

By the end of the unit, pupils will be able to answer...

- What does light do and where does darkness come from?
- What happens when light hits a surface?
- How are shadows formed and why do they change size?

Vocabulary	Definition
dark	having little or no light
light source	something that produces its own light
mat	a surface that has no shine
mirror	a smooth surface that is shiny and reflects images
opaque	not letting light pass through
reflect	to throw back from a surface
shadow	the dark image cast on a surface by a person or object blocking a light source
shiny	a surface that reflects or glows with light
translucent	lets some light pass through – objects on the other side can be seen but are not clear
transparent	lets light pass through – objects on the other side can be seen clearly

S.O.S.

A shadow is formed behind an object when it blocks the light.

source → object → shadow

The sun is a **source of light**. The moon is not a source of light. We can see it because it **reflects** light from the sun.

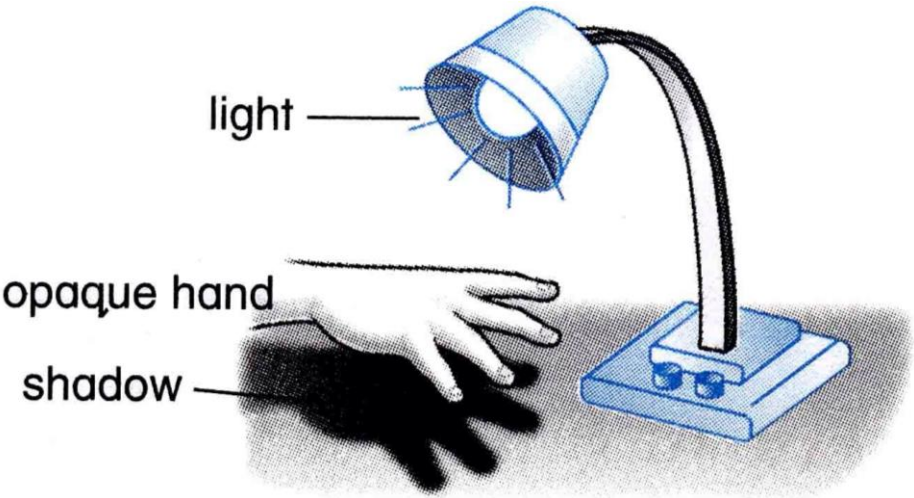
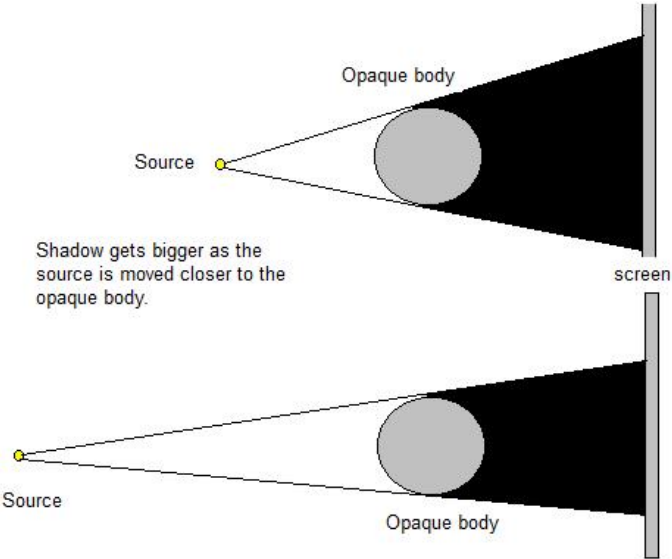
Some light can pass through **translucent** materials, such as sun glasses.

A **mirror** is highly polished and **reflects** light. We can see **images** of ourselves and other objects in mirrors.

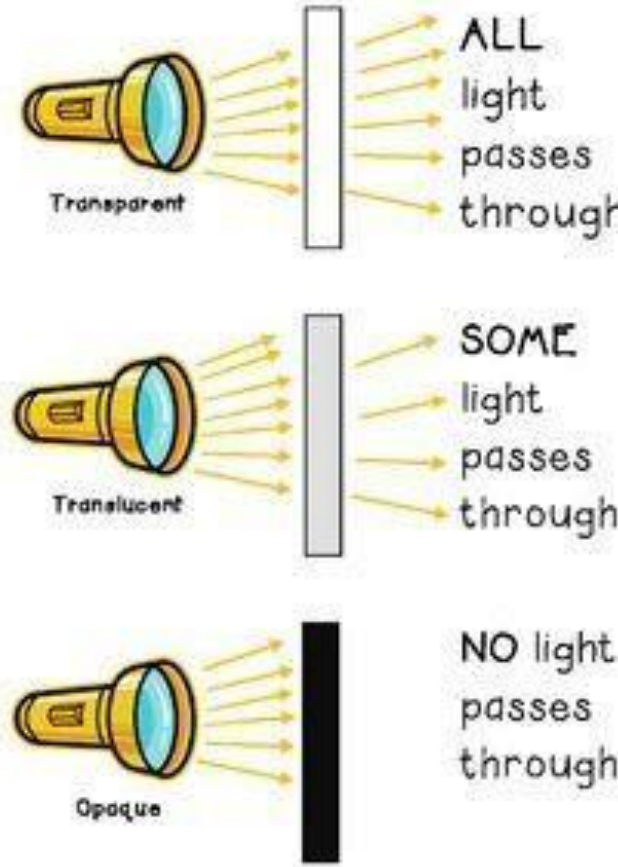
Light is **blocked** by **opaque** materials, like this mug.

Clear glass is **transparent** and allows all light to pass through.

A **periscope** has two angled mirrors, that **reflect** the light. This enable us to see around corners



Translucent, Transparent & Opaque



Investigate!

- Explore how different objects are more or less visible in different levels of lighting
 - Explore how objects with different surfaces (eg shiny vs matt) are more/less visible
 - Explore how shadows vary as the distance between a light source and an object or surface is changed
- Explore shadows which are connected to and disconnected from the object (eg shadows of clouds and children on the playground)
 - Choose suitable materials to make shadow puppets
 - Create art work using shadows