Activity 7B The Sound of Music

Skills: Do practical work safely, reach a scientific conclusion from my results

Materials:
Marker
Five identical empty glass bottles
Plastic funnel
Water
Spoon

Method

1 Label each bottle from A to E. Use the funnel to fill bottles B to E with an amount of water as shown in the table.

Bottle	Amount of water
A	empty
B	one-quarter filled
C	half-filled
D	three-quarter filled
E	full

2 Use the spoon and tap the mouth of each of the bottles. Listen to the sound made by each bottle.

a Which bottle produced a sound with the highest pitch when you tapped it?

A- the empty

b Which bottle produced a sound with the lowest pitch when you tapped it?

E- the full

c How does the amount of water in the bottle affect the pitch of the sound produced by the bottle?

The greater the amount of water, the lower the pitch is.

Word Whizz

Fill in the blanks. Use the following words.

decibels high-pitched low-pitched pitch
sound meter vibrates volume

1 When an object Vibrates, it moves back and forth.

2 The volume of sound is measured in decibels.

3 The degree of highness and lowness of a sound is its Pitch.

4 A sound meter is an instrument that measures the volume of a sound.

5 The degree of loudness and quietness of a sound is its Volume.

6 When an object vibrates quickly, it makes a high-pitch sound.

7 When an object vibrates slowly, it makes a low-pitch sound.

Fill in the blanks. Use the following words.

decibels gases high light liquids loud low
quickly quiet slowly solids sound meter
speed strength strong vibrate

Sounds

- Sounds are made when objects vibrates.
- Sounds can travel through liquid, solid and gas.

Pitch

- Pitch depends on the speed of vibrations.
- high - pitched sounds are made when an object vibrates quickly.
- low - pitched sounds are made when an object vibrates slowly.

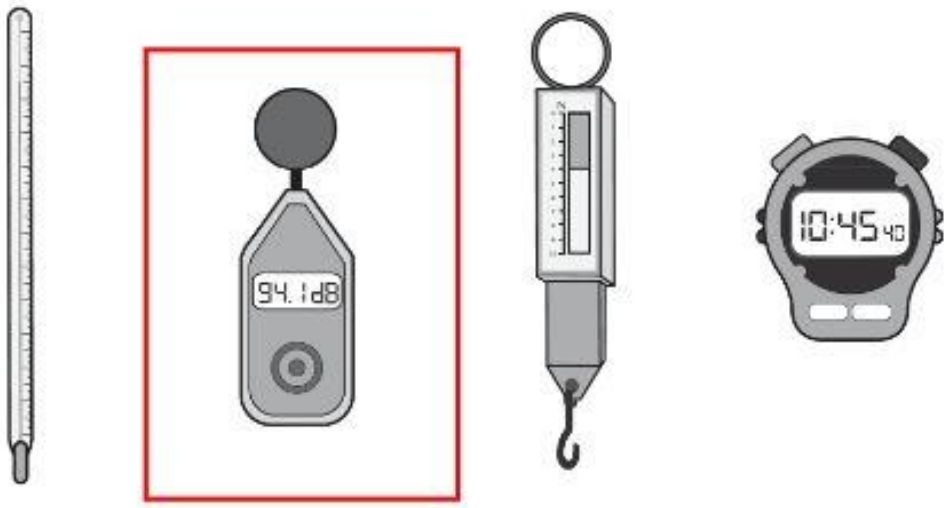
Volume

- Volume depends on the strength of vibrations.
- loud sounds are made by strong vibrations.
- quiet sounds are made by Light vibrations.
- It can be measured using a sound meter.
- The unit measure is decibels (dB).

Let's Review

1 Maggie investigates the volume of some sounds around her.

a She needs to measure the volume of sound.
Which equipment should she choose?
Circle the correct equipment.



b In what units is the volume of sound measured?
Circle the correct answer.

decibels

degree Celsius

metres

seconds

2 Joseph and Paula play the recorder.

Joseph

Paula

a Whose recorder produces a high-pitched sound?

paula

b What must they do to produce a louder sound?

Blow the recorder with more force

3 The picture shows a set of tuning forks. When we hit a tuning fork, the prongs vibrate and a sound is produced.

Tick (✓) the correct reason for the different lengths in the tuning forks.

Different loudness of sounds can be produced. ☐

Different pitches of sounds can be produced. ✓