



STAR

Music Maker

Organiser's Card



About the activity

This activity is designed to get children thinking about how different sounds are made.

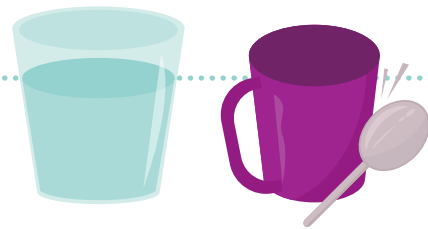
Cosmic and Gem are having breakfast with Uncle Astro. Gem is tapping things with her spoon to make sounds. Cosmic notices that the tune sounds different after he has poured fruit juice out of the bottle and the mugs are filled with tea.

Through this activity you will support your group to:

- Think about why the bottle makes different sounds
- Test different amounts of water in bottles and observe how they change the sound
- Record their results and present them to the group.

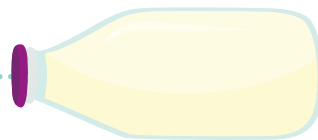
Kit list

- Several identical glass bottles
- Additional glass or pot containers of different sizes e.g. flower pots, mugs, cups, glasses or jars
- Spoons, pencils or other tappers
- Tubes with one end sealed and/or bottles with narrow necks to blow across e.g. milk or water bottles. Wine bottles work best, if you wish to use them. (optional)
- Food colouring (optional)



What to do

1. Follow the instructions on the ACTIVITY CARD. Make sure you give the children time to talk about their ideas.
2. Read the story. Get the children to talk to a buddy about the ideas in the questions and the opinions of Gem, Cosmic and Uncle Astro
3. They can start by exploring what happens when you change the amount of liquid in a bottle. The children will need several bottles all of the same size and should tap them gently with a spoon.
4. You could also give them other things to explore e.g. different sized glass bottles, jars, glasses, teapots, mugs or clay plant pots?
5. Encourage the children to work together with their buddy to put the sounds in order from low to high notes.
6. Can the children create a simple tune and share it with everyone else.
7. There are follow up activities for children who want to do more finding out.



Things to think about

Whenever a sound is made, something vibrates. Sound can travel through air, solid or liquid. When you tap a bottle of water, the water vibrates. The more water in the bottle, the lower the note becomes. So we can create different notes (i.e. change the pitch), by changing the amount of water in a bottle.

Another way of making a sound is to blow across the top of a narrow necked bottle or tube sealed at the bottom. The sound is made by air vibrating in the bottle. The more air in the bottle, the lower the note. So a nearly full bottle makes a low note when tapped and a high note when blown across.

Cracked containers or objects touching each other do not produce clear notes. It is good for children to discover this themselves. If it is affecting their exploration then it is worth pointing it out to them.

Take it further

Other things will produce sound when tapped, blown or plucked. Different sized tubes, clay flowerpots, cups, mugs or glass containers can all produce different notes. String, elastic bands or rulers of different lengths make different sounds when plucked.

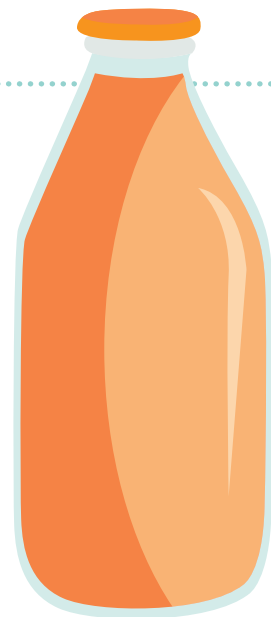
Keywords

- Sound
- Vibration
- Music
- Pitch



Watch out!

Care needs to be taken when using glass. Check your organisation's policy for using glass. Clear up water spills and breakages quickly. Encourage children to tap gently.





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Music Maker

Activity Card



Cosmic and Gem are having breakfast with Uncle Astro. Cosmic lifts the fruit juice out of the fridge. Clunk goes the bottle as he puts it down.



Gem has an idea. She begins to tap things gently with her spoon. Clink, clink, clink goes her mug. Plunk, plunk, plunk goes the teapot. Clung, clung, clung goes the fruit juice bottle. Tink, tink, tink goes Cosmic's glass.

"What a marvellous music maker you are this morning, young Gem," says Uncle Astro, as he tips tea into the mugs.

"Hey, that was a different tune! How did you do that?" asks Cosmic. "I don't know," says Gem. "I'm not sure either," Uncle Astro adds. "Let's find out and then we can play a tune."

Cosmic fills his glass almost to the brim with orange juice. "Play it again, Gem," he says. So Gem plays again. Chunk, chunk, chunk goes her mug. Plink, plink, plink goes the teapot. Cling, cling, cling goes the fruit juice bottle. Tunk, tunk, tunk goes Cosmic's glass.

Gem thinks the note will be higher when the fruit juice bottle is nearly empty
Cosmic thinks the note will be higher when the fruit juice bottle is nearly full
Uncle Astro thinks the size of the bottle makes a difference

Have you ever made music by tapping things?

Did you find ways to change the sound?



Your challenge



Find out why Gem's tune changed and how to make music.

Discuss

Talk about the best way to find out why the tune changed.

What do you think?

Getting started

Collect glass bottles that are all the same size.

Put different amounts of water in each.

Tap on the bottles to see what sound they make.

Can you put them in order from the lowest note to the highest?

You will have made a musical instrument.

Test your ideas

Can you think of any other things that you could use to make music?

What about different sized bottles?

Share your ideas

See if you can tap out a tune. If the sound is not quite right, try adding a little more water or taking some out to make the sound that you need.

You could put your instruments on display. Try to make them look interesting by adding coloured water or by decorating them.

Extra things to do

Try blowing across the top of the bottles.

Try tapping other things like mugs, jars, cups, glasses and flower pots. See what else you can do to make a musical sound.

