rolls can be taped to the end to make it look like a guitar with a neck. Show them how you can pinch the rubber bands to shorten them and raise the pitch. My roommate could actually play songs on these! While the children were working, I took small groups over to take a closer look at each instrument and allowed them to play.

**Materials Needed (Type and Quantity):**

Tupperware (shoe boxes, Kleenex boxes, etc. can be substituted)

Rubber bands with varying lengths and widths

**Optional:**

Toilet paper/paper towel rolls (with no paper)

Plain white paper

Markers

Musical instruments

**Notes and Tips (suggested changes, alternative methods, cautions):**

The original activity that I found in a book recommended using shoeboxes. However, I did not have enough for all the children, so I purchased Tupperware. For 15 of them, it cost about \$6. To keep costs down it might be wise to find shoeboxes elsewhere, or ask the teacher to tell the children to bring in one from home and bring in a few extras for those who forgot. However, the Tupperware was nice to have because it was hard to find rubber bands that easily fit over shoeboxes. The one problem that you may encounter while doing this experiment is when working with the kids in small groups to show instruments, you can not also supervise and assist in their guitar making.

**Sources/References:**

- 1)
- 2)
- 3)