

JR-SCIENTISTS

SINGING GLASSES

Learn about sound vibration with this simple experiment!

INSTRUCTIONS:

STEP 1: Fill each glass with a different amount of water. Add food coloring if desired.

STEP 2: Dip your finger into the water and begin to rub it around the rim of the glass slowly. Do you begin to hear anything?

STEP 3: Try each glass and see if you hear different sounds from each.

TIP: If you hear no sound, try changing the speed and applying more or less pressure to the rim.

SUPPLIES

4 wine glasses
Water
Food coloring
(optional)

THE SCIENCE

When you rub a dry finger along the rim of the glass, your finger will stick to the glass as it creates friction. Water on your finger will allow your finger to slip, as it creates a cushion that reduces the friction. When the right amount of pressure and moisture, the movement will cause vibrations in the sides of the glass. The glass transmit the vibration creating a sound wave with a specific frequency. There is a certain frequency, called the resonant frequency, when the sides of the glass will vibrate easily. This is why you hear the vibration as a tone. So make some music and you can play your very own wine glass instruments!

