

Musical Bottles

Experiment with an instrument made from glass bottles filled with water. As you sharpen your musical skills, you'll be giving concerts for your friends in no time!

What you need:

- Three or more clean glass bottles of the same type and size.
Be careful with the glass.
- Pencil
- Water



How to:

1. Fill three or more bottles with various levels of water. Tap each bottle with a pencil. Try tapping in different spots. How do the bottles sound? Put the bottles in order from lowest sound to highest sound. How much water is there in the bottle with the lowest pitch? How much water is there in the bottle with the highest pitch?
2. Now blow across the mouth of each bottle. How do the bottles sound? Are they still in order from lowest to highest sound?
3. Alternate activity: You may use identical drinking glasses instead, the narrower the better. Be sure they are glass. Use a pencil to tap the glasses to make the sound instead of blowing across them.

What's happening?

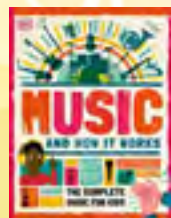
Sounds are made by vibrations. When you tap the bottle with a pencil, the water vibrates and produces a note. When you blow across the mouth of a bottle, you will get a different sound because the water is not what is vibrating. Instead, the air in the bottle is vibrating. This is called the "resonating chamber." Blowing across the mouth of the bottle produces sound waves. If the resonating chamber is large (only a little water in the bottle), the vibrations are slow and the pitch is low. If the resonating chamber is small (bottle is almost full of water), the vibrations are fast and the pitch is high.

Fun Fact



Instruments are made and played all around the world! Did you know there are over 1,500 types of musical instruments? These musical instruments are broken down into six major categories: bowed strings, woodwind, brass, percussion, keyboard and the guitar family.

Related Books:



Music and How It Works: The Complete Guide for Kids
by Charlie Morland



The Science of Song: How and Why We Make Music
by Alan Cross



50 Things You Should Know About Music
by Rob Baker

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