

Design Technology Subject Intent

Dixons Broadgreen Design Technology department instilled curiosity in designs whilst promoting independence by:

- Teaching students a range of practical skills, allowing them to become sustainable and innovative designers
- Exposing students to a range of materials and resources enabling responsible production
- Closely defining key knowledge, which is revisited and reinforced over time.

Seven Year Plan

Year 7			
	Cycle 1	Cycle 2	Cycle 3
Content	Food safety rules & standards Nutrients/ Vitamins Develop practical skills through a range of savoury and sweet dishes Eatwell Guide	Dress code Special diets Menu planning Develop practical skills through a range of savoury and sweet dishes Health & Safety in Design & Technology Marking Out & Tool Selection Fabrication: Lap Joints	Router & Jigs. Adhesives Drilling & Surface Preparation: Acrylic Drilling & Surface Preparation: Mild Steel. Finishes: Powder coating. Marking out & cutting MDF Fixtures, Fittings & Assembly
Skills	Practical skills – weighing, dicing, slicing, peeling, combining. Nutrition	Aware of differing diets to produce a successful and varied menu. Will also continue to develop practical skills. Required Practical: Marking Out & Cutting. Required Practical: Lap Joints	Required Practical: Router. Required Practical: Wood Adhesives Required Practical: Acrylic. Required Practical: Mild Steel. Required Practical: Powder Coating
Progression	Pupils may have had limited and varied opportunities within the subject.	Further develop practical skills. Make links to nutrition to support menu planning. Describe the effect of physical and working properties on a range materials Name and describe specific metals, timbers, and polymers. Use a range of workshop hand tools and equipment safely and confidently	Fabricate a range of modern and traditional materials. Learn where materials come from and how they are processed into stock forms.
Link to GCSE	1.3.1 Health and safety in hospitality and catering provision 1.3.2 Food Safety 2.1.1 Understanding the importance of nutrition	1.3.1 Health and safety in hospitality and catering provision 1.1 Materials Categories 1.2 Material categories 1.3 Material properties 1.4 Sources and origins	1.7 Tools, equipment, and components 1.8 Tools and equipment 1.9 Specialist techniques and processes



		1.5 Using and working with materials 1.6 Stock form, types, and sizes	
Year 8			
	Cycle 1	Cycle 2	Cycle 3
Content	Safety, hygiene, & cross contamination Nutrition & Eatwell Guide Cooking Methods Environmental Factors Develop practical skills through a range of savoury and sweet dishes	Menu planning Types of pastry Practical skills through a range of required practical tasks Health & Safety in Design Technology. Marking Out & Cutting. Timbers & Joining Methods	PCB & Electronic Components. Modern & Smart Materials. Lantern Designs. Lantern Design Development. CAD: 2D Design. CAM: Laser Cutter. Fixtures, Fittings & Assembly.
Skills	Practical skills – weighing, dicing, slicing, peeling, combining, handling raw meat. Nutrition	Practical skills – weighing, dicing, slicing, peeling, combining, handling raw meat. Nutrition Required Practical: Comb Joints. Required Practical: Joints & Drilling	Required Practical: PCB. Required Practical: Laser Cutter. Required Practical: MDF Base. Required Practical: Aluminium Stand.
Progression	Pupils will further develop their practical skills to produce more complex dishes. Pupils will be aware of the impact of cooking methods. How to produce environmentally friendly dishes.	Pupils will further develop their practical skills to produce more complex dishes. Pupils will be aware of the impact of cooking methods. How to produce environmentally friendly dishes. Learn basic electronics and components. Be able to solder accurately.	Learn how to select and use tools and equipment with improving skills and accuracy, including CAD/CAM. Explore surface finishes.
Link to GCSE	1.3.1 Health and safety in hospitality and catering provision 1.3.2 Food Safety 2.1.1 Understanding the importance of nutrition 2.1.2 How cooking methods can impact on nutritional value	2.2.1 Factors affecting menu planning 1.1 Materials Categories 1.2 Material categories 1.7 Tools, equipment, and components 1.8 Tools and equipment 2.5 Wood Joints and application	1.3 Material properties 1.4 Sources and origins 1.5 Using and working with materials 1.6 Stock form, types, and sizes 2.0 Investigation, primary and secondary data. 2.1 Design Strategies 2.2 Communication of design ideas 2.3 Prototype development 2.4 Materials Management
Year 9 – Transition to KS4 – Hospitality and Catering			
	Cycle 1	Cycle 2	Cycle 3



Content	Health and safety in hospitality and catering provision Food safety The skills and techniques of preparation, cooking and presentation of dishes	Food related causes of ill health Symptoms and signs of food-induced ill health The skills and techniques of preparation, cooking and presentation of dishes	Preventative control measures of food-induced ill health The Environmental Health Officer (EHO) The skills and techniques of preparation, cooking and presentation of dishes
Skills	be aware of the responsibilities for personal safety in the workplace know and understand the principles of Hazard Analysis and Critical Control Points (HACCP) The skills and techniques of preparation, cooking and presentation of dishes	Know symptoms of food induced ill health know food poisoning causes The skills and techniques of preparation, cooking and presentation of dishes	be aware of correct temperature in delivery, storage, preparation, and service The skills and techniques of preparation, cooking and presentation of dishes
Progression	Pupils will further develop practical skills focusing on high level skills such as pastry making. Pupils will further investigate food safety, making links to HACCP.	Pupils will have the opportunity to develop medium and high-level skilled dishes, using a variety of preparation and cooking methods. They will be able to demonstrate safe working practices and identify symptoms and signs of food-induced ill health	Pupils will have the opportunity to develop high level skilled dishes, using a variety of preparation and cooking methods. They will be aware of the implementation of safety standards and the role of the EHO.
Link to GCSE / A-Level	1.3.1 Health and safety in hospitality and catering provision 1.3.2 Food Safety	1.4.1 Food related causes of ill health 1.4.2 Symptoms and signs of food-induced ill health	1.4.3 Preventative control measures of food-induced ill health 1.4.4 The Environmental Health Officer (EHO)

