

The Bottle Organ

Action

The experiment will demonstrate how varying amounts of water will affect the pitch of sound.

Grade Level

Grade 3 - Sound

Materials

- 6 small glass bottles (they should all be the same)
- Water
- A metal spoon

Instructions

- Set up the bottles in a straight line.
- Pour different amounts of water in each bottle. Have it work out so that the bottles are lined up from the one containing the most water to the one containing the least. (See video clip).
- Tap each bottle with a metal spoon. Each bottle will have a different sound.

Safety

Be careful not to strike the bottles too hard so that the glass does not break.

Hints

By adjusting the amount of water in the bottles, you can even play a tune.

Science Principle

Vibrating objects make sounds. The number of times the object vibrates is called the frequency. As the frequency increases the pitch of the sound gets higher. Tapping the bottle causes the vibrations to occur in the bottle. The more water that is in the bottle, the lower the pitch of the sound.