

Topic/ Content	Week	Objectives/Skills	Homework	Assessment	Success Criteria (for E/S/D at KS3)	Stretch & Challenge (Thirst for Learning)
Designing and Making Principles Graphic Communication 3.3.5	1	<ul style="list-style-type: none"> To learn how to draw isometric using the crating technique (recap of isometric rules) 	There will be a homework booklet that students will complete over the half term period. Each week the homework task will directly mirror the skills taught in class but with a slight variation/extension in the task.	Self and peer assessments in lessons against success criteria	Examples of “What good looks like” will be used as visual success criteria. Written success criteria will also be displayed within bands marks out of 10. <ul style="list-style-type: none"> Excellent 8 – 10 Secure 5 – 7 Developing 1-4 <p>Excellent: Students are able to demonstrate the graphic communication techniques taught with precision.</p> <p>Secure: Students are starting to demonstrate the graphic communication techniques taught with some accuracy.</p> <p>Developing: Graphic communication lacks accuracy but evidence of understanding is visible.</p>	As much practise as possible at home. Student can take grid paper from school to support.
	2	<ul style="list-style-type: none"> To learn how to draw complex isometric images 				
	3	<ul style="list-style-type: none"> To learn how to add weight of line to 3D isomeric drawings 				
	4	<ul style="list-style-type: none"> To learn how to draw in orthographic (basic 3D shapes) 				
	5	<ul style="list-style-type: none"> To learn how to draw in orthographic (actual products such as toy train) 				
	6	<ul style="list-style-type: none"> To learn how to sue linking boxes for 2D and 3D drawings 				
	7	<ul style="list-style-type: none"> Graphic communication skills test 		END OF UNIT TEST		

Topic/ Content	Week	Objectives/Skills	Homework Flipped learning homework booklet CAD CAM and automation	Assessment	Success Criteria (for E/S/D at KS3)	Stretch & Challenge (Thirst for Learning)
Designing and Making Principles 3.3.5 3.3.10	1	<ul style="list-style-type: none"> To learn about the layout of 2D design and basic drawing tools 	CAD CAM advantages and disadvantages	Students will be assessed at the end of the project with a Diary of work printed out that demonstrates the skills taught and knowledge from the flipped learning homework that will be assessed via an end of unit test.	Excellent: <ul style="list-style-type: none"> 80% and above on the test CAD work completed with precision and described in detail within the diary. Score 8 - 10 Secure: <ul style="list-style-type: none"> 60% - 79% on the test. CAD work completed with some accuracy and described with some detail in the diary. Developing <ul style="list-style-type: none"> 59% and below on the test. CAD work completed with little accuracy and described with minimal detail in the diary. 	Student can start learning Sketchup using online tutorials until they become expert.
	2	<ul style="list-style-type: none"> To learn how to use layers to draw in 2D design using intersections to fill with colour. 	Laser cutting and 3d printing processes			
	3	<ul style="list-style-type: none"> Continued... To learn how to use layers to draw in 2D design using intersections to fill with colour. 	Plasma cutting and CNC milling machines			
	4	<ul style="list-style-type: none"> To learn how to use the drawing tools (path, contour) to draw fonts and add colour 	CNC machines and materials			
	5	<ul style="list-style-type: none"> To learn how to use 2D design to produce orthographic drawings (basic geometric shapes) 	Finishes and timber stock forms			
	6	<ul style="list-style-type: none"> To learn how to use 2D design to produce orthographic drawings (Pencil holder that they will manufacture after Christmas) 	Complete the diary of making by sticking prints outs of work into each sections with a written description of what they did.			
	7	<ul style="list-style-type: none"> END OF UNIT TEST 				

