Science Curriculum – Cycle A

Lower Key Stage 2 – Spring 1

Theme – Light (Physics)

Enquiry Question – What is light and where does it come from?

National Curriculum Coverage

Pupils should be taught to:
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 an opaque object
Find patterns in the way that the size of shadows change.

Key Scientists:	**Comparative Test** Which pair of sunglasses will be best at protecting our eyes? **Fair Test** Does the distance between an object and a screen affect the size of the shadow?	**Observation over time** Is the Sun the same brightness all day?	**Pattern Seeking** Are you more likely to have bad eyesight and to wear glasses if you are older?	**Research** How does the sun make light?

Objective	Challenge	Working Scientifically	Vocabulary
• To name some light sources • To know that they need light in order to see things • To recognise that dark is the absence of light • To notice that light is reflected from surfaces - To observe what happens when light reflects off a mirror or other reflective surfaces • To recognise that light from the sun can be dangerous and that that there are ways to protect their eyes - To know that it is not safe to look directly at the Sun	• To explain why lights need to be bright or dimmer according to need • To explain the difference between transparent, translucent, opaque • To make a bulb go on and off • To say what happens to the electricity when more batteries are added • To explain why their shadow changes when the light source is moved closer or	See separate objectives sheet.	Light, see, dark, reflect, surface, shadow, solid, torch, sunlight, dangerous, protect, opaque.

even when wearing dark glasses • To recognise that shadows are formed when the light from a light source is blocked by a solid, opaque object - To look for and measure shadows - To know what might cause a shadow to change • To find patterns in the way that the size of shadows change - To know the relationship between the distance of the light source from an object and the shadow it creates	further from the object **or own challenges*		