

**Product Design****Year 7****SUMMARY CURRICULUM PLAN**

<b>Subject content ( What will be covered)</b>	<b>As a result, what students should know /understood</b>	<b>What students should be able to do</b>	<b>How students will be assessed</b>
The basic design process	That materials can be divided into 3 main categories How to use the basic functions of tech soft 2d design	Write a design brief Write a design specification Provide a range of design ideas to a given requirement	Staff marking Brief homework Materials investigation Design ideas
Manufacturing skills	How to use the equipment safely in a workshop. How to operate and use a range of machines and facts correctly	Manufacture a product that they have designed Write an evaluative paragraph about their product they have produced	Peer marking Make product evaluation

**Product Design****Year 8****SUMMARY CURRICULUM PLAN**

<b>Subject content ( What will be covered)</b>	<b>As a result, what students should know /understood</b>	<b>What students should be able to do</b>	<b>How students will be assessed</b>
Basic electronics Key elements of a mould design	Key electronic components and what they do within a circuit How to solder electronic components together to form a circuit	Identify key electronic components Write a specification to include some justification Design a range of ideas to a given design brief	Teacher marking Key components Initial ideas Peer mark specification

Soldering Using a vacuum forming machine	Key requirements of a vacuum formed mould. How to vacuum form the key steps	Assemble key components to produce a complete circuit. Produce a model mould design out of graphic products materials Produce a mould using a vacuum forming machine. Assemble components to produce a working product.	Teacher mark electronic circuit Peer mark final model
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**Product Design**

**Year 9**

**SUMMARY CURRICULUM PLAN**

<b>Subject content ( What will be covered)</b>	<b>As a result, what students should know /understood</b>	<b>What students should be able to do</b>	<b>How students will be assessed</b>
Industrial systems Design process	Key systems used in industry, JIT, Quality Control, Bought in components Standardised products	Independently investigate key industrial systems and present their work Produce a design criteria Produce a range of design ideas	Teacher Peer assessment
Manufacturing techniques including Quality Control	Apply quality control to their manufactured product. Understand the term tolerance	Develop a chosen design solution Manufacture their products using CAD and CAM Manufacture a product, taking into account quality Control Assemble their product with accuracy. Evaluate work produced critically	Peer manufactured product and teacher marked and evaluation

**Subject A/S product design****Year 12****Summary**

Subject Content	Students should have completed	How students will be assessed	By when
Intended purpose of product	Intended purpose of product, Introduction, Needs of consumer, Needs of manufacturer ,Initial design flaws in the product, Key criteria	Teacher marking External assessor/moderator	HT1
Strengths and weaknesses of chosen product	A thorough examination of their chosen product and recorded their findings with analysis and 3 <sup>rd</sup> party feedback	Teacher marking External assessor/moderator	HT1
Strengths and weaknesses of similar products	Compared their chosen product against a range of similar products and produced a conclusion	Teacher marking External assessor/moderator	HT2
Social and Moral implications	Discusses the implications and effect their product has had on the environment, the country of origin and the social and moral implications of the product	Teacher marking External assessor/moderator	HT2
Design Brief and specification	<ol style="list-style-type: none"> <li>1. Produce a well-constructed design brief that outlines area for improvement.</li> <li>2. Produce a well ordered specification which suggests what the product needs to do in order for it to be successful</li> </ol>	Teacher marking External assessor/moderator	HT2
Initial design ideas/development of solution	Design a range of well thought out innovative design solutions that meet the design brief and specification. Fully develop the chosen solution. Use models to validate design solutions	Teacher marking External assessor/moderator	HT3 HT4
Testing of final developed idea	Thoroughly test and evaluate their product using a range of methods including, third party, possible client and their own observations	Teacher marking External assessor/moderator	HT5
Summary of results	Summaries what you found out from your testing. Make a judgement about your products success and suggest a further improvement.	Teacher marking External assessor/moderator	HT5

**A2 Design and make****Year 13****Summary**

Subject Content	Students should have completed	How students will be assessed	By when
Brief/background information	<ol style="list-style-type: none"> <li>1. Describe the problem area and why this is a suitable area of study.</li> <li>2. Write a design brief for a marketable product</li> <li>3. Give a brief out-line of the client and why they are suitable</li> </ol>	Teacher marking External assessor/moderator	HT1
Information, inspiration and influences	Gather a range of information, inspiration and influences and fully analyse the contents. Create a bibliography	Teacher marking External assessor/moderator	HT1
Design specification	Produce a fully justified specification taking into account your client's needs and findings from the previous section.	Teacher marking External assessor/moderator	HT2
Initial design concepts	Produce a range of innovative well-presented initial ideas that meet the specification and client criteria	Teacher marking External assessor/moderator	HT2

Development of concept with feedback	<ol style="list-style-type: none"> <li>1. Having consulted with the client take chosen initial design solution/solutions forward developing and refining until a final design solution is achieved.</li> <li>2. Plan how the product will be made to include flow charts, orthographic projections and Gantt charts</li> </ol>	Teacher marking External assessor/moderator	HT2
Making and Evidence	Manufacture the final design. Keep a log of skills used and any alterations from the plan.	Teacher marking External assessor/moderator	HT3 HT4
Testing and independent evaluation	Fully test and the product that has been made. Give product to client to use for a week and let them comment on how successful the product is.	Teacher marking External assessor/moderator	HT5
Marketing and presentation	Produce a marketing strategy for the product. Choose and design suitable marketing tools. Can include web pages, reviews that are set up on the internet, posters, flyers and suitable packaging for the product.	Teacher marking External assessor/moderator	HT5
Review and Reflection	An opportunity for the student to consider the bigger picture. How could the product be developed to fit a broader market? How did the design process help in producing a final product? What legislation would be needed to enable the product to be sold in this country?	Teacher marking External assessor/moderator	HT6
Innovation	Does the product have a USP? Is it creative? Is there evidence of risk taking?	Teacher marking External assessor/moderator	HT6