

Year 3 Science

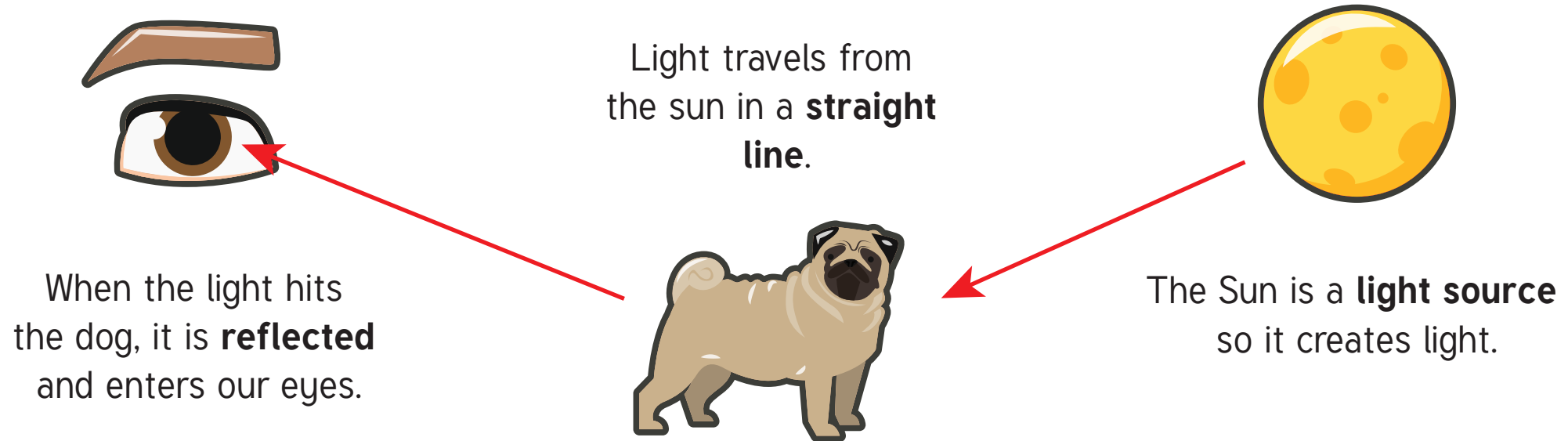
Light

I can find patterns in the way that the size of the shadows change.



Light

We have learnt that we can see things because light is reflected. Some materials reflect light better than others. Light travels in straight lines.

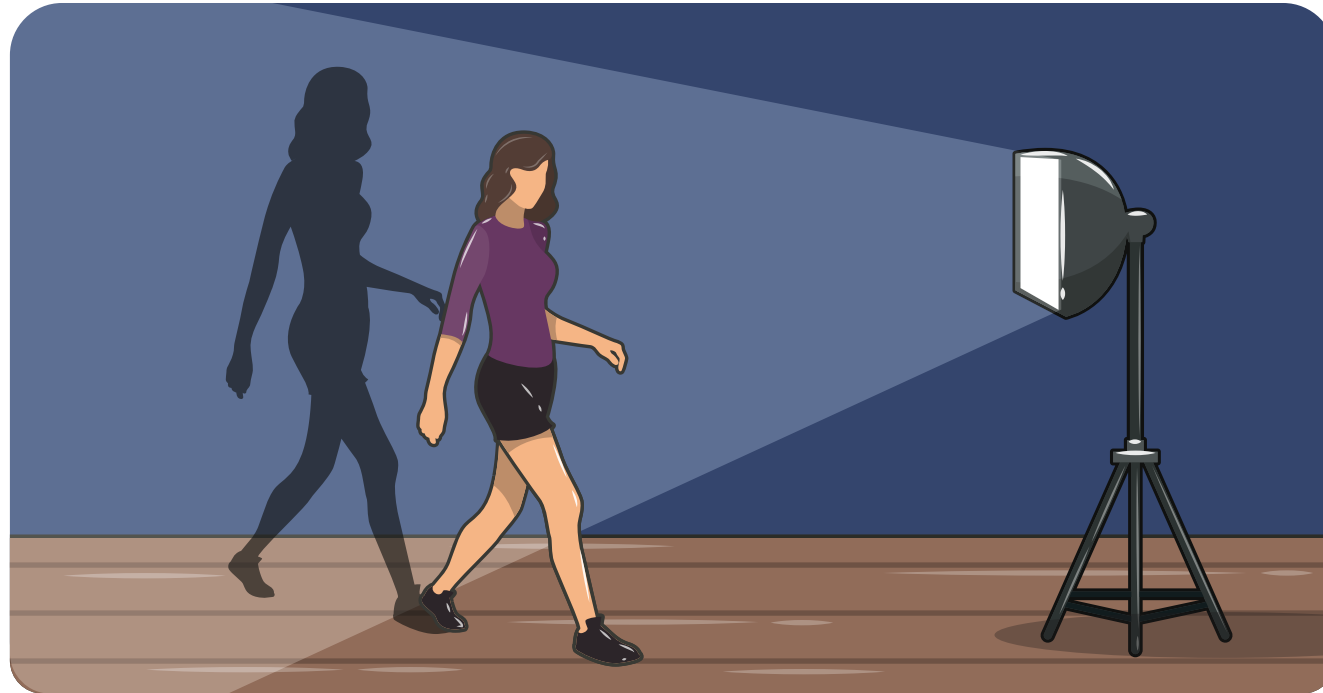


When light hits an object, it is **reflected** (bounces off) and enters our eyes.
This is how we see the object.

