

Year 8 – Design and Technology

<p>Curriculum intent</p>	<p>The aim of the curriculum is that through the delivery of the rubrics and a project-based approach learners are prepared for work and life in the 21st century by allowing them to participate confidently and successfully in an increasingly technological world. Key concepts are highlighted at the start of the rubrics for KS3 groups and are recorded in learner books in order to clearly convey the project intent. The order for these follows that of the linear design model. A brief, research, specification, ideas, development, manufacture and evaluation. Mechanisms compliments the later learning on structures in the rotation.</p>					
<p>Term</p>	<p>Autumn 1</p>	<p>Autumn 2</p>	<p>Spring 1</p>	<p>Spring 2</p>	<p>Summer 1</p>	<p>Summer 2</p>
<p>Knowledge</p>	<p><u>Mechanisms</u></p> <p>Single term project based learners will develop their technical vocabulary and understanding of the four types of motion, being able to apply these to common examples.</p> <p>Learners will conduct practical research into gears and pulleys, so they build an understanding of how these can be used to transmit power.</p>	<p><u>Structures</u></p> <p>Learning will link to a range of materials and their applications. Links to science, rigid and soft structures, different types of movement, forces, stresses and friction associated with these. Frame structures and their components will be explored with learners gaining an understanding of types of load and the role of triangulation and techniques for strengthening structures.</p>	<p><u>Mechanisms</u></p> <p>Single term project based learners will develop their technical vocabulary and understanding of the four types of motion, being able to apply these to common examples. Learners will conduct practical research into gears and pulleys, so they build an understanding of how these can be used to transmit power.</p>	<p><u>Structures</u></p> <p>Learning will link to a range of materials and their applications. Links to science, rigid and soft structures, different types of movement, forces, stresses and friction associated with these. Frame structures and their components will be explored with learners gaining an understanding of types of load and the role of triangulation and techniques for strengthening structures.</p>	<p><u>Mechanisms</u></p> <p>Single term project based learners will develop their technical vocabulary and understanding of the four types of motion, being able to apply these to common examples. Learners will conduct practical research into gears and pulleys, so they build an understanding of how these can be used to transmit power.</p>	<p><u>Structures</u></p> <p>Learning will link to a range of materials and their applications. Links to science, rigid and soft structures, different types of movement, forces, stresses and friction associated with these. Frame structures and their components will be explored with learners gaining an understanding of types of load and the role of triangulation and techniques for strengthening structures.</p>

<p>Skills</p>	<ul style="list-style-type: none"> • 3 classes of lever • Linkages in action • Gears and pulleys • Pop-up celebration card • Graphics based covering sketching in 2D and 3D • Automaton 	<ul style="list-style-type: none"> • Natural and manmade structures • Frame structures and their components • Triangulation and strengthening structures • Practical outcome • Identifying modification 	<ul style="list-style-type: none"> • 3 classes of lever • Linkages in action • Gears and pulleys • Pop-up celebration card • Graphics based covering sketching in 2D and 3D • Automaton 	<ul style="list-style-type: none"> • Natural and manmade structures • Frame structures and their components • Triangulation and strengthening structures • Practical outcome • Identifying modification 	<ul style="list-style-type: none"> • 3 classes of lever • Linkages in action • Gears and pulleys • Pop-up celebration card • Graphics based covering sketching in 2D and 3D • Automaton 	<ul style="list-style-type: none"> • Natural and manmade structures • Frame structures and their components • Triangulation and strengthening structures • Practical outcome • Identifying modification
<p>Assessments</p>	<p>Mechanisms Test with high value question.</p> <p>Outcome from card levers project.</p>	<p>Structures test, with high value question.</p> <p>Structures written evaluation.</p>	<p>Mechanisms Test with high value question.</p> <p>Outcome from card levers project.</p>	<p>Structures test, with high value question.</p> <p>Structures written evaluation.</p>	<p>Mechanisms Test with high value question.</p> <p>Outcome from card levers project.</p>	<p>Structures test, with high value question.</p> <p>Structures written evaluation.</p>
<p>Enrichment</p>	<p>https://learning.sciencemuseumgroup.org.uk/resources/?subject=design-and-technology</p>	<p>https://www.bbc.co.uk/bitesize/topics/z39mhyt/resources/1</p>	<p>https://www.bbc.co.uk/bitesize/topics/zpv8q6f/resources/1</p>	<p>https://www.bbc.co.uk/bitesize/topics/zpv8q6f/resources/1</p>	<p>https://www.bbc.co.uk/bitesize/guides/znmnb9q/revision/1</p>	<p>https://www.bbc.co.uk/bitesize/subjects/zfr9wmn</p>



Rayner Stephens
HIGH SCHOOL