

# Bottle Orchestra

## Activity Instructions

Mess-O-Meter



“Moderately Messy”

### Materials

- Ruler
- 3 or more glass bottles and or jars
- Water
- Pen or Grease pencil
- Funnel (optional)
- Food coloring (optional)

### Overview

Making sounds: it’s all about the vibes! When you blow into a bottle containing some liquid, the air molecules inside the bottle vibrate. A bottle with more air and less liquid has more air to vibrate, making a lower pitch. Bottles with more liquid have less air space, so make a higher pitch.

Try hitting the bottles with a spoon. You’ll notice a different result! Why? Because when you hit the bottle with a spoon, you make the glass vibrate, not the air! Try it yourself-- see what sounds you can make with your bottle orchestra. You can even ‘tune’ your bottles to play different notes.



### Procedure

1. Collect your bottles and or jars.
2. With your pen or grease pencil, draw a mark on each bottle/jar you want to fill with water.
3. Pour water in each bottle/jar until it reaches your marked line. The funnel from your kit can help with this.

(Optional Step) If you have food coloring you can add a few drops to the water and mix it up.

4. Blow across the mouth of the bottles to make a whistling sound. If you use jars you can tap the outside with a pencil or spoon.
5. Make observations of what you hear. If you need to, make adjustments and try it again. See how many different notes you can make, and write a song!

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