



		Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Reporting Y7		CFCs		BFL & LAL				BFL & LAL				BFL & LAL		
Year 7	Health and safety instruction	<p>Jewellery project - this is the only project in KS3 that covers all aspects of a "design and make task". Students will cover the following skills to a basic level; brief analysis and research, design ideas (learning how to draw in 3d, render, annotate), development, planning, manufacture (one off and batches) and evaluation. Machines: Scroll saw. Material focus: 3mm MDF, Pewter. Process: casting, metal finishing techniques. Maths link: percentages, calculating manufacturing costs and adding profits. Extended writing: evaluation.</p>				<p>Graphics module: 4x groups rotate through 113 to complete the CAD part module, learning Coreldraw (used to drive the machines later in Y9 and KS4). Introduction to Isometric drawing, surface and tonal rendering. Movement: Art Neoveou. Trinket box project: making task with focus on planning in folderwork. Machines: Linisher, pillar drill, scroll saw. Material focus: Plywood. Processes: natural wood finishing techniques</p>				<p>Doorhanger Project: skills covered - user centered design, consolidating practical skills, developing competence and independence on machines, CAD. Application of finishes. Material focus: 6mm MDF, HIPS. CAD/CAM: Vinyl cutter Processes: MDF finishing techniques, design for CNC</p>				Curriculum Enrichment Week
Reporting Y8		CFCs		BFL & LAL				BFL & LAL				BFL & LAL		
Year 8	Health and safety instruction	<p>Rotation of 3x projects - To allow all groups to complete the graphics project in 113. Graphics project: Endangered species 6 week project where students research and investigate causes why animals become endangered - links to ecological concerns. Culminating in a logo to promote awareness. Skills: research of endangered species, analysis of logo design, design and development of ideas in CAD (building on coreldraw skills taught in Y7). Birdfeeder project: Introduction to Engineering. Materials: Aluminium sheet, HIPS Processes: reading orthographic drawings, marking out, cold metal forming, vacuum forming, riveting. Maths link: Tolerances. Clock: Students learn to write their own specification as they are desinging a clock face. Materials: 6mm MDF. Processes: marking and cutting out, drilling, edge finishing. Literacy: Product analysis</p>						<p>Environmental design: Students will use locally sourced timber to make a bug hotel. Skills covered: design ideas drawn in 3d, rendered, planning and development of ideas. Building on skills and competences developed during Y7, students have more scope for customisation. Changing drill bits. Material: 12mm pine, plus student choice of roof materials. Literacy: evaluation of product carbon footprint. Movement: Art Deco Mechanisms: During the term students will also learn about about basic mechanisms; levers, linkages and cams.</p>						Curriculum Enrichment Week
Reporting Y9		CFCs		BFL & LAL				BFL & LAL				BFL & LAL		
Year 9	Health and safety instruction	<p>Polymers: Students learn about Polymer production and their impact on the environment, link to ecological concerns, introduction to iterative design (phone holder), commercial production, classifications of two types of polymer. Materials: Acrylic. Processes: Strip heater, injection moulding. CAD/CAM: Laser cut models. Focus of folderwork: creative design and presentation.</p>		<p>Systems and Control: Students solder a nightlight circuit, learning about; PCB production, input - process - output, component symbols and values (links to science) Maths link: Resistor colour codes, tolerances, nets. Processes: Soldering, manufacture of net for packaging.</p>		<p>Timbers: Students learn about timber production and their impact on the environment, link to ecological concerns, introduction to more complex construction joints (halving and tenon joints), how manufactured boards are made. Materials: Pine, plywood, 9mm MDF. Processes: construction techniques, laminating, natural timber finishes.</p>		<p>Sustainable design project: Final design and make project giving students opportunities to use materials and processes of their chosing. Developing competence and confidence on machines. Pen Pot project: Focused team working project where students have to produce a batch of pen pots.</p>		Curriculum Enrichment Week				



