

What should I already know?

- Certain things produce **light**, usually by burning (e.g. the Sun) or **electricity** (e.g. street **lights**)
- Shiny materials do not make **light** but do reflect it.
- **Shadows** are caused when certain materials block **light**.
- **Light** travels in straight lines. When **light** is blocked by an **opaque** object, a **dark shadow** is formed.
- The further away the **light source** is, the smaller the **shadow** is. The closer the **source** of the light, the bigger the shadow.

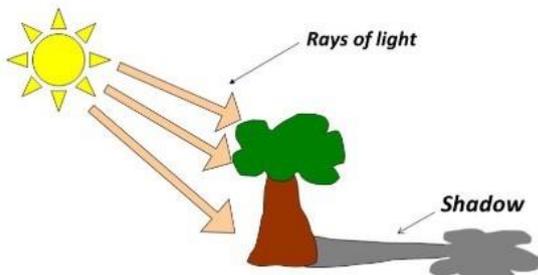
What will I know by the end of the unit?

How does **light** travel?

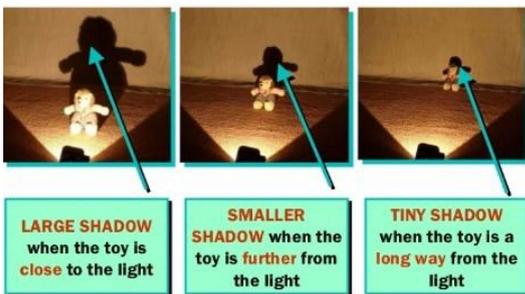
- **Light** travels in a straight line.
- When you place a torch on a table in a **dark** room, the beam travels in a straight line.
- **Reflection** is when **light** bounces off a surface - this changes the direction in which the **light** travels.

What is the relationship between **light sources** and **shadows**?

- Because **light** travels in straight lines, when there is an **opaque** object blocking the **light**, a **shadow** is formed.
- These **shadows** have the same shape as the objects that cast them.



- The size of a **shadow** changes as the **light source** moves.

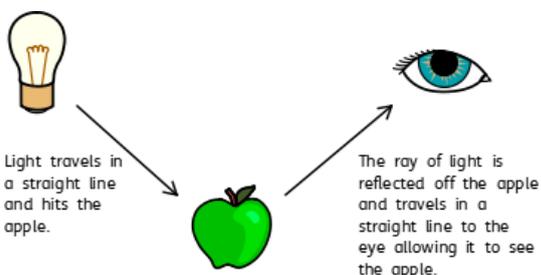


**LARGE SHADOW** when the toy is close to the light

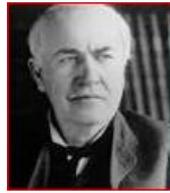
**SMALLER SHADOW** when the toy is further from the light

**TINY SHADOW** when the toy is a long way from the light

How do we see?



Famous scientists and inventors



**Thomas Edison** was an American inventor and businessman who has been described as America's greatest inventor. He developed many devices in fields such as electric power generation, mass communication, sound recording, and motion pictures but he is most famous for inventing the light bulb.

**Patricia Bath** was the first African American doctor to patent her invention that helps save peoples site.



**Percy Shaw** was an English inventor and businessman. In 1934 he invented the reflective 'Cats Eye' that we use on our roads.

Vocabulary

angle	the direction from which you look at something
dark	the absence of <b>light</b>
dim	<b>light</b> that is not <b>bright</b>
electricity	a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for machines
emits	to <b>emit</b> a sound or <b>light</b> means to produce it
light	a <b>brightness</b> that lets you see things.
mirror	a flat piece of glass which <b>reflects light</b> , so that when you lookat it you can see yourself <b>reflected</b> in it
opaque	if an object or substance is <b>opaque</b> , you cannot see through it
reflects	sent back from the <b>surface</b> and not pass through it
shadows	a dark shape on a <b>surface</b> that is made when something stands between a <b>light</b> and the <b>surface</b>
source	where something comes from
surface	the flat top part of something or the outside of it
torches	a small <b>electric light</b> which is powered by batteries and which you can carry
translucent	if a material is <b>translucent</b> , some <b>light</b> can pass through it
transparent	If an object or substance is <b>transparent</b> , you can see through it

Lakeside Primary Academy - Science

Light

Year: 6

Strand: Physics

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