



Sound and Vibrations! Year 2 Science at Home

You can help! Sound is all around us! You can help your child explore how different sounds are made and what causes them.

Why are we learning this? Sound and music on Country

Music and sound are central to life up here. Clap sticks, didgeridoos, singing and dancing are part of First Nations culture — and they are all science! Every sound is made by something vibrating. When a clap stick hits, it vibrates and that vibration travels through the air to your ears. Understanding how sound is made helps your child appreciate both science and the rich musical traditions of their community.

My child will learn to:

✓ Know what makes sound

Understand that all sound is made by something vibrating.

✓ Explore different sounds

Compare loud and soft, high and low (pitch) sounds.

✓ Make different sounds

Experiment with striking, blowing, plucking and shaking to make sounds.

✓ Understand sound energy

Know that sound energy travels from a source to our ears.

Big ideas to know:

Vibration

All sound is made by vibration — something moving back and forth very quickly. When it stops vibrating, the sound stops.

Volume (loudness)

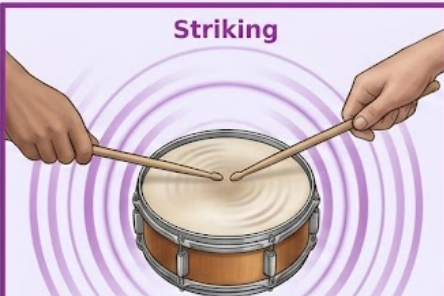
How hard you hit or blow determines how loud the sound is. Harder = louder. The loudness of sound is called its volume.

Pitch

How high or low a sound is. A short, tight string makes a high pitch. A long, loose string makes a low pitch.

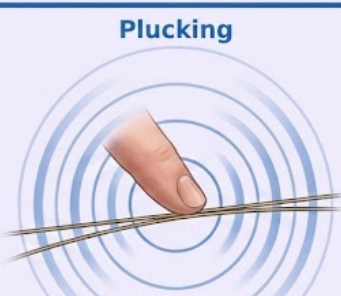
Sound is made by vibrations!

Striking



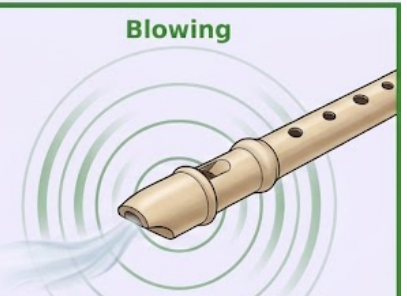
A drum is hit.
The drum skin vibrates.
Sound travels to your ear.

Plucking



A string is plucked.
The string vibrates.
Louder pluck = louder sound.

Blowing



Air is blown through.
The air-column vibrates.
Shortening makes higher pitch.



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How are sounds made?

Action	What vibrates	Examples
Striking	The object you hit vibrates	Drum skin, clap sticks, a ruler on a desk
Plucking	A string or band vibrates	Guitar, rubber band stretched over a box
Blowing	A column of air vibrates	Didgeridoo, whistle, recorder, your voice
Shaking	Small objects inside rattle and vibrate	Maraca, rain stick, seed pod rattle

Think Like a Scientist — Sound Explorer

Make a simple instrument at home. Stretch rubber bands of different sizes over an open box or container. Pluck each one — are they the same or different?

Ask: "Which band makes a higher sound? Which makes it louder? What happens if you stretch the band tighter?" Let your child explore!

You will need: (Materials)

- Rubber bands (different sizes)
- Open box or container
- Metal spoon and bowl or cups
- Ruler
- Glasses of water

Try these experiments:

1. Put your hand on your throat and hum — can you feel the vibration?
2. Hold a ruler on the edge of a table and twang it — what do you see and hear?
3. Bang a bowl and touch it gently while it is ringing — what happens?
4. Whisper vs shout the same word — what is different?
5. Fill glasses with different amounts of water and tap them gently with a spoon

Questions to ask your child

1. Can you make that louder? What did you change to make it louder?
 2. Is that a high sound or a low sound? How do you know?
 3. What is vibrating to make that sound?
 4. What would happen if you stopped the vibration? Would the sound stop too?
 5. Why is it quieter inside a room than outside when a truck goes past?
 6. Can you make a sound using just your body (clapping, stomping, clicking)?
 7. What is your favourite sound? What do you think is vibrating to make it?
- You do not need musical instruments — rubber bands, spoons, boxes and cups are all you need to explore sound at home!*

Key words to know:

Sound	Energy that travels through the air and can be heard
Vibration	A very fast back-and-forth movement that creates sound
Volume	How loud or quiet a sound is
Pitch	How high or low a sound is
Energy	The ability to do work or cause change — sound is a type of energy
Source	Where something comes from — a sound source is the thing making the sound
Absorb	To soak up or muffle — soft materials absorb sound

Key words to look up

Sound · Vibration · Volume · Pitch · Energy · Source · Absorb

What school will check

Your child needs to demonstrate how different sounds can be produced and describe how sound energy causes objects to vibrate.

Try it at home!

Stretch a rubber band around an open box and pluck it. Now stretch it tighter — what happens to the sound? Try it with different-sized rubber bands and see what you discover!