

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

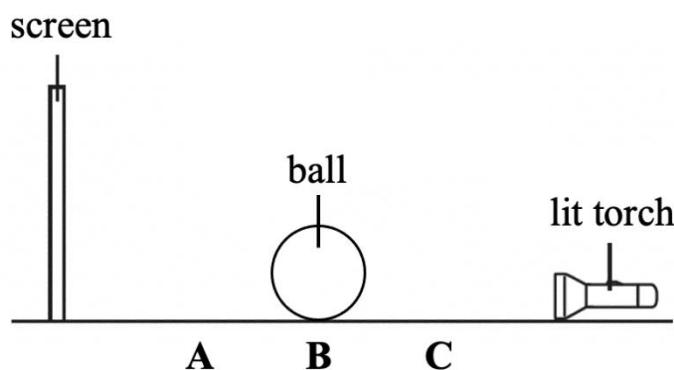
pattern seeking

research

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

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

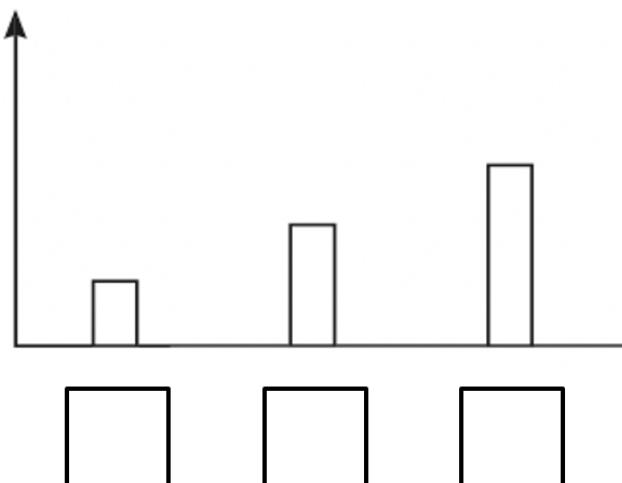
She measures the height of the ball's shadow formed each time the position is changed.



- The bar chart shows the student's results.

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

Height of the  
shadow (cm)



Position of the ball

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?

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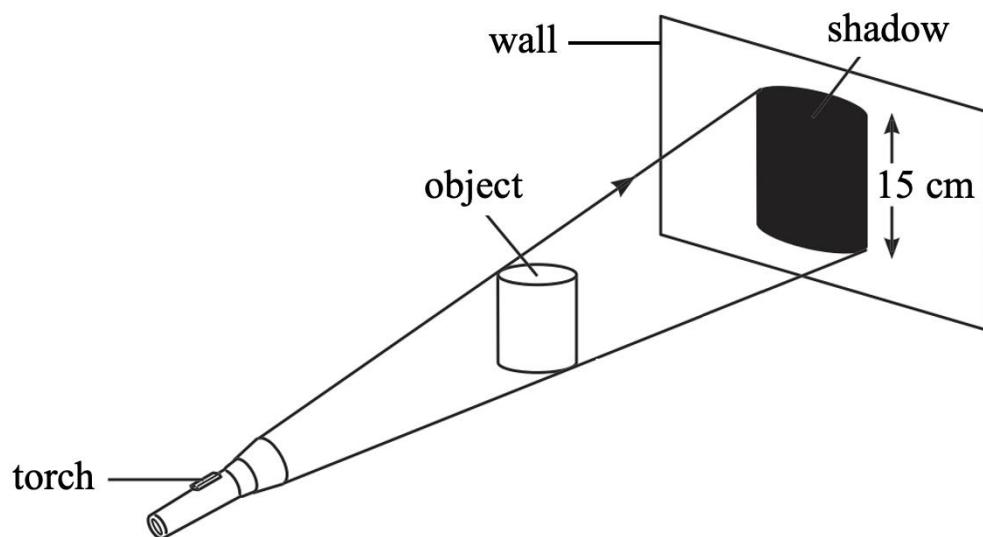
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b. Write a suitable height of the shadow if the distance of the object from the light source is 60 cm.

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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.

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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.

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