

KS4 Graphics

Year 10	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Material manipulation and knowledge	<p>Material Focus: Paper, card and board</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p>	<p>Material Focus: Timber based materials.</p> <p>Assessing materials and <u>develop</u> understanding into the product lifecycle. Cradle-2-grave.</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p>	<p>Material Focus: Plastics</p> <p>Sustainability- Investigation into Crude oils and impact extrusion has on the earth.</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p>	<p>Foam and foam board</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p> <p><u>practical</u> task with foam and independent research developed to look at other polymers.</p>	<p>Mini Design & make challenge (<u>Albumn</u> promotion)</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p>	<p>Mini Design and make challenge (<u>gameboard</u>)</p>
	AOs: 1, 2 & 3	AOs: 1,3	AOs: 1,2	AOs: 1,2	AOs: 1,2,3	AOs: 1,2,3
	<p>Assessment:</p> <p>Perfume project</p>	<p>Assessment:</p> <p>Practical assessment- joints and accuracy using reclaimed timbers.</p>	<p>Assessment: Practical assessment- manipulating plastics <u>vaccum</u> forming, <u>lazer</u> cutting and hand tools.</p>	<p>Assessment: Practical assessment- Making a 3D model/ prototyping</p>	<p>Assessment: outcome of final piece and folder</p>	<p>Assessment: outcome of final piece and folder</p>

Theory	EXAMPRO AQA - Writing a Design Brief & Spec question SECTION 1	Paper: EXAMPRO AQA Questions based on properties of materials - TIMBER, PAPER & BOARDS	Paper: EXAMPRO AQA Questions based on properties of materials- THERMOSETTING AND THERMO PLASTICS	Paper: EXAMPRO AQA Questions based on properties of materials- Foam link to plastics	Paper: EXAMPRO AQA Questions- ERGONOMICS AND ANTHROPOMETRICS	Paper: EOY test on design test. Question paper SECTION 1 & 2
	AOs: 1 & 4	AOs: 1 & 4	AOs: 1 & 4		AOs: 1 & 4	AOs: 1 & 4

Year 11	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Design Ideas Development Nov 10 - Nov 31	CA Making of Board Games Nov 31 - Feb 28	CA: Completion of making pages Feb 28th - March	Evaluation & Modifications.	Drawing Skills - Exam Skills	Industrial Practices - Exam Skills
	Pupils producing a range of at least 12 design ideas for their final product. Imaginative and innovative ideas	Prototyping of the board game 4-5 mock ups Practical skills used: printing, cropping, using adhesives, CAD/CAM (laser cutting), vacuum	Material Focus: CARD/PAPER/THERMOPLASTICS Final outcome(s) shows a high level of making/modelling/finishing	Detailed testing and evaluation as appropriate throughout the designing and making process taking account of client/user or third party opinion All aspects of the final	Isometric Working drawings Perspective Produce quality, annotated 2D and 3D freehand drawings:	Industrial Practices Candidates should: • understand how the method of production changes from single to multiple production; • demonstrate a

<p>have been developed, demonstrating creativity, flair and originality. Further Excellent development work through experimentation with a wide variety of techniques and modelling (including CAD where appropriate) in order to produce a final design solution</p> <p>Appropriate materials and components selected with full regard to their working properties. Fully detailed and justified</p>	<p>forming, 2D Design</p> <p>Final outcome(s) shows a high level of making/modelling/finishing skills and accuracy</p> <p>where appropriate, CAM correctly, skilfully and safely. Worked independently to produce a rigorous and demanding outcome</p> <p>Quality controls are evident throughout the project and it is clear how accuracy has been achieved.</p> <p>The outcome has the potential to be commercially viable and is suitable for the target market</p>	<p>skills and accuracy</p> <p>Selected and used appropriate tools, materials and/or technologies including, where appropriate, CAM correctly, skilfully and safely</p> <p>Worked independently to produce a rigorous and demanding outcome</p> <p>Quality controls are evident throughout the project and it is clear how accuracy has been achieved.</p> <p>The outcome has the potential to be commercially viable and is suitable for the target market</p> <p>Students learn to manipulate different materials and assess the properties and uses.</p>	<p>outcome have been tested against the design criteria and/or the product/manufacturing specification</p> <p>Evaluate and justify the need for modifications to the product and consideration given as to how the outcome might need to be modified for commercial production.</p>	<p>Use crating/wire frame techniques to produce drawings; use grids and under-lays.</p> <p>Candidates should: Use third angle orthographic projection to British Standard Conventions (BS8888, 2006);</p> <ul style="list-style-type: none"> • demonstrate use of self assembly, sectional and exploded drawings; • use and understand scale drawings; • interpret room, site plans and maps; 	<p>sequence of making tasks that show how and when decisions are made;</p> <ul style="list-style-type: none"> • understand the importance of producing scale models and prototypes in product development; <p>Printing methods understand the different demands of different scales of production;</p> <p>have an awareness of 'just in time production' (JIT).</p> <p>Understand how common graphical products are designed and manufactured;</p> <p>Understand how and why quality checks are made in production;</p> <p>Demonstrate an</p>
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	product/manufacturing specification taking full account of the analysis undertaken					awareness of commercial Printing and packaging methods; i.e. lithography,
	Assessment: Sketching and development of design ideas HT - 1	Assessment: Practical assessment-manipulating materials , laser cutting and hand tools.	Assessment: Practical assessment-manipulating materials , laser cutting and hand tools.	Assessment: Exam Pro Materials Key Designers	Assessment: Mocks	Assessment: Mocks
Theory	EXAMPRO AQA - Design question	Paper: EXAMPRO AQA Questions based on, Writing a Design Brief & Spec Properties of materials	Paper: EXAMPRO AQA Questions based on the specification. Some sections will have been covered in more detail through the completion of the CA (controlled assessment). This half term provides the opportunity	Paper: EXAMPRO AQA The focus for this half term will be preparing for the design section of the exam.prerelease information will be sent to the school from AQA at the end of Feb and can be shown to the students	Paper: EXAMPRO AQA Questions- ERGONOMICS AND ANTHROPOMETRICS Context; further revision / exam practice. This halfterm is used to refine knowledge and practice answering the higher	Paper: EOY test

			to <u>revise</u> in further detail the <u>sections which</u> have had less focus.	from March. Resources will need to be planned before hand then students will complete mock versions of the section and familiarise themselves with the format of the <u>design</u> section and the use of <u>specifications</u> and the marking structure.	marked / evaluative questions found at the end of the exam paper.	
			<p>KEY SKILLS & CONTENT</p> <p>Properties and uses of paper and card. Types and properties of plastics, Smart and modern materials, key designers, prototypes, block modelling, British standards, QC/QA systems, representing data in graphical form, sequential drawings & schematic maps (links to Harry Beck), Pop-ups and card mechanisms, <u>bought</u> in components.</p>	<p>KEY SKILLS & CONTENT</p> <p>This will depend on the pre-release information provided by AQA. However, the students will familiarise themselves with the way the design section (section A) of the exam is presented and how marks are awarded. Students will practice their <u>drawing</u> skills based around the pre-release product and how it can be developed into a final outcome.</p>	<p>KEY SKILLS & CONTENT</p> <p>Ergonomics, Product life cycle, moral social cultural, issues, environmental issues, ICT systems, CAD/CAM, safety, risk assessment, joining materials, scales of production, printing processes, print finishes, packaging, patents & copyright,</p>	

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