

	Autumn Term WWII		Spring Term Space		Summer Term Chocolate	
Area of Science	Y6 Light	Y5: Properties and Changes of Materials	Y5: Earth and Space	Y5: Forces	Y5: Properties and Changes of Materials	Y5: Animals, including Humans
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>◆ Recognise that light appears to travel in straight lines</li> <li>◆ Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye</li> <li>◆ Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</li> <li>◆ Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>	<ul style="list-style-type: none"> <li>◆ Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> <li>◆ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> </ul>	<ul style="list-style-type: none"> <li>◆ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> <li>◆ Describe the movement of the Moon relative to the Earth</li> <li>◆ Describe the Sun, Earth and moon as approximately spherical bodies</li> <li>◆ Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>◆ Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>◆ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</li> </ul>	<ul style="list-style-type: none"> <li>◆ Know that some materials will dissolve in liquid to form solution, and describe how to recover a substance from solution</li> <li>◆ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>◆ Demonstrate that dissolving, mixing and changes are reversible changes</li> <li>◆ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li> </ul>	<ul style="list-style-type: none"> <li>◆ Describe the changes as humans develop to old age</li> </ul>
<b>Key Vocabulary</b>	light, source, reflective, mirror, shadow, block, absorb, direct, transparent, opaque, translucent, straight, bend, rainbow, colours, refraction, magnifying glass	opinion, fact, variables, accuracy, precision, enquiry, causal relationship, degree of trust, thermal insulator/ conductor, support, refute	Earth, planets, Sun, solar system, Moon, celestial body, rotate, spin, orbit, geocentric, heliocentric, orrery, shadow clocks, sundials, astronomical clocks, time-zone, Greenwich Meantime, eclipse, satellite	gravity, air resistance, friction, balancing force, weight, newtons, resistance force, variables, moving surfaces, mechanisms, levers, pulleys, transfers, gears, water resistance	variable, accuracy, precision, enquiry, solid, liquid, gas, dissolve, soluble, solute, solution, insoluble, filter, sieve, magnetism, evaporation, reversible, irreversible, degree of trust, heating, burning, cooking, reaction	life cycle, sperm, egg, foetus, gestation, development, nutrition, uterus, centile, adolescence, puberty, reproduction, aging, change, death
<b>Cross-curricular Links</b>	<b>History</b> – inventors, how has our understanding of light changed? <b>Art</b> – sketching or modelling spectrums of colour	<b>DT</b> – textiles, selecting suitable materials <b>History/DT</b> – building Anderson shelters using suitable materials	<b>History</b> – How has space travel changed? <b>Art</b> – Recreating images of Earth and Space (Peter Thorpe) <b>Geography</b> – Why do we have seasons?	<b>DT</b> – How to stiffen and strengthen weight-bearing structures	<b>DT</b> – creating chocolate bars, changing state, using suitable materials for packaging	<b>PSHE</b> – SRE, reproduction
<b>Scientific Enquiry Methods</b>	 <ul style="list-style-type: none"> <li>◆ Observe changes over time</li> <li>◆ Notice patterns and pattern seeking</li> <li>◆ Group and classify</li> </ul>		<ul style="list-style-type: none"> <li>◆ Fair and comparative testing</li> <li>◆ Researching/secondary sources</li> </ul>			
<b>Working Scientifically Skills</b>	 <ul style="list-style-type: none"> <li>◆ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>◆ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>◆ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul>		<ul style="list-style-type: none"> <li>◆ Using test results to make predictions to set up further comparative and fair tests</li> <li>◆ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>◆ Identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>			