Lent 2.1 & 2.2		Year 2 Learning Program DESIGN TECHNOLOGY			Desk Tidy and Sketch up
Topic/Content	Objective/Skills	Homework	Assessment	Success Criteria	Stretch and Challenge
3.3.6 3.3.10 3.3.11					
Week 1 Measuring and marking out	Learn how to measure and mark out using a try square, ruler, marking gauge and template	Complete a detailed diary / description of the processes taught in the lesson using both sketches and annotations as per GCSE exam style questions.	Excellent 8-10 marks Secure 5-7 marks Developing 1-5 marks Example products will be used to show the difference between E,S and D.	Excellent: High levels of precision demonstrated throughout to produce a professional looking product with a high end finish Secure: Demonstrating some accuracy and with a reasonable quality finish Developing: Working without accuracy and the finish achieved looks incomplete	Research quality control (QC), quality assurance (QA)and tolerance. Research hand tools used to check QA and QC. Try and produce a diary of how to product might be mass produced if made in industry.
Week 2 Removing waste	Learn how to remove waste using a tenon saw and pillar drill	Diary completion			
Week 3 Shaping and smoothing	Learn how to shape and smooth using rasp, file and glass paper	Diary completion			
Week 4	Learn how to apply a finish	Diary completion			
Week 5 Strip Heater	<ul style="list-style-type: none"> Learn how to use the strip heater Learn how to join materials using clearance holes and pilot holes 	Diary completion			
Week 6 Sketch-up	Learn how to draw and extrude using push pull tool	<i>Students need to download free version of Sketchup and work through tutorials to learn the basics. Students should aim to recreate the product using Sketchup. Those without IT facilities will be able to use the DT PCs. Work needs to be printed and stuck into booklets as evidence.</i>	Formative assessment during each lesson to assess if students have been able to follow the tutorials.	More advance Google sketch up products using the online tutorials. All work needs to be printed and stuck into books as evidence.	
Week 7 Sketch-up	Learn how to use guides and remove material using push pull				
Week 8 Sketch-up	Learn how to chamfer and round edges				
Week 9 Sketch up	Learn how to assemble components using the move tool				
Week 10 Sketch up	Learn how to render components				

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3.3.10 3.3.11					
Week 1 DMP	To learn how to follow a plan of making: mark out and cut using a try square and Tenon saw and carry out QC checks	Diary of making to be completed each week with details of the tools equipment and processes.	Excellent 8-10 marks Secure 5-7 marks Developing 1-5 marks Final completed product will be marked out of 10. A success criteria grid will be shown to students and demonstrated in lessons so that they know 'What good looks like'.	<p>Excellent</p> <ul style="list-style-type: none"> Joint marked out and cut with a high level of precision. All edges and corners are smooth and slightly rounded Frame sides are flush. Final finish has been applied with a high level of precision. Drill and jigs used with precision Quality controls are evident throughout <p>Secure</p> <ul style="list-style-type: none"> Joint marked out and cut with some accuracy. Most edges and corners are smooth and slightly rounded Frame sides are almost flush. Final finish has been applied with some accuracy. Drill and jigs used with some accuracy <p>Developing</p> <ul style="list-style-type: none"> Joint marked out and little or no accuracy. Edges and corners are not smooth or slightly rounded. Frame is not flush. Final finish has been applied without accuracy (too much applied). Drill and jigs used without accuracy. 	<p>Use the GCSE BBC bitesize link to revise, watch the activities and complete the tests for the following topics:</p> <ul style="list-style-type: none"> Materials and processes <p>http://www.bbc.co.uk/schools/gcsebitesize/design/</p>
Week 2 DMP	To learn how to follow a plan of making: How to glue and clamp a butt joint with QC checks				
Week 3 DMP	To learn how to follow a plan of making: Creating flush edges using a flat file and sander				
Week 4 DMP	To learn how to follow a plan of making: Use a drilling jig to drill the acrylic lid				
Week 5 DMP	To learn how to follow a plan of making: Assembling components using screws (clearance holes and pilot holes)				
Week 6 DMP	To learn how to follow a plan of making: Applying a final finish to the pine materials				