

Rosary School / Marj El-Hamam
Science Worksheet (7.B.1)



Name: _____

Grade 2 ()

Date: _____

Shadows

Objectives:

- Tell that shadows are formed when the light from a source is blocked by an object.
- Tell how the size of a shadow is affected by the position of the object and the position of the light source.

1. Tick (✓) the correct answer.

An **opaque object** forms a shadow when it allows only **some** light to pass through it.

An **opaque object** forms a shadow when it blocks light from passing through it.

A **transparent object** forms a shadow when it blocks light from passing through it.

2. Sana places an object at different distances from a torch.

She keeps **the position of the torch the same** all the time.

She measures **the height of the shadow** formed each time the distance is changed.

Which type of scientific enquiry is Sana using?

Circle the correct answer.

fair testing

observing over time

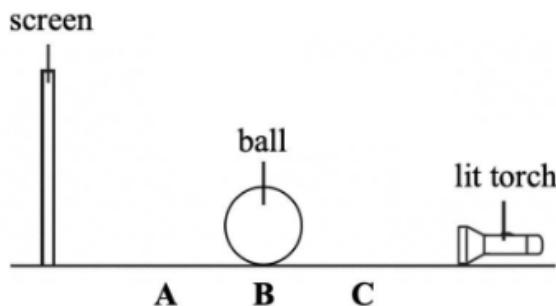
pattern seeking

research

3. A student carries out an experiment using the set-up below.

She places the ball at positions **A**, **B** and **C**.

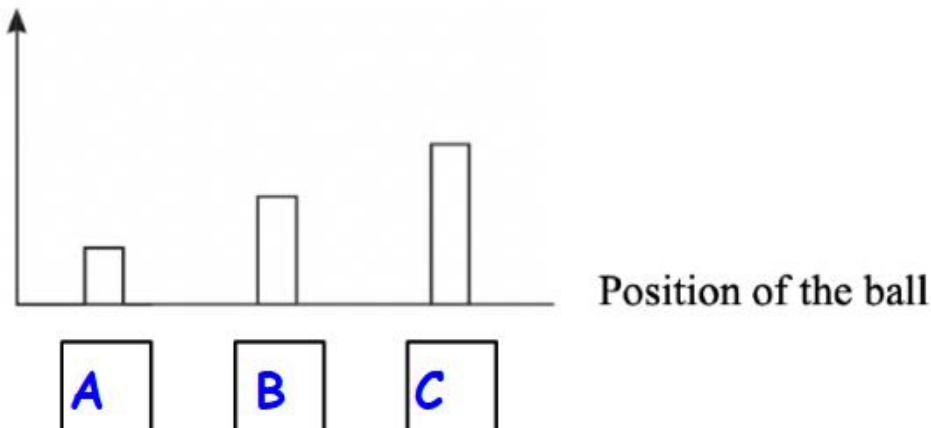
She measures the height of the ball's shadow formed each time the position is changed.



- The bar chart shows the student's results.

Write **A**, **B** and **C** in the correct boxes.

Height of the
shadow (cm)



4. Haitham investigates how the position of the object and the light source affects the **size** of a shadow.

The table shows his results.

| Distance of the object from the light source (cm) | Height of the shadow (cm) |
|---|---------------------------|
| 10 | 70 |
| 20 | 60 |
| 30 | 50 |
| 40 | 40 |
| 50 | 30 |

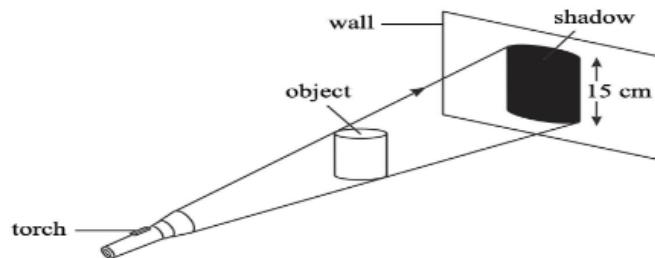
a. What can Haitham conclude about his investigation?

As the distance of the object from the light increases, the height of the shadow decrease

b. Write a suitable height of the shadow if the distance of the object from light source is 60 cm.

5. Fawaz shines a torch at an object.

He measures the height of the shadow formed.



a. Name **one** instrument that Fawaz can use to measure the height of the shadow in standard units.

ruler/ measuring tape

b. Fawaz finds out that the height of the shadow is 15 cm.

He wants to make the shadow smaller.

Write down **one** way in which he can make the shadow smaller.

move the torch further from the object/
move the object closer to the wall