

Episode 6: Wonderful Water Xylophone



What is the science to making sound? Rachael is experimenting with water levels to create a xylophone instrument from colourful water jars. Discover how sound travels and make music on the way!

Scientific concepts:

1. Sounds come from vibrations.
2. Sound can travel through water at different speeds.

Science process skills:

Observing, measuring and comparing.

Let's investigate:

How many different sounds can we make using glass jars and water?

Materials

- 7 x glass jars or bottles
- Water
- Wooden spoon
- Food colouring (7x colours)

Experiment procedure

1. Pour a small amount of water into 7 jars. Add food colouring to make different coloured water in each jar.
2. Tap the jars with a wooden spoon and listen to the sounds made. They should all make the same sound.
3. Fill one jar with water (almost to the top). Tap this full jar, hear the low sound and compare it to the high sound made from tapping the jar with a small amount of water.
4. Fill the remaining 6 jars with different amounts of water and line up to create a Wonderful Water



Xylophone! Tap each jar in order starting from the jar with the most water, down to the last jar with the least amount of water. Each jar makes a different note! Different levels of water effect the vibrations and how sound travels.

5. Have fun making musical tunes on your Wonderful Water Xylophone!

How it works: The speed of the sound waves depends on the amount of water in the jar. The jar with the most water makes the lowest sound because the sound waves travel the slowest. The glass with the least water makes the highest sound because the sound waves travel the fastest.

Early Education links

Episode themes relate to [EYLF Learning Outcomes](#) 4.1, 4.2, 5.1 and 5.3. This experiment ignites curiosity and provides an opportunity for children to manipulate objects and experiment with cause and effect through music. Modelling language such as - *full, half, three-quarters, empty* – also supports mathematical understandings of measurement and capacity.

Follow-up learning

- Explore sounds made by different instruments with Play School: Through the Windows [Orchestra](#) and [Percussion and Drumming](#).
- Listen to ABC Kids listen [Classic Kids](#) to help children recognise different instrument sounds and develop understandings about musical concepts and vocabulary.

