Science Curriculum – Cycle A

Upper Key Stage 2 – Summer 1

Theme – Light (Physics)

Enquiry Question – How do we see?

National Curriculum Coverage

Pupils should be taught to:
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.

Key Scientists:	**Comparative Test** Which material is most reflective? **Fair Test** Does the shape of a shadow change depending on which angle the light hits the object?	**Observation over time** How do the light levels in the classroom change over the day?	**Pattern Seeking** Which area in school has the most light?	**Research** What is refraction and how does this happen?

Objective	Challenge	Working Scientifically	Vocabulary
• To know that light appears to travel in straight lines • To know and 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 • To use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect into the eyes - To understand how a periscope works • To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	• To explain how different colours of light can be created • To use and explain how simple optical instruments work (periscope, telescope, binoculars, mirror, magnifying glass, Newton's first reflecting telescope) • To explore a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters. **or own challenges*	See separate objectives sheet.	Light, travels, straight, reflect, reflection, light source, object, shadows, mirrors, periscope, refraction