

## Year 6 Science: Light

# Key Question: How does light travel?



Key	<b>Facts</b>	Related	To	Light
-----	--------------	---------	----	-------

Term: Autumn 2

A source of light makes light. The Sun and

other stars, fires, torches and lamps all make their own light and so are examples of sources of light.

Some animals, such as fireflies and glow-worms, are light sources. They make their own light to attract mates.

When light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle as it hits it.

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.

Light travels in straight lines. When light hits an object, it is reflected (bounces off) and enters our eyes. This is how we see the object.

#### Scientists Involved In The Theory of Optics / Light

Euclid (330-275 B.C.)



He summarised fundamental knowledge of optics, such as reflection, diffusion and vision. These concepts on light had a large effect up until the appearance of Isaac Newton in the late 17th century.





He contributed to the development of the science of optics by collecting technology on lenses, prisms, mirrors, telescopes, microscopes. In 1672, he announced his "New Theory on Light and Colour" in which he said that "light is a mixture of various colours having different refractivity" rather than "the pure white."

Vocabulary Dozen			
Eyes	Globular organs of sight in the head of humans and vertebrate animals		
Filter	Pass through a device to remove unwanted material (liquid, gas, light or sound)		
Incidence	An incident ray is a ray of light that strikes a surface.		
Light	The natural agent that stimulates sight and makes things visible		
Light source	Something that provides light, whether it be a natural or artifical source of light (e.g. the sun, a torch)		
Periscope	An apparatus consisting of a tube of attached to a set of mirrors or prisms through which an observer can see things that are otherwise out of sight		
Rainbow	An arch of colours visible in the sky, caused by the refraction and dispersion of the sun's light by rain or other water droplets in the atmosphere		
Reflection	The throwing back by a body or surface of light, heat or sound without absorbing it		
Refraction	The bending of light as it passes from one substance to another with the bending caused by the difference in density between two substances		
Shadow	A dark area or shape produced by a body coming between rays of light and a surface		
Spectrum	A band of colours, as seen in rainbows, produced by separation of the components of light by their different degrees		
Transparent	Allowing light to pass through so that objects behind can be distinctly seen.		

#### **Home Scientist:**

Whilst at home you can use the link below to watch videos to help you with consolidating your knowledge of light. https://www.bbc.co.uk/bitesize/topics/zbssgk7

If you want to try some games to help with your learning use the link below: http://www.primaryhomeworkhelp.co.uk/revision/Science/lightshadows.html





# Year 6 Science: Light

### Term: Autumn 2

# Key Question: How does light travel?



Light sensitive cells create nerve impulses retina

focus point

is on retina images are clear.

**Optic Nerve** 

Sends nerve

impulses to the brain for interpretation

Timeline showing the history of artificial light		
1800 BC	Egyptians used candles.	
1810 AD	William Murdoch invented the oil gas lamp.	
1879 AD	Thomas Edison invented the incandescent lamp (traditional light bulb).	
1934 AD	George Inman invented the fluorescent tube light.	
2006 AD	Nick Holonyack invented the LED light bulb.	







