

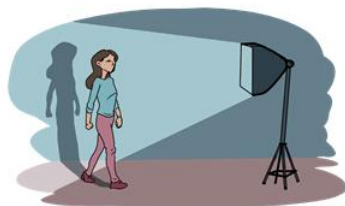
Key Vocabulary

Key Knowledge

WORD	DEFINITION
angle	the space between 2 intersecting lines
light	a form of energy
light source	an object that provides its own light
opaque	it describes materials which do not allow light to travel through
optical	relating to the science of optics (sight)
reflected	when light shines on a surface and bounces back
rotate	to turn an object around a centre point
spectrum	a band of several colours
transparent	it describes materials which do allow all light to travel through
variable	any one of the elements of an experiment which could be changed

Shadows

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.



How We See

Light travels in **straight lines**. The light **rays** from a light source **reflect** off the object we are looking at. The light travels in a **straight line** and enters the eye through our **pupil**.

Light sources

A **light source** makes light. The **Sun** and other **stars, fires, torches** and **lamps** all make their own light, so they are examples of sources of light.

Bending Light

Reflection
Light reflects off shiny, bright or light surfaces. That is why you can see your reflection when you look in a mirror.

Refraction
Water and bent shiny surfaces cause light rays to be reflected at different angles, meaning the reflection of the image is distorted.

Colours

Absorption and reflection of light

White light is made up of the colours of the rainbow. When light is refracted through a transparent object, a rainbow is formed.

A red object reflects red and absorbs others colors of white light

A white object reflects all colors of white light equally

An object is seen as black if it absorbs all colors of white light

Reflective light

We can see things because light is **reflected**. Some materials reflect light better than others.

Light travels in straight lines. When light from an object is reflected by a surface, it changes direction.

Smooth, shiny surfaces such as mirrors and polished metals **reflect light well**. **Dull and dark surfaces** such as dark fabrics do **not reflect light well**.

When the light hits the dog, it is **reflected** and enters our eyes.

The Sun is a **light source** so it creates light.

Light travels from the sun in a **straight line**.

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

We need **light sources** to be able to see; otherwise, there is no light to reflect o surfaces and into our eyes. This is why we cannot see in the dark.

