

SCHEME OF LEARNING – DESIGN TECHNOLOGY – YEAR 8

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>AO</p> <p>Develop the understanding and safety of pupils in a new material area (electronics) and research into a current topic of discussion in the wider world (sustainability).</p>	<p>AO</p> <p>Complete the soldering and electronics tasks for the lamp project and create suitable designs for lighting based off biomimicry. Start to develop the remaining structure of the lamp (shade and base)</p>	<p>AO</p> <p>Complete the lamp base, shade and electronics. Assemble and evaluate against the specification. Post project there is an investigation into the theory of levers and mechanisms.</p>	<p>AO</p> <p>Develop the understanding and safety of pupils in a new material area (electronics) and research into a current topic of discussion in the wider world (sustainability).</p>	<p>AO</p> <p>Complete the soldering and electronics tasks for the lamp project and create suitable designs for lighting based off biomimicry. Start to develop the remaining structure of the lamp (shade and base)</p>	<p>AO</p> <p>Complete the lamp base, shade and electronics. Assemble and evaluate against the specification. Post project there is an investigation into the theory of levers and mechanisms.</p>
<ul style="list-style-type: none"> - Safety rules recap - Discussion of design brief and the impact on the project (Core GCSE Skill) - Investigation into electronics and keywords - Soldering technique, equipment and safety - Biomimicry research and moodboard - Initial designs expectations 	<ul style="list-style-type: none"> - QC on circuit and ensuring product works through testing - Electronic components with symbols (Science Link) - Input/Output Examples - Base designs and final idea - Use of core ideas of sustainability and biomimicry in the designs - Produce lamp shade and 	<ul style="list-style-type: none"> - Creating the base piece. Checking of key safety using machinery as learned in year 7. - Vinyl stickers and finishing processes. - Impact of plastics and plastic production processes. - Evaluate the product giving opinion and referencing back to 	<ul style="list-style-type: none"> - Safety rules recap - Discussion of design brief and the impact on the project (Core GCSE Skill) - Investigation into electronics and keywords - Soldering technique, equipment and safety - Biomimicry research and moodboard - Initial designs expectations 	<ul style="list-style-type: none"> - QC on circuit and ensuring product works through testing - Electronic components with symbols (Science Link) - Input/Output Examples - Base designs and final idea - Use of core ideas of sustainability and biomimicry in the designs - Produce lamp shade and 	<ul style="list-style-type: none"> - Creating the base piece. Checking of key safety using machinery as learned in year 7. - Vinyl stickers and finishing processes. - Impact of plastics and plastic production processes. - Evaluate the product giving opinion and referencing back to

<p>and recap (Core GCSE Skill)</p>	<p>push fit sections. Checking for accuracy of fit.</p>	<p>biomimicry and sustainability principles. (Geography link) - Investigation into gears, linkages and other mechanism. Focus on types of movement.</p>	<p>and recap (Core GCSE Skill)</p>	<p>push fit sections. Checking for accuracy of fit.</p>	<p>biomimicry and sustainability principles. (Geography link) - Investigation into gears, linkages and other mechanism. Focus on types of movement.</p>
<p>Assessment: Book Creator for research, design and soldering sections of the lamp. AO1.3 - Use of biomimicry in the designs and referred to in the annotation. AO2 – Design pages and the annotation. Must provide evaluative comments not labels AO3 – Soldering and components pages for safety and accuracy of work. Demonstrated through pictures of working circuit and images of track side of the circuit board.</p>		<p>Assessment: Book Creator for design and soldering, making and evaluation sections of the lamp. AO4 – Evaluation of completed product and its component pieces. This will be tested by the user and peer marked. This should be linked back to the design sustainability and biomimicry AO1 – Understanding the types of motion and their potential uses.</p>	<p>Assessment: Book Creator for research, design and soldering sections of the lamp. AO1.3 - Use of biomimicry in the designs and referred to in the annotation. AO2 – Design pages and the annotation. Must provide evaluative comments not labels AO3 – Soldering and components pages for safety and accuracy of work. Demonstrated through pictures of working circuit and images of track side of the circuit board.</p>		<p>Assessment: Book Creator for design and soldering, making and evaluation sections of the lamp. AO4 – Evaluation of completed product and its component pieces. This will be tested by the user and peer marked. This should be linked back to the design sustainability and biomimicry AO1 – Understanding the types of motion and their potential uses.</p>

Rationale:

Pupils must cover health and safety to allow themselves to work responsibly and be trusted in workshop environments. Engaging pupils rapidly in using machinery and hand tools will allow them to be enthused by the subject and make links between core theory and practical work.

The lamp project is a good introduction to social, moral, cultural and environmental issues that are facing designers in industry. Challenging pupils to take responsibility for their waste and think about its effect on the world around them.

With the new GCSE the core skills must be embedded early to allow pupils to see the journey they are undertaking and its relevance in design throughout school and in industry.