

LESSON 4.5

Learning Objectives

- Recognise that light can be reflected, transmitted or absorbed
- Identify and differentiate between materials that allow light to pass through (transparent), materials that allow some light to pass through (translucent) and materials that do not allow any light to pass through (opaque)

Why we are able to see through some objects but not others

- Light can be transmitted or absorbed by objects.
- Objects can be **transparent**, **translucent** or **opaque**.



Transparent

- Light is transmitted when a lot of light goes through an object.
- We can see through the object completely.
- Clear glass, clear plastic and clear water are examples of transparent objects.



Translucent

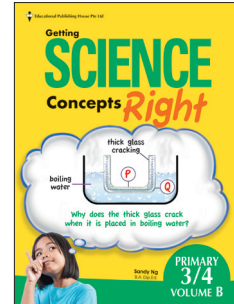
- When only some light is transmitted through an object, we cannot see through the object clearly.
- Some of the light is absorbed by the object.
- Frosted glass, tracing paper and thin fabric are examples of translucent objects.



Opaque

- When light cannot pass through an object, light is absorbed by the object.
- Rough and dark surfaces absorb more light than smooth and shiny surfaces.
- Wood, metal and ceramics are examples of opaque objects.

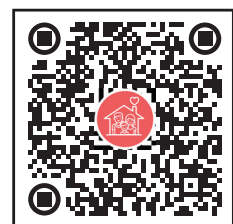
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Scan the QR code for
the Answer Sheet.



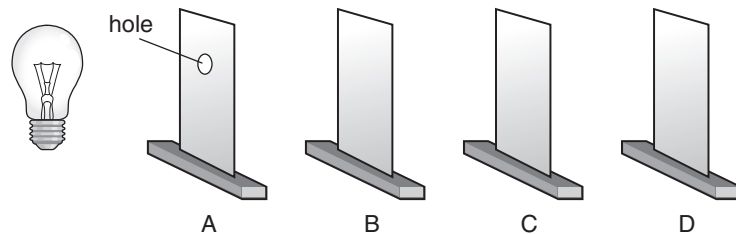


Primary 4 Science

Practice 4.5

1. An experiment was conducted in a dark room to find out how much light can pass through materials A, B, C and D. Sheets A, B, C and D were arranged in a straight line as shown in the diagram below.

When the light bulb was turned on, a bright circular patch of light was seen on sheet C.

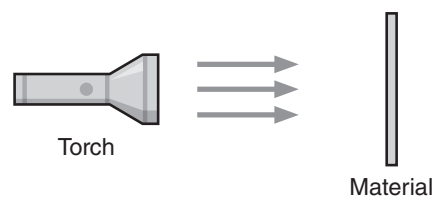


Which one of the following correctly describes the properties of the materials that sheets A, B, C and D are made of?

	Allows light to pass through	Does not allow light to pass through	Not possible to tell
(1)	A and B	D	C
(2)	A and D	C	B
(3)	B	C	A and D
(4)	B	A and C	D

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2. Aimin conducted an experiment using four different materials and a torch. She placed the materials in front of the torch, one at a time, and recorded her observations as shown in the table below.



Which of the following was correctly observed by Aimin?

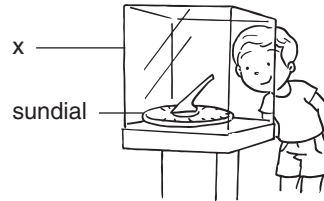
	Type of material	Does it allow any light to pass through?
(1)	Mirror	Yes
(2)	Fish tank	Yes
(3)	Baking sheet	No
(4)	Spectacles lenses	No

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3. Adam was at a museum during an exhibition about light.



Adam was able to see the sundial in the box clearly.

- (a) State a property of X which allowed Adam to look at the sundial.

- (b) Suggest a material which was used to make X.

4. Study the list below.

Wooden block	Clear plastic	Tap water
Porcelain	A piece of dough	A sheet of tracing paper

Classify the objects in the list into the flow chart below.

