

# Musical Math

## Activity 2 - Musical Volume and Pitch



Did you know that you can easily make your own xylophone? The xylophone is a musical instrument that belongs to the percussion family. That means that it is played by hitting or striking. The xylophone sometimes looks similar to a piano and can be made out of many different materials. Let's try to make our own using glass bottles or other containers and water.

**Activity Instructions:** Find some containers made of glass. With a pencil or a small metal object, gently tap the glass. Does it make a sound? Now add some water to the container and tap it again. *Is the sound different or the same?*

Fill one container with 100 ml of water and tap the outside. Take another container and fill it with 200 ml of water. Gently tap the outside. *How has the sound changed? How is the sound affected when you try 250 ml or 300 ml?*

Try gathering some other glass bottles and make each have a different pitch. Can you make up a tune?

It is easier if you use bottles that are exactly the same. When you have found the amount of water in the bottle that gives you the note you want, you can keep a record of what you have done by tipping all the water back into the measuring jug and writing down the amount. Take a look at the number of milliliters you used and write it down, so when you want to play your composition you will know exactly how much water to pour into each container.

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# Can you believe THIS is math?