Project FOCUS
Best Lessons
FIRST GRADE

Title of Lesson: **Introduction to Vibration**
Theme: **Physical Science**
Unit Number: **5** **Unit Title:** **Sound**
Performance Standard(s) Covered (enter code):
S1CS3
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

Learning Activity (Description in Steps)

Abstract(limit 100 characters): This lesson explains what a vibration is and how it relates to sound.

Details: Ask the children what they think vibration is and make a list on the board. Have the children vibrate their bodies, and ask them how they are moving (moving fast ack and forth, wiggling). Next have the children hum and feel their vocal cords. Ask what they feel and then explain the relationship of sound to vibrations. Next place a ruler on the edge of a desk and lightly press down on the end. Ask the children how the end of the ruler looks. How does it sound? You can also have the children try this themselves and ask them how it feels. Next tap a tuning fork against the edge of a table. Allow the children to try this and ask the children how it looks, sounds and feels. Now that they have experienced several different types of sound vibrations split them up into groups of two. Have the pairs work together and pull the plastic so it is tight over the opening. Sprinkle some salt on top of the plastic. Have one partner hold the small can near the plastic and tap it with a ruler. Ask them what is happening to the salt and why. You will see the salt bounce because of the sound vibrations hitting the plastic. I found it helpful to give each pair two jobs: an "observer" and a "tapper." The observer watches what happens to the salt, and the tapper taps the smaller can. This makes the kids want to perform both aspects of the experiment, and prevents one student from dominating the tapping.

Materials Needed (Type and Quantity):
1 ruler per 2 students

1 tuning fork
1 rubber band per 2 students
1 piece of plastic wrap per 2 students
1 large can per 2 students
1 small can per 2 students
salt

<u>Notes and Tips (suggested changes, alternative methods, cautions):</u>
I found it helpful to divide the students into small groups of 5-8 when doing this lesson. Since some noise will be made, you may want to make arrangements to do the lesson in a place that won't disturb other classrooms.
The salt should not be eaten. Also, emphasize that only the cans should be tapped with the rulers.

Sources/References:
1)
2)
3)