

Can I escape my shadow?



Key scientist – Ole Roemer

He was the first scientist to measure the speed of light in 1676. He discovered that light travels at a set speed.



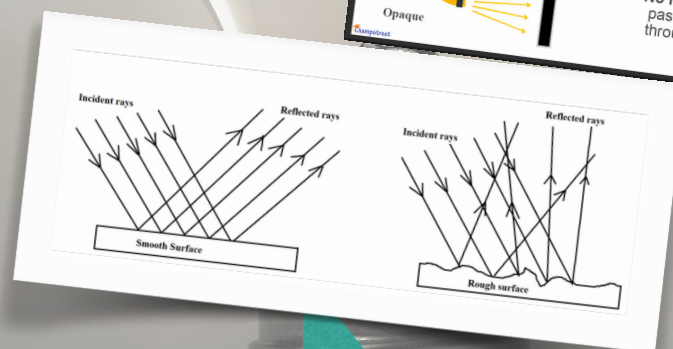
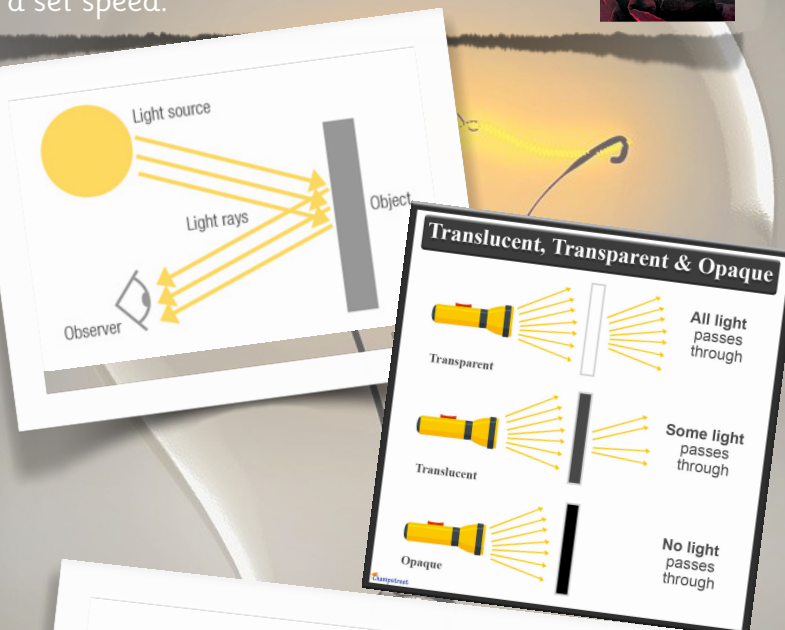
Key vocabulary

artificial light source	Light that is not naturally occurring – it cannot exist without humans.
incident ray	The light ray that travels from the light source to an object.
light	The natural element which allows us to see and makes things visible
natural light source	Light that occurs naturally without the input of humans.
refraction	When light changes direction or bends, when it moves from one material to another.
light source	Something that produces light, e.g. the sun, fire, stars, man-made light such as a lamp.
reflect	When light rays bounce off an object.
transparent	A material which allows light to pass through it, objects can be seen through it. E.g. glass.
translucent	A material which allows some light to pass through but not detailed shapes. E.g. a frosted window
opaque	A material which does not allow any light to pass through it. You cannot see through it.
reflected ray	The light ray that is reflected off of an object when light rays hit it.
shadow	An area of darkness caused by an opaque object blocking light rays.

Key learning



- Recognise that they need light in order to see things and that dark is the absence of light
- Notice that light is reflected from surfaces
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Recognise that shadows are formed when the light from a light source is blocked by an opaque object
- Find patterns in the way that the size of shadows change



Working scientifically concepts

- Interpreting and communicating results
- Recording data
- Observing and measuring
- Evaluating



Light – Our Learning Journey

Year 3/4

- Recognise we need light in order to see
- Notice that light is reflected from surfaces
- How shadows are formed and how they change

Year 5/6

- Recognise that light travels in straight lines
- Explain how we see things
- Using that light travels in straight lines to explain shapes of shadows



Scientific enquiry types



Observation over time



Identifying and classifying



Ethics –

Is artificial light bad for the planet?