

# KS4Project Scheme of Work 2018-19

Subject	Topic	Year Group	Length
WJEC Product Design	<b>GCSE MAJOR PROJECT</b>	<b>Y11</b>	25 weeks

<u>Target Grade</u> <span style="font-size: 1.5em; font-weight: bold;">A-C</span>
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<p><b>Investigating the design context</b>          Choose a design context.          Situation and Design Brief          Collect research.          Analyse research          Specification writing.</p>	<p><b>Development of the design proposal</b>          Generation of ideas.          Making of models.          Quantity/ Costing page.          CAD modelling.          Social, moral and sustainability considerations.          Planning of making.          An ITERATIVE process to be shown in folder.</p>	<p><b>Testing and evaluation</b>          Interim evaluations.          Testing the final product.          Findings and Conclusions drawn from the evaluation process.          Again ITERATIVE process is the key aspect.</p>	<p><b>Communication</b>          Use of a variety of communication techniques.</p>
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<b>ICT SKILLS</b>
<p>Use of Publisher, CAD, CAM, Digital photography.</p> <p>Laser cutter, CNC router and 3D printers available.</p>

<b>Making</b>
<p>Making a product which satisfies one of the Design Contexts set out by the exam board. The product will have to fully satisfy the individual Design brief identified by the pupil. CAM used where appropriate.</p>

<b>HEALTH AND SAFETY</b>
<p>Demonstrations of all unfamiliar tools and machinery.</p> <p>Supervision throughout.</p>

<b>EXTENTION WORK</b>
<p>Further re-designing of the product following evaluative feedback.</p> <p>Iterative process requires pupils to design, make , test and re design.</p>

<b>Learning ACTIVITY</b>
<p>Designing and making a substantially challenging Major project.</p> <p>Pupils embark on their own project based on their choice of a possible 3 context set down by the WJEC each year.</p>

<b>SKILLS AND KNOWLEDGE</b>
<p>The pupils will use their knowledge and understanding from a range of more focussed tasks in Y10 studies to demonstrate their true potential.</p>

<b>TECHNICAL LANGUAGE</b>
<p>Various depending upon the material being used.</p> <p>Pupils can use wood, metal, synthetic and composite materials.</p> <p>Materials have been classified in a different way by WJEC.</p>

Week No	Learning Objective We are Learning to (WALTS)	Specification Focus	Teaching Activity	Outcomes Plenary (WILFs) Assessment	Health and Safety	Resources
1	To choose which one of the three possible context they will focus on.	Communication is applicable throughout the whole folder.	Analysis of the Exam board contexts.	Work which is in line/ in excess of the individuals Target grade, based on the Grade descriptors on the following sheet.	All unfamiliar machinery and tools to be demonstrated and supervision of the class at all times.	Fully stocked workshop.
2-3	Presenting research.	Investigating the Design context.	Guidance to making a choice of a suitable project Situation and Design Brief.			
4	Analysing		Analysis of existing products. Introduce the idea of primary research. Pupils to undertake primary research on materials—strength, durability and aesthetic quality.			
5-9	Carrying out meaningful testing and research.		Analyse research material. Identify a target market. Write a specification for the chosen product.			
10-13	Analysing		Developing ideas by sketching. Develop ideas by modelling. Develop ideas through use of CAD. Research into methods of manufacture. Produce test joints.			
14-19	Generating and Developing ideas. Formulating a detailed design solution.	Development of the Design proposal.	Making Material sourcing, Marking and cutting.			
20	Making high quality products.	Making	Product construction.			
21-24	Evaluating and testing the product to allow for improvements.	Testing and Evaluation	Product finishing.			
25		Testing and Evaluation	Testing, evaluation and modification. Improvements which could be made.			
		Testing and Evaluation	Final evaluation against the specification.		Risk assessment information displayed next to each machine.	Large range of materials to cope with the array of project being taken on.

Notes.

# Assessment

Grade	Investigating the design context	Development of the design proposal	Making	Testing and evaluation	Communication
A					
C					
E					

Addition all assessment