

Year 8 Design Technology Curriculum Rationale

"Ethical design, environment and culture". Four design-and-make projects are taught across the year. The theme for all projects is "Ethical design, environment and culture", and each project has been designed to give learners a pertinent focus and help them to appreciate the wider impact of design on individuals, communities and the environment. **META-COGNITION** is key in all projects as we aim to give students the ability to transfer knowledge/learning from one design area to another, by explicitly highlighting these transferable skills and knowledge.

Unit	Core knowledge/skill development	Sequence	Assessment	Literacy, numeracy, PSHE, FBV, other links	ACP and VAA development	Home learning and enrichment
Product Design <i>Picture frame</i> 16.5 hours	-be able to use a variety of hand tools and equipment including tenon saw, band-facer, measuring and marking tools and the vacuum former -display safe working practices in the workshop -the issues surrounding waste and sustainability when selecting materials to make a quality product.	-Build on basic design skills taught in Year 7 bat project (Eg – tenon saw is more challenging to use than a coping saw) -Further emphasis on workshop safety and independence/self-regulation -Introduce vacuum former and concept of CAD/CAM using 2D Design and the laser cutter	FA1 – Design ideas FA2 – Practical assessment End of unit test – Sources of materials and their impact on societies, communities and the environment	-Ethical design and the environment – the effect of consumerism and 'throwaway culture'. Students will learn how poorly designed products can have a negative impact on the environment and waste natural resources NUMERACY – be able to identify and use correct units of measurement (cm to mm). Be able to use accurate	-REALISING – Focussing on <i>accuracy</i> to produce a quality outcome -Speed and automaticity is now a focus as students have previous experience of hand tools so we are aiming to increase confidence and competence. -CREATING – <i>Fluent and flexible thinking</i> when designing basic shapes/objects to be used to decorate frame -META-THINKING – <i>self-regulation</i> – be able to judge the quality of your own work and decide upon steps needed to improve (what is expected quality?). Encourage greater independence and	HW1 – Materials research sheet HW2 – EBL task – How does product manufacture impact natural resources HW3 – Revise for end of unit test

Unit:	Core knowledge/skill development:	Sequence:	Assessment:	Literacy, numeracy, PSHE, FBV, other links	ACP and VAA development:	Home learning and enrichment
				dimensions when measuring and using CAD software	mastery by employing student 'experts' to help monitor/deliver certain skills.	
Textiles Day of The Dead cushion cover <i>16.5 hours</i>	-understand the importance of using a design strategy to avoid design fixation	-build on iterative design techniques introduced in year 7	FA1 – Design ideas FA2 – Practical assessment End of unit test –	-Ethical design – the effect of fast fashion on the environment and workers in developing countries	-CREATING – <i>Fluent and flexible thinking</i> when designing iteratively -REALISING – Focussing on <i>accuracy</i> to produce a quality outcome	HW1 – Materials research sheet HW2 – EBL task – Mexican culture – Dead of The Dead HW3 – Revise for end of unit test
Graphics/CAD <i>Mini projects</i> <i>16.5 hours</i>	-2D keyring 2D Design Laser cutter - Acrylic phone holder 2D Design Modelling Line bender	-Build on basic design skills taught in Year 7 -Introduction to iterative design strategies -Introduction to CAD/CAM (the relationship between 2D Design and the laser cutter - how to test and develop ideas by	FA1 – Design ideas (2D Design and modelling) FA2 – Practical assessment (Phone holder) End of unit test – ?	-Ethical design – the effect of mass production on society	-CREATING – <i>Fluent and flexible thinking</i> when designing and developing iteratively -REALISING – Focussing on <i>accuracy</i> to produce a quality outcome META-THINKING – using self-regulation to monitor progress and manage tasks when using 2D Design or	HW1 – Materials research sheet HW2 – EBL task – ? HW3 – Revise for end of unit test

Unit:	Core knowledge/skill development:	Sequence:	Assessment:	Literacy, numeracy, PSHE, FBV, other links	ACP and VAA development:	Home learning and enrichment
		using card modelling -how to use the line bender to manipulate thermoplastic materials			carrying out practical tasks	
Food <i>16.5 hours</i>	-Be able to use provided ingredient lists and method sheets to accurately cook healthy meals -Further increase confidence and independence when cooking and using various equipment and utensils -Learn how to work in a hygienic manner in the food room -Learn how to prevent the cross-contamination of a variety of foods -Learn about macro and micronutrients Recipes: Apple crumble	-Year 8 food is designed to increase students' confidence in the kitchen and build upon their knowledge of factors which affect food safety and hygiene. -Year 8 recipes represent a higher degree of complexity and challenge than those undertaken in Year 7	FA 1 – cooking practical with photo evidence FA 2 -Weekly evaluations of practical work SA – Percentage based on burger practical outcome and end of topic test	Ethical – using ingredients wisely by reducing food waste and food miles	LINKING – Be able to transfer knowledge and skills to other recipes using different foods and ingredients <i>Working within the rules of a domain</i> META-THINKING – <i>self regulation</i> – being able to make decisions about the progress of dishes and practical cooks REALISING – being able to follow recipes <i>accurately</i> and be able to carefully prepare and cook food. Work within the rules of a domain	HW – Bring in ingredients every week for the practical lesson HW – Complete planning burger

Unit:	Core knowledge/skill development:	Sequence:	Assessment:	Literacy, numeracy, PSHE, FBV, other links	ACP and VAA development:	Home learning and enrichment
	Ratatouille Savoury rice Ragu sauce Roux sauce Brownies Personalised burger					