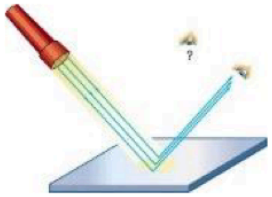
Year 3 Science Knowledge Organiser - Light

Key Knowledge

Reflection and how we see things?

Light beams are projected from the light source (the sun). These light beams travel in a straight line until they meet an object. The light beams are then reflected off the surface it meets, until the light beam enters the eye (see picture). The light activates cells inside our eyes which are processed by our brain into an image. This all happens incredibly fast! All of the objects we can see are only visible when light has reflected from the objects into our eyes.



Sun Safety

Sunlight can damage your eyes. Protect them by wearing sunglasses or a hat. NEVER look directly at the sun.



Focus Scientist — Ibn al-Haytham

Ibn al-Haytham was born in 965BC in what is now present day Iraq. He was the first person to prove that we see because light reflects off objects and into our eyes. He was also one of the first thinkers to use a scientific method.



Darkness and how shadows are formed?

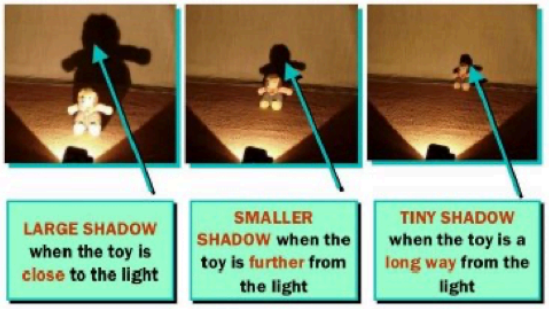
Darkness is the absence of light.

A shadow is an area of darkness produced by an object coming between beams of light and a surface.



They look different depending on the transparency of the object. Transparent objects = faint shadows (more light gets through). Translucent objects = darker than transparent, lighter than opaque object shadows. Opaque objects = dark shadows.

The distance between the object and the light source, near or far / high or low, will affect the size



Key Vocabulary

Word	Definition
light	light is a type of energy that makes it possible for us to see the world around us.
light source	an object that emits light.
light beam	a projection of light energy radiating from a light source.
dark/darkness	the absence of light in a place.
reflection	when light hits the surface of an object and then that light travels to our eyes so we can see.
opaque	a material you are not able to see through (not transparent).
transparent	a material allowing light to pass through so that objects behind can be seen clearly.
shadow	an area of darkness produced by an object coming between rays of light and a surface.
translucent	a material allowing light, but not detailed shapes, to pass through (semi-transparent).
torch	a portable battery-powered electric lamp.
mirror	a surface, typically glass coated with metal, which reflects a clear image.
source	where something comes from.
sunglasses	glasses with dark lenses which you wear to protect your eyes from bright sunlight.
protect	to keep from being harmed either by covering or shielding.
illuminate	a verb meaning to light up. E.g. A flash of light illuminated the house.