

Cycle ..... <b>Biomimicry &amp; Metals</b>				
<b>My Expected Grade</b>				
<b>Teacher Assessed Grade (circle)</b>				
SBE	BE	E	AE	SAE
<b>Comment:</b>				

Grade		Prior Knowledge	New Knowledge
8 - 9	I can... <ul style="list-style-type: none"> <li>Fully define the term biomimicry, giving a range of examples.</li> <li>Explain and define the sub groups of metals, giving several examples for each.</li> <li>Develop my ideas using a range of appropriate 3D technical drawing techniques.</li> <li>Demonstrate the ability to effectively plan and manufacture a high quality product, demonstrating skill and accuracy.</li> <li>Reflect on my research; analyse the information and make judgements which will inform my design decisions when modelling my ideas to scale.</li> <li>Model my ideas effectively to scale and evaluate third party feedback to modify; improve and reproduce new prototypes based on this feedback.</li> <li>I can work safely in the workshop with a good degree of accuracy and skill.</li> <li>Respond effectively and accurately to a range of questions in assessment on a broad number of topics.</li> </ul>		
6 - 7	I can... <ul style="list-style-type: none"> <li>Fully define the term biomimicry and give at least 1 example.</li> <li>Explain and give examples of the sub groups of metals.</li> <li>Fully develop a range of ideas with clear with a degree of skill.</li> <li>Reflect on my research; analyse the information and make judgements which will inform my design decisions when modelling my ideas.</li> <li>I can work safely and skilfully in the workshop using a range of tools and equipment.</li> <li>Recall and explain previous learning in response to broad questions in an assessment.</li> </ul>		
4 - 5	I can... <ul style="list-style-type: none"> <li>Explain the term biomimicry.</li> <li>Explain the sub groups of metals.</li> <li>Develop ideas that are feasible using my research.</li> <li>Plan and manufacture a good quality product.</li> <li>Model my ideas using appropriate materials and evaluate their success.</li> <li>Work safely in the workshop using a range of tools &amp; equipment</li> <li>Recall previous learning and respond to questions in an assessment.</li> </ul>		

Tick when you think you are able to define the meaning of the keyword

KEYWORDS	Ferrous	Non-ferrous	Corrode
Biomimicry	Alloy	Pure metal	Oxidisation
Stock form	Scribe	Tin snips	Waste side



## LEARNING TOOLS



### Challenge!

Can you add more keywords you have covered?



Lesson	Content	Completed?	
		Y / N	EFFORT
1	<ul style="list-style-type: none"> <li>Bioimicry introduction</li> <li>Matching card game</li> <li>Analysis of brief</li> <li>Ideas generation</li> </ul> <p><b>Homework:</b> Complete the table by researching possible uses for each metal group.</p> <p><b>Challenge:</b> Metals are also either a PURE metal or an ALLOY. Explain what these two terms mean.</p> <p><b>Further Challenge:</b> Add more metals to the table that are not on the list – placing them correctly in their sub groups</p>		
2	<ul style="list-style-type: none"> <li>Homework Review</li> <li>Development of ideas</li> <li>Card template modelling</li> <li>Final Design: tin snip demo</li> <li>Stock forms</li> <li>Making for some</li> </ul>		
3	<ul style="list-style-type: none"> <li>Practical: metal working</li> <li>H&amp;S demo/reminder</li> <li>Pair &amp; share</li> </ul> <p><b>Homework:</b> Complete the question worksheet on metals.</p> <p><b>Challenge:</b> Carry out more specific research into the metal you are working with – Aluminium. What products is it commonly used for? Can you explain why?</p> <p><b>Further Challenge:</b> Research deeper still and explore 'metal processes'. How can metal be formed into different products? Give examples</p>		
4	<ul style="list-style-type: none"> <li>Homework Review</li> <li>Practical: completion of final products</li> </ul>		
5	<ul style="list-style-type: none"> <li>Revision lesson—retake of mini mock</li> <li>The BIG revision Quiz</li> </ul> <p><b>Homework:</b> Create targeted revision based on your strengths and weaknesses</p> <p><b>Challenge:</b> Make flash cards to aid revision and prepare for future use for GCSE</p>		
6	<ul style="list-style-type: none"> <li>End of cycle assessment: retake mini mock</li> </ul>		

Why are we learning how about biomimicry and metal working?



You are learning about metals & biomimicry so that you:

- ◆ Have a broader understanding of how design can be influenced by the natural world around us.
- ◆ Develop use of keywords to annotate and communicate your ideas.
- ◆ Develop and enhance your workshop skills and learn to use new equipment independently.
- ◆ Can fully explain the sub categories of metals and deepen your understanding of material properties and their uses.



New Learning made.

List three or more subject specific information you have learnt in this project.

- .....
- .....
- .....