



Year group	What we are studying	Work to complete
Year 8	<ul style="list-style-type: none"><li>• Presentation techniques (two-point perspective)</li><li>• Metals and alloys</li><li>• Computer Aided Design</li><li>• Computer Aided Manufacture</li><li>• Specialist tools and equipment (metal casting &amp; hand tools)</li></ul>	<p><b>Task 1</b> You need to produce a two-point perspective drawing of a handheld product. A computer game controller etc. <u>The drawing must include:</u></p> <ul style="list-style-type: none"><li>• Your drawing must be three-dimensional and relate to surrounding objects.</li><li>• Apply colour rendering to your drawing. Make the material look realistic.</li><li>• Proportion and scale must be considered when creating the drawing.</li></ul> <p>Challenge: Can you redesign your kitchen/bedroom/garden in two-point perspective presentation</p> <p><i>Keywords</i> Client    Material    Function    Durability    MDF    Pine    Dowels</p> <p><b>Task 2</b> Create a mind map describing ferrous and non-ferrous metals and metal alloys <u>Your poster must include:</u></p> <ul style="list-style-type: none"><li>• Characteristics and properties of pure metals</li><li>• Information of the original source (Where metal comes from and converted into a workable material)</li><li>• Draw products that are made from ferrous or non-ferrous metal. i.e cutlery, car bodies, cutting tools.</li></ul> <p>Challenge: Describe ONE advantage of alloys over pure metals.</p> <p><b>Task 3</b> Research Computer Aided Design and Computer Aided Manufacture <u>Your work must include:</u></p> <ul style="list-style-type: none"><li>• Brief description of CAD/CAM</li><li>• Advantages and disadvantages of CAD/CAM</li><li>• Draw a CAM machine either a laser cutter or 3D printer and annotate important features.</li></ul> <p>Challenge: Write a short article (200 words) describing the benefits of using CAM rather than traditional hand tools to make products.</p>



#### Task 4

Produce a table with the headings (Name of equipment, what it's used for, safety issues)

- Research the item you will describe by using the link attached
- 4 or more items must be demonstrated
- Name and draw the hand tool or machinery
- Describe what it is used for
- What safety issues must be considered to ensure the user is safe when operating the tool or machinery

Key words

Pillar Drill    Laser cutter    Hack Saw    Engineers' Vice    Flat File    Bench Hook    Wet & Dry paper

Challenge: You could look at the manufacture process of sand casting

If you need help!

Technology Student website: <https://www.technologystudent.com/joints/joindex.htm>

YouTube:

<https://www.youtube.com/watch?v=ETz67OUsXCO>

<https://www.youtube.com/watch?v=sdACSB8GH3Y>

[https://www.youtube.com/watch?v=SZ\\_bF7KnWQg](https://www.youtube.com/watch?v=SZ_bF7KnWQg)