Shadows!

Last lesson, we learnt that a shadow is made when an object blocks light.

A shadow is a dark area or shape caused by a solid object blocking the rays of light from a light source. Opaque objects make the darkest shadows.



Recap Time!

Who can remember what these words mean from last lesson?

opaque translucent transparent

Talk to your partner before we discuss it as a class.

Recap Time!

Opaque

Opaque materials do not let any light pass through them. They block the light. Wood is an example of an opaque material.

Translucent

Translucent materials let some light through, but they scatter the light in all directions, so that you cannot see clearly through them. Tissue paper is an example of a translucent material.

Transparent

Transparent materials let light pass through them in straight lines, so that you can see clearly through them. Glass is an example of a transparent material.

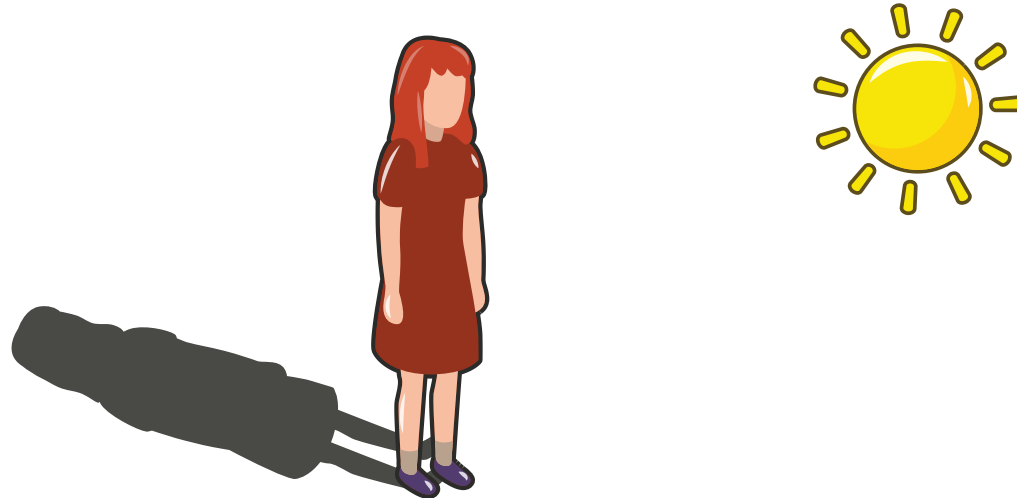
Can you think of any other examples of opaque, translucent or transparent materials or objects?

Shadows from the Sun

The Sun is a very bright natural light source. It seems to move across the sky during the day. In fact it just looks like it does that because the Earth is spinning.

The Sun make the **longest shadows** at the beginning and end of the day, when the Sun is lowest in the sky.

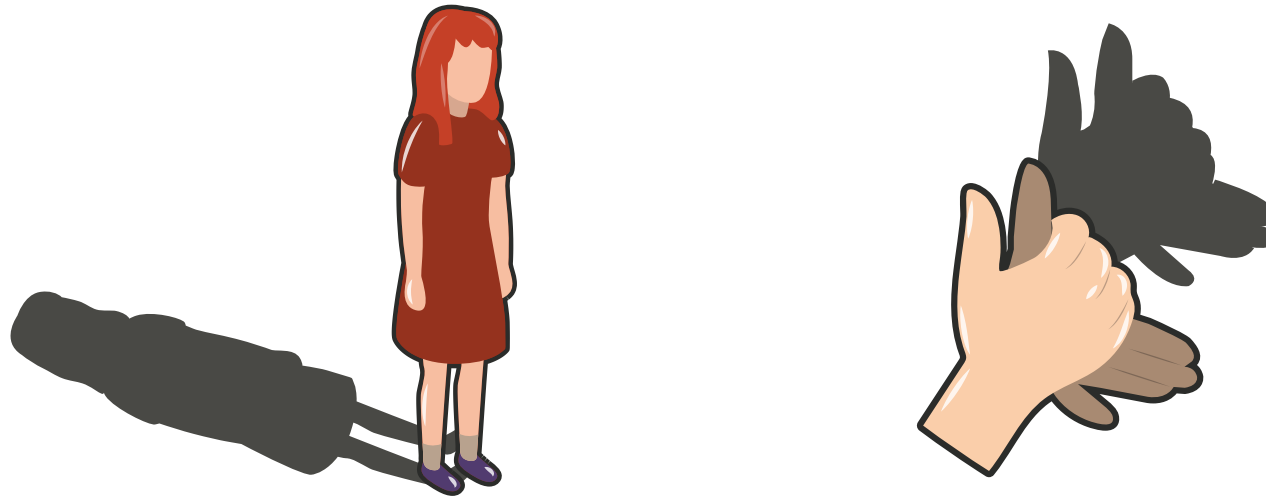
The Sun casts the **shortest shadows** at midday, when the Sun is highest in the sky.



Changing Shadows

We can change the shadows that objects make by moving the light source. If we move the light source from side to side, the shadow also moves from side to side.

We can also change the **shape**, **length**, and **size** of a shadow by moving the light source closer and further away.





Can we help Britney by investigating **light sources** and **shadows**?

Task

You will now plan and carry out an investigation to find an answer to Britney's question.

- 1. First complete the planning section of your sheet.**
- 2. We will then carry out our planned investigations.**
- 3. Finally we will communicate our results to Britney.**

What did we find out?

Think about these questions and discuss with your partner before feeding back to the class.

1. What did you most enjoy about this lesson?
2. Tell me one thing you have learnt.
3. Did you find anything difficult?

