

Properties of Light

Activity 7A How Light Travels



Skills: Learn to predict the possible results of a scientific activity, explain that results are more reliable when the activity is done more than once, analyse results to answer a scientific question

Materials:

Three cardboard cards
Hole puncher
Plasticine
Stick
Black paper
Torch

**Method**

- 1 Work in groups.
- 2 Place the three cards together.
- 3 Use a hole puncher to punch a hole in the middle of each card at the same place.
- 4 Place a small ball of plasticine at the bottom of each card to help it stand up as shown.
- 5 Insert the stick through all the holes and adjust to make sure the holes are in a straight line.
- 6 Hold a piece of black paper behind the last card.
- 7 Turn on the torch. Predict what you think will happen when you shine the torch through the holes.

Activity Book p.63



- 7 Turn on the torch. Predict what you think will happen when you shine the torch through the holes.

I think light will be seen on the black board.

Activity Book p.64

- 8 Observe what happens when you shine the torch through the hole on the first card. Do you see the light on the black paper?

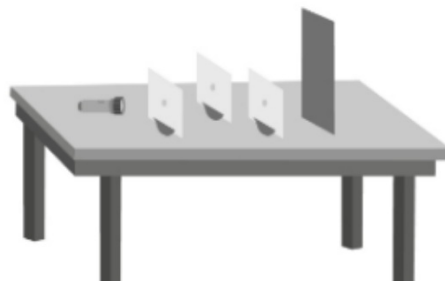
- 9 Was your prediction correct?

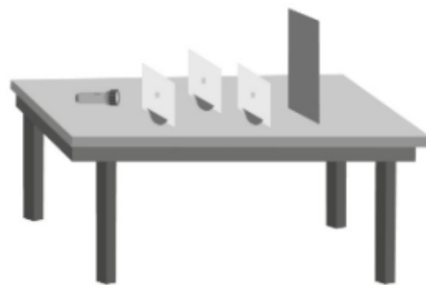
yes

- 10 Move the middle card to the left slightly. Predict what you think will happen when you shine the torch this time.

I think we will not see light on the black paper.

Take turns so that everyone gets a chance to try it out!





Activity Book p.64

- 11 Shine the torch through the hole in the first card. Do you see the light on the black paper?

no _____

- 12 Was your prediction correct?

yes _____

- 13 Explain what is happening to the light from the torch.

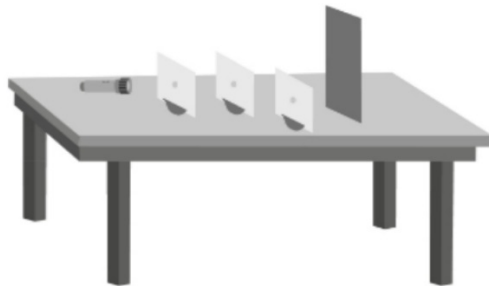
Light travels in straight lines, if the holes are aligned light will reach the black paper, but if the light is blocked it will not reach the black paper.

- 14 Arrange the cards in a straight line again and shine the torch through the holes. Do you see the light on the black paper again?



yes

- 15 Move the last card to the right slightly.



Activity Book p.65

- 16 Shine the torch through the hole in the first card. Do you see the light on the black paper?

no

- 17 Do you get the same results each time you repeated the investigation?

yes

Activity Book p.66

- 18 Fill in the blanks with the following words to make conclusions for this activity.

can cannot reliable straight

Light can be seen when cardboards A, B and C are in a straight line. When the holes on the cardboards A, B and C are not in a straight line, light cannot be seen. Light travels in a straight line. Repeated observations give more reliable data.