

Design and Technology

Learning Aims and Curriculum Intent:

Design and Technology offers a broad and inclusive curriculum that has been meticulously designed for Year 8, pupils study Design and Technology on a rotation with Food Preparation and Nutrition, during a rotation pupils will focus on the Chocolate Packaging project and undergo a design process; analyse, research, design, plan, make, test and evaluate. During a rotation, pupils will complete four assessed, extended writing tasks that is an amalgamation of class work and homework, pursuing the theoretical principles and technical knowledge of design, whilst including cross curricular links and wider contexts involving culture and society.

Term	Content, Key Questions and Knowledge	Skills	Assessment		
Michaelmas	 A reintroduction to the DT Department How can you encourage teenagers to donate to charity? How do charities visually communicate their branding and mission statements? 	Application and experience of the Design Process as a whole entity. Understanding of primary research, open and closed questioning, considering intention and visualising and interpreting gathered data.	Written interpretation and analysis of self-designed primary research questionnaire. Existing Product Analysis on the graphic design elements chocolate wrapping packaging and creative presentation.		
	 An introduction to graphic design, logos and branding: the role of visual communication as advertising and storytelling. The Design Process: Primary and secondary research: product analysis; questionnaires, data visualisation and interpretation. The Design Process: Initial idea generation and avoiding fixation. The Design Process: Iteration and design development The Design Process: Final design. 2) How can you convert a design into a manufactured product? A reintroduction to the H&S of the DT Department Scales of Manufacture, workshop vs industry processes. The Design Process: Manufacturing – Cardboard manipulation, net shapes, graphic packaging design. The Design Process: Manufacturing – Vacuum forming; theory of polymers; the ethical, moral, and social implications of polymers; industrial processes in practice; Quality control. The Design Process: Evaluation 	Analysis of existing products. Generating, iterating and developing design ideas. Presentation and drawing skills, use of rendering. Detailed annotation. Evaluation and self-reflection Health and Safety; In practice. Workshop skills; correct tool use, selection for desired outcomes. Identification of polymers	Practical assessment of vacuum forming Written personal reflection and evaluation of design process and outcome. Ongoing holistic assessment via live marking, questioning, feedback and active oracy.		
	Focused Practical Task: How can we organise belongs to reduce stress and promote wellbeing? 1) How to traditionally join wood? • Natural Timber and Manufactured Boards Theory. • Manipulation of wood; sawing, sanding, drilling, surface preparation, surface finishing. • Construction of functional and purposeful products from raw materials.	Health and Safety; In practice. Workshop skills; correct tool use, selection for desired outcomes. Identification of Natural Timbers and Manufactured Boards. Finishing skills	Retrieval quizzes to build knowledge acquisition, understanding and retention. Ongoing practical assessment via live marking, feedback, progressive practical outcome		
Lent	DT / FNU SUBJECT ROTATION				
	 A reintroduction to the DT Department How can you encourage teenagers to donate to charity? How do charities visually communicate their branding and mission statements? An introduction to graphic design, logos and branding: the role of visual communication as advertising and storytelling. The Design Process: Primary and secondary research: product analysis; questionnaires, data visualisation and interpretation. The Design Process: Initial idea generation and avoiding fixation. The Design Process: Iteration and design development The Design Process: Final design. 	Application and experience of the Design Process as a whole entity. Understanding of primary research, open and closed questioning, considering intention and visualising and interpreting gathered data. Analysis of existing products. Generating, iterating, and developing design ideas. Presentation and drawing skills, use of rendering. Detailed annotation. Evaluation and self-reflection	Written interpretation and analysis of self-designed primary research questionnaire. Existing Product Analysis on the graphic design elements chocolate wrapping packaging and creative presentation. Practical assessment of vacuum forming Written personal reflection and evaluation of design process and outcome. Ongoing holistic assessment via live marking, questioning, feedback and active oracy.		

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4) How can you convert a design into a manufactured product?

- A reintroduction to the H&S of the DT Department
- Scales of Manufacture, workshop vs industry processes.
- The Design Process: Manufacturing Cardboard manipulation, net shapes, graphic packaging design.
- The Design Process: Manufacturing Vacuum forming; theory of polymers; the ethical, moral and social implications of polymers; industrial processes in practice; Quality control.
- The Design Process: Evaluation

Focused Practical Task: How can we organise belongs to reduce stress and promote wellbeing?

2) How to traditionally join wood?

- Natural Timber and Manufactured Boards Theory.
- Manipulation of wood; sawing, sanding, drilling, surface preparation, surface finishing.
 Construction of functional and purposeful products from raw materials.

Health and Safety; In practice.

Identification of polymers

Workshop skills; correct tool use, selection for desired outcomes.

Identification of Natural Timbers and Manufactured Boards.

Finishing skills

Retrieval quizzes to build knowledge acquisition, understanding and retention.

Ongoing practical assessment via live marking, feedback, progressive practical outcome

Examples of Homework	Analysis of Existing Products – deconstructed Chocolate Bar wrapper Design, Make and implement Primary Research Questionnaire Creation of research document on the Vacuum forming process and products produced.		
Key terminology	Graphic Design; Brand Identity; Design Process; Primary Research; Secondary Research; Charity; Moral; Aesthetics; Function; Materials; Target Market; Data Visualisation; Interpretation; Page Presentation; Layout; Annotation; Iteration; Paper and Boards; Net shapes; Manufacturing Process; Vacuum Forming; Mould; Negative and Positive Space; Scales of Production; Chocolate		
Super-curricular enrichment and scholarly extension	 Read: The Design of Everyday Things by Donald A. Norman Watch: Design and Technology (D&T) KS3 Vacuum forming BBC Teach - YouTube, The Interior Design Challenge, Mythbusters, The Repair Shop Listen: Design Better (The Curiosity Department), 99% Invisible, Monocle on Design, Visit: Design Museum; V&A South Kensington; V&A Bethnal Green; Design Shop - Conran Shop 		
Useful websites	KS3 Design and Technology - BBC Teach		
	Head of Design and Technology	Mr H Ibrahim, <u>hi@forest.org.uk</u>	
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