

The Primary Stage of Grades (4-5) School Year 2022- 2023

Name: ___ **Answer key** ___

Subject: Science

Unit 7: Sound

Worksheet 2: Pitch and Volume

Class: Grade 4 CP (All Sections)

Date: / /

Objective/s

- Describe sounds in terms of high or low pitch and loud or quiet volume.
- Investigate how to change the volume and pitch of sounds.

Question 1:

Drums are used to make sound.



Complete the sentences.

(a) The drum makes a higher pitch sound when the skin is

Tightly stretched

(b) The drum makes a louder sound when

We hit it harder or hit it with more

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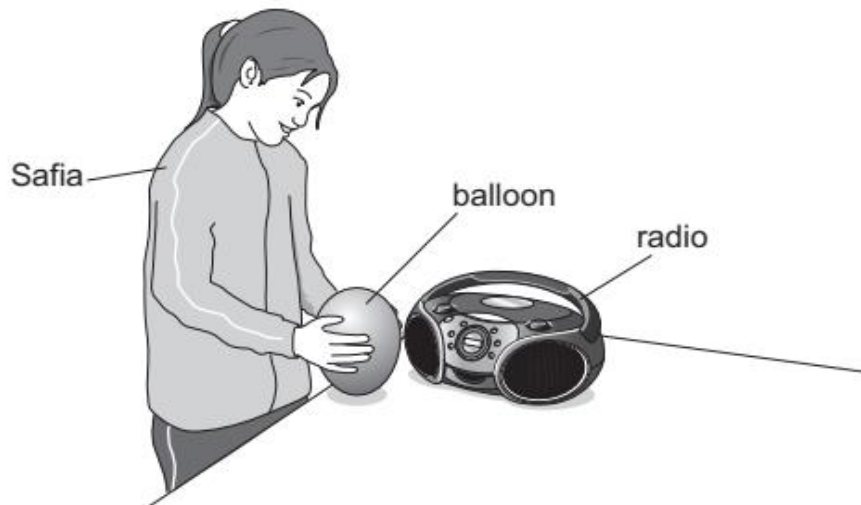
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Question 2:

Safia investigates sound.



- She puts a balloon near a radio.
- She holds the balloon with her hands.

(a) The radio is switched on.

The radio makes a loud sound.

What does Safia feel with her hands?

Vibration

.....

(b) Safia wants to measure the volume of the sound from the radio.

What measuring equipment does she use?

Sound meter

.....

(c) Distance is measured in units called **metres**.

What **units** measure sound?

Circle the correct answer.

decibels

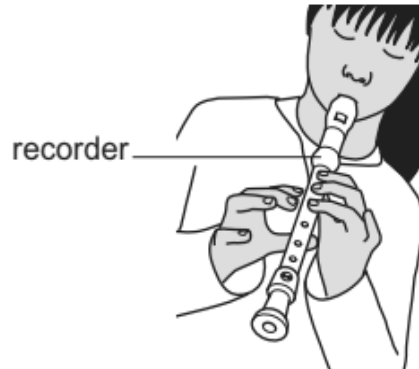
meterbels

soundbels

unibels

Question 3:

Angelique plays the recorder.



(a) Complete the sentence.

Choose the **best** word from the following.

bounces

changes

flows

vibrates

The air inside the recorder **vibrates**

(b) Describe how Angelique changes the pitch of the sound from the recorder.

By opening or closing the holes with her fingers.
.....

Question 4: Underline the correct words to complete these sentences:

a) Sounds are **higher-pitched** / lower-pitched when the elastic band is stretched tightly.

b) Sounds are *higher-pitched* / **lower-pitched** when the elastic band is long.

c) Sounds are **higher-pitched** / *lower-pitched* when the elastic band is thin.

d) Sounds are **higher-pitched** / *lower-pitched* when the elastic band is short.

e) Sounds are *higher-pitched* / **lower-pitched** when the elastic band is thick.

f) Sounds are *higher-pitched* / **lower-pitched** when the elastic band is not stretched tightly.

Question 5:



Jon stretches a rubber band between his fingers.
When he plucks it with his other hand it makes a sound.

(a) Why does the rubber band make a sound?

Because it vibrates [1]

(b) How can he make the sound louder?

By hitting it harder or putting more force [1]

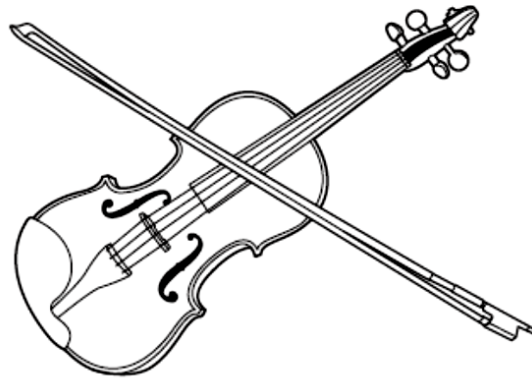
(c) When he moves his fingers further apart the rubber band stretches more. This changes the pitch of the sound.

What is pitch?

It is the speed of vibration, it is high pitch and low pitch [1]

Question 6:

(a) Anita plays the violin with a bow.



(i) How would she make the volume quieter?

Playing it with less force or by playing it very gently [1]

(ii) What **two** things could she do to play a note with a higher pitch?

1 Shorten the strings with her fingers

2 Stretch the strings tightly [2]

(b) Here are four statements about how a violin makes a note and the sound reaches our ear.

Put numbers in the boxes next to each statement to show their correct order.

The body of the violin makes the sound louder.

3

The sound carries vibrating air particles until they reach our ears.

4

The vibrations enter the body of the violin.

2

The violin string vibrates.

1