



## Highsted Knowledge Organiser

### Year 8 Term 3: Design & Technology

What I need to know	Key Vocabulary
<p>To be able to design and make a light for a relevant target audience.</p> <p>How to use all materials safely in the workshop to create a fully functioning product.</p>	<p>Design movements</p> <p>Mood board</p> <p>Product analysis</p> <p>Aesthetic</p> <p>Environments</p> <p>Customer/Client</p> <p>Safety</p> <p>Innovation</p>
<p>Student reference point</p> <p><b>*Design movements:</b></p> <p>Memphis</p> <p>Pop Art</p> <p>De Styjl</p> <p>Bauhaus</p> <p><b>* Product analysis:</b></p> <p><b>Aesthetics</b> What does the product look like?</p> <p><b>Environment</b> What impact does the product have on the environment, both in terms of how it is made and when it is being used?</p> <p><b>Customer/client</b> Who is your lamp aimed at?</p> <p><b>Safety</b> What do you need to consider to ensure that you create and make a safe product?</p> <p><b>Innovation</b> How is this different from any of the other lights currently on the market? Why?</p> <p><b>* Systems and control – Inputs:</b></p> <p><b>Light dependent resistor (LDR)</b> Detects changes in light levels. Resistance increases in the dark and decreases in the light. Used in street lighting and security lights.</p> <p><b>Switch</b> Switches turn a circuit on or off. Types include push, slide or toggle. Used in lighting, control panels and power switches.</p> <p><b>Temperature sensor</b> Detect a change in temperature. When the temperature increases, resistance decreases. Used in household appliances and vehicles.</p> <p><b>* Systems and control – Outputs:</b></p> <p><b>Lamp</b> Uses electricity to produce lights of varying levels. Available in different sizes and power outputs. Used for household lighting.</p> <p><b>Speaker</b> Speakers translate an electrical signal into an audible sound. Used in sound systems, laptops and radios.</p> <p><b>* Process:</b></p> <p><b>Resistor</b> Used to limit the flow of current and helps to protect some components from being over loaded.</p> <p><b>* Electronic symbols</b> To be able to know and recognise what different electronic symbols mean.</p>	
<p>Challenge question</p> <p>How could I apply the six R's to my product?</p> <p>Research into manufacturing products for electronics.</p>	
<p>Suggested reading</p> <p>GCSE bitesize website: <a href="http://www.bbc.co.uk/bitesize">www.bbc.co.uk/bitesize</a></p> <p><a href="http://www.technologystudent.com">www.technologystudent.com</a></p>	