



Musical Bottles

Post-visit activity connection to Nickelodeon Play Lab

Grade level: 1st grade NGSS 1-PS4-1

Concepts: Musical Pitch

Materials needed:

1. 5 to 8 identical glass bottles (such as jars, beakers, or empty soda bottles)
2. Water
3. A spoon, fork, or butter knife

Procedure:

1. Place the bottles in a straight line, about 2 to 4 inches apart from each other.
2. Fill the bottles one-by-one until the water level is staggered. For example, fill the first bottle with a small amount of water. Fill the second bottle with more water than the first bottle. Fill the third bottle with more water than the second bottle and so forth and so on until all of your bottles have a varying amount of water. The first bottle should have the least amount of water and the last bottle the most.
3. Take your spoon, fork, or knife and strike the tops of each bottle one after the other and listen to the different pitches.
4. Adjust the level of water in each bottle to 'tune' the sound.

What's Happening:

Pitch is one of the three primary auditory attributes of sound, along with loudness and timbre. It represents the perceived natural frequency of sound and can be perceived differently by different people. It also affected by the amplitude of the sound, especially at lower frequencies where a low note will sound lower in pitch when played at a louder level.

Book List:

1. Music Hit the Right Note by Dan Green
2. Making Musical Instruments with Kids by Bart Hopkins
3. Music is a Rainbow by Stephan Earl

Extension Activities:

1. Have the students play a tune with the bottles such as "Mary Had a Little Lamb". Have them hit the glass and listen for the pitch and decide what note it would be.
2. Have the students label each bottle with a number. Have them compose a song and write the order of the notes on paper. Have the students write a story and set it to music they have composed. They could record in on a CD.
3. Have the students write a story where an instrument comes to life. What would they eat, where would they visit, who would be their friends, what problems would they have?