	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
Reporting Y10		CfCs		BfL & Grades		CfCs		BfL & Grades		BfL & Report		
Year 10 Graphics	Introduction to Graphic Design	Unit 1- Introduction to graphic design components - Students will be producing a PowerPoint presentation to show their understand of the 6 main components. Imagery, typography, line, composition, colour and tone. Students will be learning how to analyse existing examples of good graphic design and will be experimenting using software. Students will be using Corel Draw, Photoshop and Illustrator. Students will develop a poster for a social campaign such as deforestation / global warming. link to ecological concerns.					Unit 2: Work of others . Students are to research a graphic design discipline of their choice. They will learn the difference between formats and sources and can justify how reliable they are. They are to develop their understanding of design components by annotating the work of designers. Develop their skills on software as they create a design which is influenced by the chosen designer on Photoshop / Corel Draw / Illustrator.					
Year 10 Engineering		Preparation for assignment. Put n' Take game: Students learn about engineering organisations, introduction to Centre Lathe. Risk assessments.	Component 1 Assignment A	Preparation for assignment. Coat hook: Students learn about designing in engineering through an aluminium casting design and make project. CAD drawing. Introduction to the Turret Mill.	Component 1 Assignment B		Preparation for Component 2: Theory work into material properties.	Component 2 Assignment A	Component 2 Assignment B	Component 2 Assignment C		
Year 10 Resistant Materials	Health and safety instruction	Revision box: Classification of 3 types of timber, properties and specific types identified, production methods involved from raw to stock form links to ecological concerns,, environmental impacts, tools and processes involved when working on them inc router, construction methods hinges, dowel joints, finishes applied. Student learn theory whilst making the box and then fill it with revision resources inc flash cards, sample materials.		Flat Pack Rack: students learn about mass production techniques, CAD/CAM in industry, QC, knock down fittings, JIT production. Card net box produce with lasercutter.	Iteritive design project: mini GCSE NEA project, to develop on iteritive design task in Y9. Desk lamp design brief. Electronics, user defined specification. Students use range of strategies to design and develop working model.		Smart and composite materials: Students learn about a range of different smart and new materials	Mechanisms / forces / structures: Students make a revision pack of levers, linkages, gears whilst learning the theory.		NEA: Students begin NEA section A.		
Reporting Y11			CfCs & Grades		Rep & Grades		CfCs & Grades		BfL & Grades			
Year 11 Graphics	Health and safety	Unit 3 - how to respond to a brief. Students learn how to analyse a brief. .i.e. target user, client requirements. They are to draw design ideas and experiment with different components. Write evaluations.		10 hour PPE split into five 2 hour exams	Exam Prep: Go over the PPE. Revise all 6 components. A series of short briefs at the begging of lessons to prepare hem for thinking on the spot		EXAM	Unit 4: Research how designers present their work and career paths into Graphic Design. Students to create a portfolio of their work produced over the duration of the course.				
Year 11 Engineering		Health and safety instruction	Preperation for Component 3. Follow text book of tasks, data collection methods, recording and presenting data, analysing results. CAD drawing, design development. Revision of materials and processes covered in Com1 and Com 2.			Topic for Component 3 released. Preperation.	First attempt at Component 3 - external examination	Preperation/revision for students who have not passed Component 3.		Second attempt at Component 3 - external examination		
Year 11 Resistant Materials	Health and safety instruction		NEA section A and B - analysis of design brief provided by the exam board, range of research tasks carried out including site surveys, client interviews and product analysis.	NEA section C - Generation of a range of solutions to the brief, designs are to be innovative and original, students are to demonstrate a range of techniques to produce ideas.	NEA section D - Students will develop ideas using the iterative design process, designing, modelling, evaluating and improving design ideas.	NEA section E - Realisation - students will use workshop facilities to produce a working prototype of their developed solution		NEA section F - A full evaluation of the final prototype is carried out, including testing and a full client review.	Revision and preparation for exam			

Work Experience Week