



**Subject:** DT  
**Module 1** Pewter Casting

Overarching Topic:			
<p>Why is this topic being studied at this time?</p> <p>How does it fit into the wider subject curriculum?</p>	<p>Students will begin this project at the half way point of their KS3 journey at Ravens Wood School, with this being an opportunity to showcase their skills and knowledge that they have acquired so far which they can use to efficiently complete this unique practical experience. From studying different metals and their properties, to specific manufacturing processes used within the industry, students will be able to embark in their most exciting practical project yet to create their own dog-tag key chain.</p> <p>This project will require students to perform each part of the design process; from sketching initial ideas, researching and understanding materials theory to aid in development, creating a logical flowchart of manufacture specification, technical drawing and product evaluation, students will have a real chance to create something they can be truly proud of.</p>		
Essential		Core	
Ambitious			
<p><b>The Big Questions</b>                      (What questions will students be able to answer upon mastery of the topic?)</p>	<ul style="list-style-type: none"> <li>o How can I communicate my design ideas?</li> <li>o What are the different categories of metals?</li> <li>o What makes a safe working environment in a workshop?</li> <li>o Can I use appropriate cutting/shaping/finishing tools with metal?</li> <li>o What skills have I improved?</li> </ul>	<ul style="list-style-type: none"> <li>o What other techniques can I use to communicate my design ideas?</li> <li>o Can I categorise specific metals based on their working properties?</li> <li>o How can I ensure a logical workflow when manufacturing my product?</li> <li>o Can I identify and use the appropriate tools for cutting and shaping metals?</li> <li>o Can I identify and use appropriate finishing methods with metals?</li> <li>o Can I critically evaluate my final outcome and suggest modifications?</li> </ul>	<ul style="list-style-type: none"> <li>o What finishing methods can I use after the manufacturing of my product and how can I effectively apply these to my dog tag?</li> <li>o Can I compare my practical outcome to the template amongst other rigorous methods of Quality Assurance?</li> <li>o Can I create an accurate CAD model of my final design considering materials, finishes and dimensions?</li> </ul>
<p><b>The Key Skills/ Techniques</b></p>	<p>The sophistication and application of skills will become more advanced as students' progress through the essential, core and ambitious knowledge</p>		
	<p><b>Skill/Technique</b></p>	<p><b>How will this skill be developed?</b></p>	

Sketching	Building on sketching experiences from previous projects, students will use these techniques to communicate their design ideas.
Presenting written theory notes	Sharing high expectations of book work.
Researching and reading of extracts for comprehension	Students will be given biomimicry resources and case studies to research and draw conclusions from.
Practical workshop skills: cutting, filing, sanding, casting, buffing.	Demonstrations of how to use each tool/process. Supporting homework tasks.
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