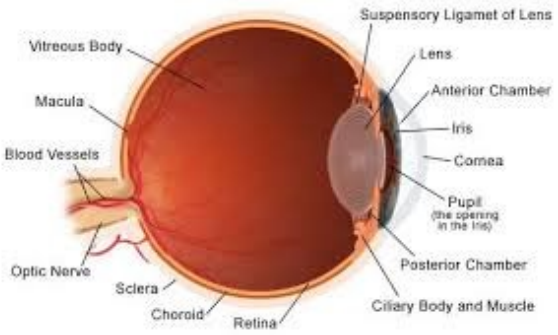
Science: Light

Innovation



Prior Knowledge:

Year 3: You learned to recognise that we need light in order to see. You also learned that light can be reflected from some surfaces and casts shadows from others.

Year 4: You learned that light can be created using energy (a light bulb for example).

Year 5: You learned about the Solar System and that the Sun is a light (and heat source) that allows life to exist on our planet.

Working Scientifically:

You have learned how to plan different types of scientific enquiries; how to take and record accurate measurements; and how to use results to make predictions and test a hypothesis.

Key Vocabulary

Tier 1: light source, focus, reflection, shadow, cast,

Tier 2: Refraction, electromagnetic, radiation, translucent, opaque, prism, retina, transmission, spectrum,

Tier 3: Visual cortex, optic nerve, absorption,

My Component Knowledge:

Lesson 1: I can draw a scientific drawing of an eye.

Lesson 2: I can understand how mirrors reflect light, and how they can help us see objects.

Lesson 3: I can investigate how refraction changes the direction in which light travels.

Lesson 4: I can investigate how a prism changes a ray of light to show the spectrum.

Lesson 5: I can investigate how light enables us to see colours.

Lesson 6: I can explain why shadows have the same shape as the object that casts them

My Composite Knowledge:

I understand how light travels, where it comes from and how it can be manipulated.

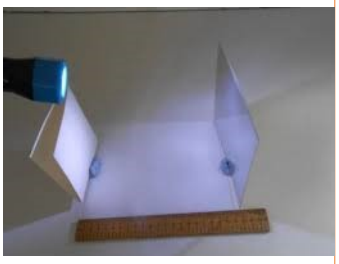
My Powerful Knowledge:

Light travels in straight lines from a light source (beams).

Light travels from a light source and reflects off an object into our eyes.

White light is composed of a spectrum of colours and can be split (refracted).

Some objects reflect light while others absorb light rays.



A submarine's periscope allows people to see objects that are above the water. How is this possible?

There are forms of light which are invisible to the human eye. Can you identify an example and explain why?

Visible light contains many colours. What are these colours?