

# BLOCKING LIGHT

Light passes through some things, but not through others.

## BLOCKING LIGHT

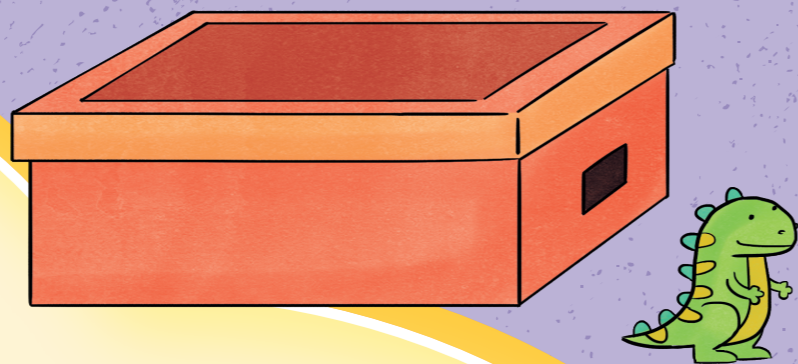


- THINK** about what happens when light is blocked.
- Bricks block light so you cannot see through walls.
  - Glass does not block light. It is used to make windows and doors.
- What other materials block out light?



**YOU WILL NEED**

- Scissors
- A shoe box
- A ruler
- A small toy
- A hand torch
- Sticky tape
- A book
- Some test materials (e.g. pieces of paper, cloth, clear plastic, cling film,

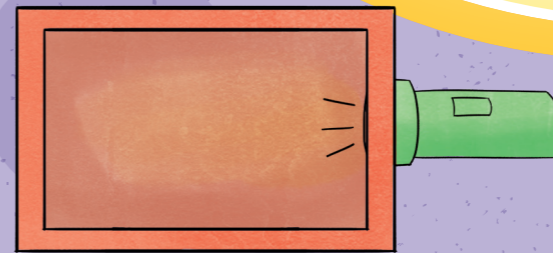


## WHICH MATERIALS BLOCK OUT LIGHT?

**1** Ask an adult to cut a hole about 15 cm x 10 cm in the top of the shoe-box lid, and a square of about 3 cm in one side of the shoe box.

**2** Put the toy inside the box and put the lid on.

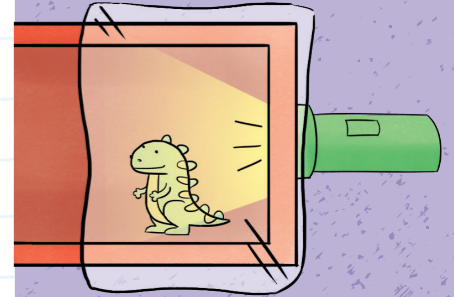
**3** Position the end of the torch over the hole in the side and tape it securely to hold it in place. You may need to rest the torch on something, such as a book. Switch on the torch.



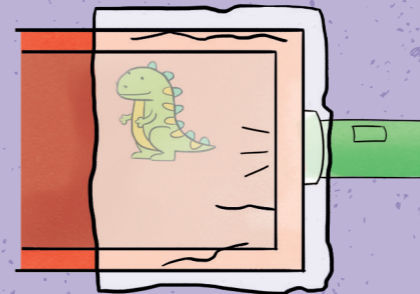
**4** Lay your test materials, one at a time, over the hole in the lid, completely covering it. What can you see? Make a record of the results.

## BECAUSE...

You can see the torchlight and toy clearly through some materials. This is because almost all the light passes through these materials, from inside and outside the box. These materials are **transparent**.



Some materials let some light through them and block (reflect) the rest. You can see the torchlight glowing inside the box, but you cannot see the toy very clearly. These materials are **translucent**.



The other materials block all of the light, both from outside and inside the box. You cannot see inside the box at all. These materials are **opaque**.