Year 9 – Transition to KS4 – Design Technology

	Cycle 1	Cycle 2	Cycle 3
Content	CAD/CAM, Outputs: using speakers Polymers (Thermoplastic: Acrylic and HIPS), Composites (MDF). Sustainable design.	Polymers: refining crude oil Shaping using cutting and abrasion (timber and polymer) Timber based materials Polymer sheets and rods Use of jigs and templates Sawing and drilling Generate creative designs: collaboration, iterative Explore and develop ideas: sketching, modelling, testing, evaluating Develop and communicate ideas: sketching (perspective / isometric), annotated development drawings, orthographic drawings, card modelling	3D Printing Cutting Soldering Bending / Forming Commercial processed: Routing Finishes - Painting Design and develop prototypes Evaluate prototypes Select materials based on the functional need, the cost and availability. Cut materials efficiently to reduce waste Mark out correctly Select and use specialist tools and equipment, accurately and safely



Skills	Design and manufacturing using CAD software and CAM fabrication. Advanced soldering skills. Advanced fabrication using polymers.	Components and circuit board design. Use of commercial manufacturing equipment router. Development of jigs and formers to enhance accuracy and precision whilst manufacturing.	Finishes for timbers. Self-finishing materials such as Polymers. Use of different and unusual stock forms, for polymers, sheets, pellet, and rod.
Progression	Learn advanced electronic and components. Advanced electronics and manufacturing.	Design development and planning for manufacturing including orthographic and exploded diagrams.	Design and manufacture a product to meet specification and design brief. Apply suitable surface finishes for outcome.
Link to GCSE / A-Level	3.2.6 Using and working with materials 3.2.7 Stock form and sizes 3.1.1 New and emerging technologies	3.1.5 Systems approach to designing 3.1.6 Materials and properties 3.2.3 Ecology and social footprint 3.2.8 Specialist techniques	3.3.3 The work of others 3.3.4 Design Strategies 3.3.5 Communication of design ideas 3.3.6 Prototype development 3.3.7 Selection of materials and components 3.3.9 Materials Management 3.3.10 Tools and equipment

Year 10 – Hospitality and Catering

	Cycle 1	Cycle 2	Cycle 3
Content	1.1 Hospitality and catering provision 2.3 The skills and techniques of preparation, cooking and presentation of dishes	1.2 How hospitality and catering provisions operate 2.3 The skills and techniques of preparation, cooking and presentation of dishes	2.1 The importance of nutrition 2.3 The skills and techniques of preparation, cooking and presentation of dishes
Skills	know and understand the two different types of hospitality and catering provision: commercial and non-commercial know and understand types of employment roles, and responsibilities within the industry aware of the working conditions within the industry The skills and techniques of preparation, cooking and presentation of dishes	To be able to describe the operation of the front and back of house The skills and techniques of preparation, cooking and presentation of dishes	Understanding the importance of nutrition The skills and techniques of preparation, cooking and presentation of dishes
Progression	Pupils will understand how the kitchen operates, making clear links to industry. Pupils will have developed a range of practical skills to support NEA assessment in year 11	Pupils will be aware of the different staffing requirements to support catering provision. Pupils will have developed a range of practical skills to support NEA assessment in year 11	Pupils will be aware of the importance of nutrition and consider this when planning a menu
Link to GCSE / A-Level	1.1 – unit 1 examination	1.2 – unit 1 examination	2.1 – unit 1 examination



	2.3 – unit 2 NEA	2.3 – unit 2 NEA	2.3 – unit 2 NEA
Year 10 – Design Technology			
	Cycle 1	Cycle 2	Cycle 3
Content			
Skills			
Progression			
Link to GCSE / A-Level			
Year 11 – Transition to KS5 – Hospitality and Catering			
	Cycle 1	Cycle 2	Cycle 3
Content	2.2 Menu planning 2.3 The skills and techniques of preparation, cooking and presentation of dishes	2.4 Evaluating cooking skills 2.3 The skills and techniques of preparation, cooking and presentation of dishes	Revision: 1.1, 1.2, 1.3, 1.4 2.1, 2.2, 2.3, 2.4
Skills	Be aware of the different factors when planning menus. Be able to plan dishes for a menu. Pupils will have developed a range of practical skills to support NEA assessment in year 11	Be able to provide a brief review of their planning, preparation, and cooking, highlighting areas of success and of potential further development. Be able to demonstrate a range of the food preparation and cooking techniques for the production of dishes.	Able to answer examination questions using powerful knowledge. Can respond to command words accordingly.
Progression	Pupils will be aware of dietary needs and considerations when planning a menu. Pupils will have developed a range of practical skills to support NEA assessment in year 11	Pupils will have successfully completed their practical NEA assessment. Pupils will now demonstrate the ability to evaluate their assessment.	Can demonstrate powerful knowledge to complete unit 1 paper.
Link to GCSE / A-Level	2.3 – unit 2 NEA	2.3 – unit 2 NEA	unit 1 examination
Year 11 – Transition to KS5 – Design Technology			
	Cycle 1	Cycle 2	Cycle 3
Content			
Skills			
Progression			
Link to GCSE / A-Level			



<i>Key</i>
Hospitality and Catering
Design Technology

