

Light	Science	Years 3 & 4, Term 3	Year A
Key vocabulary: Dark, light source, absence of light, reflected, shadows, see, illuminate, visible, sun, beneficial, dangerous, glare, bright, damage, UV light, UV rating, spectrum, pupil, retina, protect, direct, sunglasses, hat, brim, energy, beam, ray, travel, straight, opaque, translucent, transparent, block, observe, pattern, size, distance			
Knowledge and skills: Ask relevant questions and use different types of scientific enquiries to answer them. (B1) Set up simple practical enquiries, comparative and fair tests. (B2) Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. (B3) Gather, record, classify and present data in a variety of ways to help in answering questions. (B4) Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. (B5) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. (B6) Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. (B7) Use straightforward scientific evidence to answer questions or to support findings. (B9) Recognise that light is needed in order to see things and that dark is the absence of light. (B28) Recognise that light from the sun can be dangerous and that there are ways to protect eyes. (B29) Recognise that shadows are formed when the light from a light source is blocked by a solid object. (B30) Find patterns in the way that the size of shadows change. (B31) Notice that light is reflected from surfaces. (B32)		Possible activities: Explore what happens when light reflects off a mirror or other reflective surfaces (mirror games) Explore why it is important to protect your eyes from bright lights. Create a guide for keeping yourself safe in the sun. Look for and measure shadows, find out how they are formed and what might cause the shadows to change. Work scientifically by looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.	
Spiritual, Moral, Social and Cultural Education and Promotion of British Values Spiritual: Light is used as a symbol in religious art. Role of sun in prehistoric worship. Children will consider the scope and wonder of the natural world and the fact that science does not answer every question we may wish to ask. Moral: Not all scientific developments have caused positive change; some have brought about damage to people and the environment. Ethical considerations are vital when undertaking scientific research. Social: Looking directly at the sun can damage your eyes. Children will work in groups to plan experiments. They will respect each other’s predictions and work together to carry out investigations. Cultural: Getting a ‘suntan’ may be a culturally accepted norm but the sun’s rays can be both harmful and beneficial so it is important to protect our skin and eyes. Scientists are well respected in British culture, particularly after the pandemic highlighted their importance in our lives. British Values: Encourage children to accept responsibility for their behaviour. Children will show respect for each other’s thoughts and ideas during discussions. We know that our behaviour affects our rights and the rights of others; children will behave in a way that allows everyone to learn and achieve their potential.			