

Holy Family Catholic Primary School Cronton

Year 6: Science spring term 2

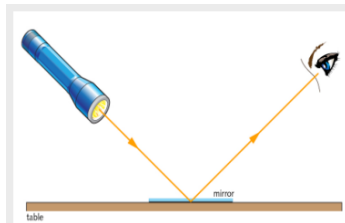
What I should already know:

- * 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.

Fact File

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.



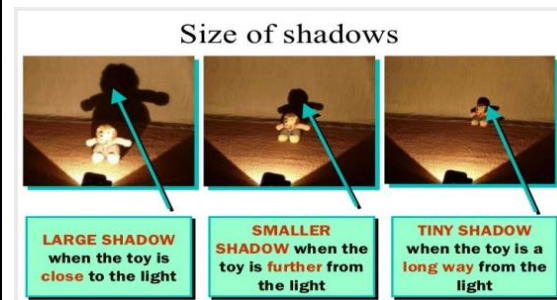
Unit: Light up your world

What I will know by the end of the unit:

- * Recognise that light appears to travel in straight lines.
- * Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.
- * Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- * Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

Key Scientist

Thomas Edison (1847-1931) was an **American inventor**. As a teenager he started his own business printing and selling a newspaper. He came up with his first invention at age 16, the “automatic repeater”, which helped to transmit telegraph signals. In 1876 he opened a lab where he developed most of his inventions.



Theme: Light

Vocabulary

Incident ray	This is a ray of light that strikes a surface. The angle between this ray and the perpendicular or normal to the surface is the angle of incidence.
Opaque	If an object or substance is opaque, you cannot see through it.
Prism	A glass or other transparent object in the form of a prism.
Reflected ray	The ray that represents the light reflected by the surface.
Reflection	This is sent back from the surface and not passed through it.
Refraction	The refraction of light when it passes from a fast medium to a slow medium and bends the light ray.
Shadow	A dark shape on a surface that is made when something stands between a light and the surface.
Translucent	If a material is translucent, some light can pass through it.
Transparent	If an object or substance is transparent, you can see through it.
Visible spectrum	Seven colours that are visible to humans. Red, orange, yellow, green, blue, indigo and finally violet.

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 shape of a shadow is defined by the shape of the object causing it. If you move the object creating a shadow towards the light source, the shadow gets bigger. If you move the object towards the screen then the shadow gets smaller. In both cases the shape of the shadow remains the same.

