WATER XYLOPHONE

Do you have a favorite musical instrument and have you ever wondered what makes it sound the way that it does? The science of sound, or acoustics, is a branch of physics that studies the way sound waves travel through different mediums (like gases, liquids and solids).

WHAT YOU’LL NEED:

- 4+ Glass Jars or Drinking Glasses (the same size and shape)
- Wooden Spoon
- Water
- Food Coloring

Caution: Be careful with the glass jars and drinking glasses. Ask a grownup if they would like to help you.

WHAT YOU’LL DO:

1. Line up your glass jars or drinking glasses in a straight line on a flat surface.

2. With a wooden spoon, gently tap each jar on the side. What sound does each jar make? Is it the same sound or are they different?

3. Pour a small amount of water into the first jar. Then, pour a little more water into the jar that’s next to it.

4. Continue doing this until all the jars have water in them. Each jar should have a little more water than the jar before it. (Tip: The last jar should be nearly full.)

5. For a fun addition, add a few drops of different food colorings to each jar. This will look great and help you better visualize the different pitches.

6. With your wooden spoon, gently tap each jar again. Notice how the sounds have changed.

FOR ADVANCED SCIENTISTS:

Try tuning each glass to a specific pitch. Use a digital or online tuner, and add or subtract water from each jar until the pitches match.

Time to review what we learned. Ask yourself the following:

- Which jar had the highest sound or pitch?
- Which jar had the lowest?
- Why do you think the pitches were different?
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