

# Home-School Learning Collaboration – D&T (Product Design)



<p><b>Topics in this cycle:</b></p> <ol style="list-style-type: none"> <li>1. Primary &amp; Secondary research - human factors &amp; metal research</li> <li>2. Designing using creative techniques ring ideas</li> <li>4. Making a ring by way of soldering</li> <li>5. Product evaluation</li> </ol>	<p><b>Taught:</b> 9 weeks</p>	<p><b>Year Group: 8</b></p>
<p><b>Key knowledge/concepts to be learnt ('Tell me about...')</b></p>	<p><b>Websites/blogs/YouTube links and further reading to deepen and consolidate learning</b></p>	
<ul style="list-style-type: none"> <li>☑ Ergonomics and anthropometric data.</li> <li>☑ Different types of metal.</li> <li>☑ Writing a well detailed specification for a piece of ring.</li> <li>☑ Biomimicry</li> <li>☑ How to draw &amp; annotate imaginative ring ideas in 3D. I've used other people design influence.</li> <li>☑ How to use designs of others to help me develop creative ideas?</li> <li>☑ How to use a range of tools, materials, equipment, components and processes with some precision to make ring.</li> <li>☑ How to use the brazing hearth/blow torch safely and accurately to solder a ring?</li> <li>☑ How to write a detailed evaluation that at least gives good points and bad points about. Use ACCESS-FMM as your guide.</li> <li>☑ How to explain in detail improvements/modification that could be made to your ring/jewellery. Giving reasons for each change.</li> <li>☑ How to have explain the processes I've used to manufacture my jewellery and the difficulties I encountered.</li> </ul>	<ul style="list-style-type: none"> <li>○ <a href="http://www.technologystudent.com">www.technologystudent.com</a></li> <li>○ <a href="http://www.bitesize.co.uk">www.bitesize.co.uk</a></li> <li>○ How to make a ring using the soldering process? <a href="https://youtu.be/Q_gejiVECIE">https://youtu.be/Q_gejiVECIE</a></li> <li>○ How to form shapes out of wire? <a href="https://youtu.be/ENwtmgRM_v0">https://youtu.be/ENwtmgRM_v0</a></li> <li>○ <a href="http://www.gracefullymadejewellery.com">Jewellery Metals Guide: What is the Right Metal For Your Jewellery? – Gracefully Made (gracefullymadejewellery.com)</a></li> <li>○ How to stamp on metal? <a href="https://youtu.be/4bG5BFPoC-E">https://youtu.be/4bG5BFPoC-E</a></li> <li>○ How to use a polisher? <a href="https://youtu.be/WrxXBmFY8Bs">https://youtu.be/WrxXBmFY8Bs</a></li> </ul>	

Key vocabulary and definitions to be learnt		What will the assessment look like?
<b>Investigate/Research</b>	Carry out research or study into, study of materials and sources in order to establish facts and reach new conclusions.	<b>Project Booklet: Jewellery (Ring)</b> Assessed on investigation, design, make and evaluate. End of Unit test: 35 minutes <ul style="list-style-type: none"> <li>• Multiple choice</li> <li>• Short answer questions</li> <li>• Designing design task</li> </ul>
<b>Design</b>	A plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made.	
<b>Manufacture</b>	To build or make.	
<b>Evaluate</b>	To evaluate is defined as to judge the value or worth of someone or something.	
<b>Reuse</b>	Is the action or practice of using an item, whether for its original purpose (conventional reuse) or to fulfil a different function (creative reuse or repurposing).	
<b>Aesthetics</b>	How well a product appeals to the sense as it relates to (colour, texture & form/geometry)	<b>Family Learning Opportunities</b> Make a ring model from card or paper  Practice drawing/sketching in 2D & 3D (ring ideas) Basic <a href="https://youtu.be/-i1PvI9H_GA">https://youtu.be/-i1PvI9H_GA</a> Challenge <a href="https://youtu.be/Vmz1j-xwSow">https://youtu.be/Vmz1j-xwSow</a> Advance <a href="https://youtu.be/aZ0FmObw5fI?t=9">https://youtu.be/aZ0FmObw5fI?t=9</a>  Research Biomimicry <a href="https://youtu.be/UHb_XNgIHFY">https://youtu.be/UHb_XNgIHFY</a>  <a href="https://youtu.be/OdQIaaD77uA">https://youtu.be/OdQIaaD77uA</a> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Visit the Jewellery Quarter</li> <li><input checked="" type="checkbox"/> Design Museum or galleries.</li> </ul>
<b>Consumer</b>	Who uses the product.	
<b>Function</b>	The use or purpose of a product.	
<b>Environment</b>	The impact will the product have on the natural environment.	
<b>Design Specification</b>	A list of criteria the product must meet to be successful.	
<b>Soldering</b>	Soldering is a joining process used to join different types of metals together by melting solder.	
<b>Die Casting</b>	Die casting is a metal casting process that involves feeding molten nonferrous alloys into dies under high pressure and at high speed to rapidly create moulded products.	
<b>Thermoplastic</b>	Is a plastic that gets soft when heated and re-hardening on cooling without appreciable change of properties.	
<b>Ferrous metal</b>	Chiefly of metals containing or consisting of iron.	
<b>Brazing hearth</b>	Brazing Hearths are usually at bench height and provide a convenient, heat proof and shielded location for Hard Soldering and Annealing. They are used in combination with a Blow Torch fuelled by natural gas, and for which they may have a built-in air compressor, or a Gas Torch fuelled by Liquefied Petroleum Gas (LPG)	
<b>Wasting process</b>	One that produces waste or unusable material either by cutting bits out or cutting bits off. Name the most common wasting processes. - Drilling. - Cutting - Filing. - Smoothing -	
<b>Biomimicry</b>	Biomimicry or biomimetics is the examination of nature, its models, systems, processes, and elements to emulate or take inspiration from in order to solve human problems. The term biomimicry and biomimetics come from the Greek word's bios, meaning life, and mimesis, meaning to imitate.	



A large empty rectangular box with a black border, intended for student or teacher input.