

**Lesson Plan Title**  
Feeling the Vibration

**Grade Level**  
1<sup>st</sup> Grade

**Subject Area**  
Science

### **MSCCRS**

P.1.6B.1 Conduct an investigation to provide evidence that vibrations create sound (e.g., pluck a guitar string), and sound can create vibrations (e.g., feeling sound through a speaker).

**Art Form**  
Music

### **MSCCR Creative Arts Standards**

MU: Re7.2.1 Perceive and analyze artistic work.

a. With limited guidance, demonstrate and identify how specific music concepts (such as beat or **pitch**) are used in various styles of music for a purpose.

**Duration**  
1 Hour

**Materials**  
Rubber bands (different sizes, thick and thin - cut so they make a “string”)  
Speaker for music

**Objectives**  
The student will identify and feel vibrations through hands-on experiences

**Vocabulary**  
Vibration  
Pluck  
Pitch

### **Lesson Description**

The teacher will ask the students, “Have you ever plucked a guitar string before? We are going to use rubber bands as if they were strings on a guitar.” The teacher will have various size rubber bands, thick and thin. Prior to the lesson, the teacher will cut the rubber bands so that they are in the shape of a string.

The teacher will need to pair students up for this experiment. The teacher will pass out the rubber band strings. One student holds the rubber band string, while the other plucks it, then trade jobs, and experiment with various sizes of rubber bands.

The teacher will model how to hold the rubber band and pluck it as if it were a guitar string. The teacher will then have students pluck their rubber bands. The teacher will ask students, “what do you notice when you pluck the rubber band”? The teacher will allow students to respond.

The teacher will ask students if they notice a vibration when they pluck the rubber band. The

teacher will explain to students that the thin rubber bands create a higher pitch sound, and the thick rubber bands create a lower pitch sound. The teacher will let students experiment with different size rubber bands to determine the difference in the pitch of the thin and thick rubber band.

The teacher will tell the students, “the next part of our lesson is going to be about feeling vibration through a speaker.” The teacher will play the funky bassline “Top Funkiest Funk Basslines” <https://youtu.be/DRIG0kmMnCA>. The teacher will have students feel the vibrations on the speaker as the bassline plays aloud. The teacher will ask the students to describe what he/she feels as the bassline changes. The teacher will ask the students to describe the feeling of the vibrations from the speaker.

The teacher will review with students how both the rubber bands and the speaker created vibration, by plucking the rubber bands and with the sound that was coming through the speaker.

### **Recommended Resources**

<https://youtu.be/36Qcg0CyEB4> (video on how to change sound settings on your computer)

### **Extended Learning Activities**

The teacher could use a guitar (if they have access to one) and have students pluck the guitar strings to feel the vibration.

### **Sources**

One Minute Solo <https://youtu.be/DRIG0kmMnCA> youtube video

My Learning Lab <https://youtu.be/36Qcg0CyEB4> youtube video

### **Tips**

### **Author**

Heather Hodges