



Singing Glasses

In this melodic experiment “Singing Glasses”, music and science meet in a harmonious duet!

Materials

- 🚀 Wine glass
- 🚀 Water
- 🚀 Napkin or towel



Method

Step 1: Fill the glass half-full of water.

Step 2: Wash your index finger and dry it with a napkin or a towel. A clean finger works best.

Step 3: Wet your index finger again.

Step 4: Rub your finger around the rim of the glass while pressing down gently.

Step 5: Enjoy the music!

What is happening? The Science explained.

With this experiment you are proving the stick-slip phenomenon, which is the spontaneous jerking motion that can occur while two objects are sliding over each other. When rubbing your finger along the rim of the glass, your finger sticks to the glass and the water allows it to slip by reducing friction. The slight friction between your wet finger and the glass causes vibrations in the sides of the glass (the crystals in the glass are vibrating together). Then, these vibrations are transmitted to the surrounding air creating a sound with a frequency. The frequency depends on the rate of vibrations. The pitch and the volume can be modified by changing the amount of water in the glass or the pressure from your finger, respectively. What happens if you fill one-third of the glass with water and repeat the procedure?

