

Yr. 8 Product Engineering Topics	Learning Objective	Assessment Criteria	This is what you could get in WJEC Level 1/2 Engineering at end of year 11.		
			Level 1 Pass	Level 2 Pass/Merit	Level 2 Distinction/Distinction*
Designing, and planning	Be able to set up a drawing board.	1.1 Set up and use drawing board tools and equipment.	I can make a cover page and a lesson diary sheet. I can describe how I made it.	I can use the drawing tools to produce a cover page and lesson diary sheet, and say how I could improve.	I can use the drawing tools to produce a cover page and lesson diary sheet. I can say how I could improve and then do it. In others words I can learn from my mistakes to make progress.
	Be able to write a Design Brief.	1.2 Write a clear statement about the Engineered Product you will make.	I can write a sentence saying what I am going to make.	I can write sentences about what I am going to make, and what it can be used for.	I can write a paragraph describing what I intend to make, why it is useful, who will benefit from it and what materials I will use to make it.
	Be able to write a Specification.	1.3 Use "ACCESSFM" to write a product specification.	I can write 2 or more sentences to help explain the materials I will use and who will use it.	I can write 4 or more sentences to help explain the materials I will use, who will use it, where it will be used and what size it will be.	I can write a list of statements that describes in some detailed the desired features of my Engineered Product.
Computer Aided Design and Computer Aided Manufacture (CAD/CAM)	Be able to present a drawing using 2D Design.	2.1 Present an Engineering drawing correctly using 2d Design.	I can add a border, my name and date to my 2D design Drawing	I can add a 10 mm border and title block in the correct proportions to my 2D design drawing	I can add an accurate border, title block and advisory notes to my engineering drawing.
	Be able to produce 2D Engineering Drawings using 2D Design.	2.2 Present 2D Drawings of my engineered product.	I can produce a 2D drawing of my idea.	I can produce 2D drawings of my ideas, and add descriptive labels.	I can produce accurate 2D drawings, in proportion with added dimension lines.
	Be able to produce 3D Drawings using 2D Design.	2.3 Present 3D drawings of my engineered product.	I can produce a 3D drawing of my engineered product.	I can produce 3D drawings of my engineered product with descriptive labels.	I can produce well-proportioned and accurate 3d drawings. I can add texture and shading to my drawings.
	Be able to produce an Engineered Product using Computer Aided Manufacture.	2.4 Use Computer Aided Manufacture.	I can say how a laser machine can be used to cut or engrave materials.	I can produce a 2D design drawing and use a laser machine to cut or engrave materials.	I can independently produce 2D Design drawings. Cut and engrave materials using a laser machine.
Using tools and workshop equipment	Name and describe workshop tools and equipment.	3.1 Describe common tools and equipment found in an engineering environment.	I can name and describe at least 2 hand tools or machines. I can sketch or find a picture of each.	I can name and describe at least 3 hand tools or machines. I am able to find pictures or sketch them, and add descriptive labels.	I can describe, evaluate and discuss in detail the purpose of each of the machines that I have used. I am able to find pictures, sketch them, and add descriptive labels.
	Use workshop tools and equipment.	3.2 Select the most appropriate tools or equipment for an identified purpose.	I am able to select the correct tools or equipment to complete a given task.	I am able to select the correct tools or equipment. I am able to say why the equipment is the most appropriate for the task I have been given.	I am able to select the correct tools or equipment. I am able to clearly explain why the equipment is the most appropriate by comparing other tools or machines.
Being Safe	To be able to identify risks in the workshop.	4.1 Demonstrate a safe working environment throughout.	I am able to work safely in a workshop, and recall 3 of the safety rules.	I am able to work safely in the workshop, respect my own safety and that of others. I am able to carry out a risk assessment on at least two of the pieces of equipment I have used.	