



Class 1

Madron Daniel Science Small Step Progression

Light – Year 6 Unit – Year B

| Light – Year 6 Unit – Year B | | | | | | |
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| Retrieval vocab: Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous. New Vocab Straight lines, light rays, refraction, prism, angles of incidence, reflection, periscope, colour wheel, spectrum | | | Previous learning Recognise that they need light in order to see things and that dark is the absence of light. (Y3 - Light) • Notice that light is reflected from surfaces. (Y3 - Light) • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 - Light) • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. (Y3 - Light) • Find patterns in the way that the size of shadows change. (Y3 - Light) | | | Links with Vision and Values. <i>Stimulate in every child a sense of curiosity and excitement about the world</i> |
| | Working scientifically/ enquiry focus | Curriculum Strand/ Focus | Small step objective | Previous learning within the unit. | Lesson content | Outcome |
| 1 | Identify Research | Light | Explain that light travels in straight lines from light sources to our eyes, and from light sources to objects, then our eyes. | N/A | How does light travel? | The children can: Demonstrate that light travels in a straight line by creating a model. |
| 2 | Identify Research | Light | Understand how mirrors reflect light and how they help us see objects. | <i>Demonstrate that light travels in a straight line by creating a model.</i> | How do mirrors work? | The children can: Explain how light is reflected. Measure the angles of incidence and reflection. Explain how the periscope allows us to see objects we would not usually be able to see. |
| 3 | Comparative/ fair testing | Light | Investigate how refraction changes the direction in which light travels. | <i>As above Explain how light is reflected. Measure the angles of incidence and reflection. Explain how the periscope allows us to see objects we would not usually be able to see.</i> | Why do objects look different in water? | The children can: Investigate the effects of refraction and understand the way refraction alters the direction of light. |



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| 4 | Identify Research | Light | Explain how a prism changes a ray of light | <i>As above Investigate the effects of refraction and understand the way refraction alters the direction of light.</i> | How does a prism affect a ray of light? (Issac Newton) Colour wheels | The children can: Understand how a prism affects a ray of light and explain what this tells us about the visible spectrum. Describe what Isaac Newton discovered about light and colour. |
| 5 | Research | Light | Understand how the eye works and how light enables us to see colours. | <i>As above Understand how a prism affects a ray of light and explain what this tells us about the visible spectrum. Describe what Issac Newton discovered about light and colour.</i> | How does the eye work? | The children can: Explain how the eye works and how light enables us to see colour. |
| 6 | Identify | Light | Explain why shadows have the same shape as the object that casts them. | <i>As above Explain how the eye works and how light enables us to see colour.</i> | How do shadows change during the day? | The children can: Explain how a shadow is formed and explain why shadows are the same shape as the object that casts them. |