**Crofton Junior School – Curriculum Knowledge Organiser**

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| **Unit of Work** | Science – Physics – Year 3 |
| **Key Strand** | Understanding light and seeing |
| **Overview of the Unit of Work** | This concept involves understanding how light and reflection affect sight. |
| **Prior Learning & Vocabulary** | Year 2 (materials): transparent, opaque, translucent  |
| **Sticky Knowledge** | We need light to be able to see things. Light travels in a straight line. When light hits an object, it is reflected. If the reflected light hits our eyes, we can see the object. Some surfaces and materials reflect light well; other materials do not reflect materials well. Reflective materials can be very useful. The surfaces that reflect light best are smooth, shiny and flat.  | The pupils control the amount of light entering the eyes. If too much light enters, then it can damage the retina. To help protect the eyes, you can wear a hat with a wide brim and sunglasses with a UV rating.  |
|  | A shadow is caused when light is blocked by an opaque object. When a light source is to one side of an object, the shadow will appear on opposite side. |
| **Key Vocabulary** | Tier 2* **predict:** to estimate that a specified thing will happen
* **conclude:** arrive at a judgement or opinion by reasoning
* **identify:** establish or indicate who or what (someone or something) is
* **describe:** give a detailed account of concepts
* **recognise:** identify from knowledge of appearance or character
* **source:** a place, person, or thing from which something originates or can be obtained
* **investigate:** carry out a systematic or formal inquiry to discover and examine the facts so as to establish the truth
 | Tier 3 * **dark/darkness:** with little or no light
* **reflect:** (of a mirror or shiny surface) show an image of
* **reflective:** providing a reflection; capable of reflecting light
* **mirror:** a surface, typically of glass coated with a metal amalgam, which reflects a clear image
* **shadow:** a dark area or shape produced by a body coming between rays of light and a surface
* **block:** put an obstacle (opaque solid) in the way
* **direct/direction:** extending or moving from one place to another without changing direction or stopping
* **ray:** each of the lines in which light may seem to stream from the sun or any luminous body, or pass through a small opening
* **retina:** a layer at the back of the eyeball that contains cells sensitive to light, which trigger nerve impulses that pass via the optic nerve to the brain, where a visual image is formed
* **pupil:** the dark circular opening in the centre of the iris of the eye, which varies in size to regulate the amount of light reaching the retina
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| **Post Learning** | Year 6 : Light  |