SCIENTIFIC ENQUIRY OVERVIEW

Light

YEAR 3 | SPRING 1 | 6 LESSONS

LESSON	OBJECTIVES	SCIENTIFIC ENQUIRY	EQUIPMENT
L1 **Light source or light reflector?**	• Define a light source. • Distinguish sources from reflectors. • Sort objects accordingly.	**IDENTIFYING, CLASSIFYING AND GROUPING** Pupils sort everyday objects (Sun, mirror, torch, moon, candle) into light sources and reflectors and justify each choice.	• Object picture cards (1 per child) • Sorting hoops (1 per group) • Recording sheet (1 per child) • Booklet (1 per child)
L2 **Transparent, translucent or opaque?**	• Define transparent, translucent and opaque. • Test a range of materials. • Sort materials by light transmission.	**COMPARATIVE AND FAIR TESTING** Pupils shine a torch through different materials and classify each as transparent, translucent or opaque using the same test for fairness.	• Torch (1 per group) • Material samples (glass, paper, foil, tracing paper, plastic) • Recording sheet (1 per child)
L3 **What makes a good reflector?**	• Define reflection. • Plan a fair test. • Conclude which materials reflect best.	**COMPARATIVE AND FAIR TESTING** Pupils use a torch and ruler to measure how far light reflects off different surfaces, varying only the surface.	• Torch (1 per group) • Ruler (1 per pair) • Reflective and dull surfaces (mirror, foil, paper, fabric) (1 per pair) • Recording sheet (1 per child)

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L4 **What is a shadow?**	• Define a shadow. • Identify factors affecting shadow size. • Plan a fair test.	**COMPARATIVE AND FAIR TESTING** Pupils vary the distance of a torch from an object and measure how the shadow size changes, keeping object and screen position fixed.	• Torch (1 per group) • Cut-out object • White screen or wall • Ruler (1 per pair) • Recording sheet (1 per child)
L5 **How can we protect our eyes from the sun?**	• Describe how the sun can damage the eyes. • Identify ways to protect eyes. • Explain the role of sunglasses and shade.	**OBSERVING CLOSELY** Pupils observe pupil response to bright light using mirrors and design a class sun-safety poster.	• Mirrors (1 per pair) • Torch (1 per group) • Poster paper • Markers • Booklet (1 per child)
L6 **How do telescopes work?**	• Define a telescope. • Describe how lenses bend light. • Build a simple telescope.	**COMPARATIVE AND FAIR TESTING** Pupils build a simple telescope and compare the magnification with and without the lens, noting how distant objects appear.	• Cardboard tubes (1 per pair) • 2 lenses per pair (different focal lengths) • Tape • Recording sheet (1 per child)