Year 3

Light

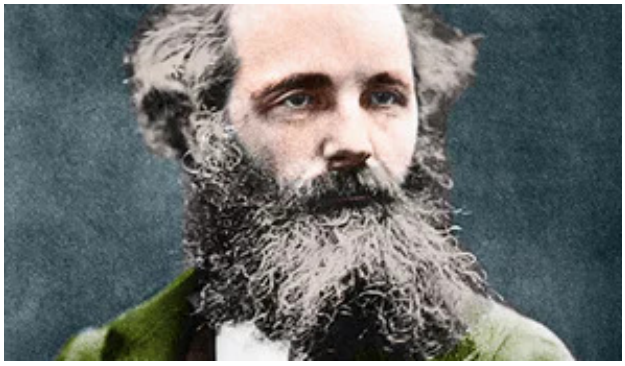
Statutory Requirements:

- Recognise that they need light in order to see things and that dark is the absence of light
- Notice that light is reflected from surfaces
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Recognise that shadows are formed when the light from a light source is blocked by a solid object
- Find patterns in the way that the sizes of shadows change

Working Scientifically:

- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Key Scientists



James Clerk Maxwell (1831- 1879)
Scottish physicist, whose work led to many modern-day inventions. Albert Einstein said that 'his work changed the world forever'.

Key Vocabulary:

- Opaque, translucent, transparent
- Shadow – block, absence of light
- Reflection, refraction
- Light source
- Sunset, sunrise
- Photon, light wave
- Simple comparisons: dark, dull, bright, very bright
- Comparative vocabulary: brighter, duller, darker
- Superlative vocabulary: brightest, dullest, and darkest

Key Knowledge:

Light sources

Places from which light is emitted: e.g. Sun, candles, torches, fire. The moon is not a light source (it reflects light but does not emit light).

Seeing an object

We see objects when light from a source reflects off of them and into our eyes. Lighter objects reflect more light than darker objects.

Refraction

Refraction happens when objects slow down the light beam, and slightly change its direction.

Photons

Light is small particles called photons, which travel in a wave pattern along a generally straight path.