

MUSICAL Water Glasses

MATERIALS

- A variety of glasses/jars (you can use a full set of matching glasses, or experiment with different shapes and sizes)
- Water
- Spoons
- Food coloring (optional)

INSTRUCTIONS

1. Start by allowing the children to explore what sounds they can make with the spoons and empty glasses. How will the sound change when we add water to the glasses?
2. Allow the children to pour water into each glass.
3. If you would like, add food coloring to the glasses.
4. Allow the children to explore sound with the glasses again. How have the sounds changed? What happens when you add or remove water?

WHAT'S HAPPENING?

Sound is the energy produced when an object vibrates. These vibrations usually cannot be seen, but instead are heard, and sometimes, you can feel them! Try holding your hand on your throat while you hum.

In this activity, you tapped the side of a glass with a spoon. That action caused the glass to vibrate. The vibrations in the glass then caused the air around the glass to vibrate. As the air moved, it carried the sound waves with it – all the way to your ears! When the air inside your ears starts vibrating, you hear a sound!

Adding water to the glass changes the speed of the vibrations, and the pitch of the sound we hear. What happens to the pitch when there is more water in the glass? The more water you add to the glass, the more it slows down the vibration. Slower vibrations cause us to hear a lower pitch.

During this activity, you can experiment with different sizes and shapes of glasses to see how the glass affects the sound you hear. This experiment is designed for open-ended discovery, encourage your young scientist to think outside the box, in regards to materials and how they're used.



Tag us @perotmuseum on social media to show us how you *Amaze your Brain!*