# Corpus Christi Catholic Primary School
# Year 6 – Light - MTP Unit Overview

## Outcomes:

**By the end of this unit <u>all</u> pupils should know:**

- 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.

**By the end of this unit pupils should have developed the following working scientifically skills:**

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

## Progression:

**Prior learning:**

- Year 3 – to recognise that they need light in order to see things and that dark is the absence of light
- Year 3 - notice that light is reflected from surfaces
- Year 3 - recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Year 3 - recognise that shadows are formed when the light from a light source is blocked by an opaque object
- Year 3 - find patterns in the way that the size of shadows change.

**Building towards: KS3 – Physics – Light waves**

- the similarities and differences between light waves and waves in matter
- light waves travelling through a vacuum; speed of light
- the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface
- use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye.
- light transferring energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras
- colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption and diffuse reflection.