

Year 6 Spring

<p>Design NC LOs</p>	<p><b>Design:</b></p> <ul style="list-style-type: none"> <li>• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>• select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining, and finishing], accurately</li> <li>• select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> <p><b>Evaluate:</b></p> <ul style="list-style-type: none"> <li>• investigate and analyse a range of existing products</li> <li>• evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge:</b></p> <ul style="list-style-type: none"> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products.</li> </ul> <p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>• understand and apply the principles of a healthy and varied diet</li> <li>• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• understand seasonality, and know where and how a variety of ingredients are grown,</li> </ul>
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<p>Topic</p>	<p>Natural Disasters</p>	<p>Knowledge organiser</p>	<p>3.7 Pulleys and Gears</p>
<p>Concepts</p>	<p>Practical Knowledge, Technical Knowledge, Design Inspiration, Design Process</p>	<p>Resources</p>	<p>corrugated card, pins, thread, wood, card, paper, motors</p>
<p>Vocabulary</p>	<p>circumference, mechanical advantage, physical, gear train, interlock, pulleys</p>		
<p>Unit Development</p>	<p>Lesson 1: What are Pulley and Gears (pg. 386-387&amp;392) LO: To develop technical knowledge. LO: To explore the features of a pulleys and gears.</p>		
	<p>Lesson 2: Pulley and Gears Guided Design (pg. 393-395) LO: To develop and communicate ideas by talking and drawing.</p>		

Lesson 3 : Pullets and Gears , Guided Design (pg. 398) LO: To make a prototype that has a pulley and gear.

Lesson 4: Pulley and Gears Guided Design (pg. 399-400) LO: To evaluate their products against their design and consider improvements.