Science: Light

Innovation

THE WOODLAND FEDERATION

WINKLEIGH Primary School

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,
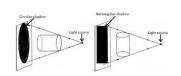
Prior Knowledge:

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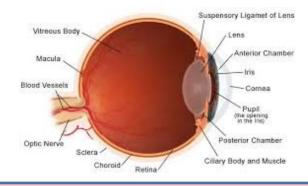
Year 4: You learned that light can be created using energy (a light bulb for example).

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.

My Component Knowledge:

Lesson 1: I know that light travels in straight lines.

Lesson 2: I know that light reflects off some surfaces and not off others.

Lesson 3: I know that there are different factors that effect the size of a shadow.

Lesson 4: I know that white light is made up of a spectrum of colours.

Lesson 5: I know how to prove that light is made up of a spectrum of colours.

Lesson 6: I can demonstrate my knowledge of light.

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).

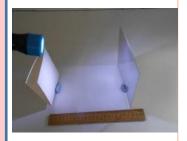Some objects reflect light while others absorb light rays.

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?