

Y4 Sound

KS2 Y4 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

How can you show that a drum vibrates when it makes a sound?

Step 1 · Sprinkle rice on top of the drum

Ready to observe

Step 2 · Hit the drum

The rice jumps up and down

Step 3 · Touch the drum to stop it

The rice stops and the sound stops

Answer: The jumping rice shows the drum skin is vibrating. When the vibration stops, the sound stops.

Check: No vibration = no sound.

2. Now try one with the steps

How does the sound of a clap reach your friend's ear?

Step 1 · Your hands hit together

Step 2 · The vibration is passed on

Step 3 · It reaches the ear

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. What causes all sounds?

2. What does 'vibrate' mean?

3. What vibrates when you play a guitar?

4. What vibrates in your throat when you speak?

5. What vibrates when you blow a recorder?

6. What is a 'medium'?

7. Can sound travel through water?

8. Can sound travel through empty space?

9. Which part of your ear vibrates when sound reaches it?

10. Rice is sprinkled on a drum. What happens to the rice when the drum is hit?

11. Why does a sound stop when you put your hand on a ringing bell?

12. Put in order how you hear a dog bark: eardrum vibrates; air vibrates; dog's vocal cords vibrate; brain hears.

13. Why must the string of a string telephone be pulled tight?

14. Astronauts outside a spaceship talk using radios. Why can't they just shout?

4. Before you hand it in

Sound only travels through air.

Sound travels through any medium: gases, liquids and solids. Only empty space stops it.

The drumstick makes the sound, not the drum.

Look for the part that is vibrating.

Our ears send sound out to collect noises.

Sound travels from the source into your ear.

You can't see or feel vibrations, so they aren't real.

Feel your throat while humming, or watch rice jump on a drum.