

Subject: Year 9 DT

In Year 9 Design and Technology curriculum, students will develop on existing skills with a keen focus on independence with an established understanding of health and safety protocols through practical lessons and theoretical study. They will learn technical language relevant to their projects, enhancing their ability to articulate design concepts and processes effectively. The focus will be on integrating theory with hands-on experience, allowing students to demonstrate their knowledge through the creation of high-quality products that emphasise aesthetics, functionality, and material suitability. This year is dedicated to learning and developing new skills that will lay a strong foundation for their future work in Design and Technology. Students will build on knowledge learnt from previous years and create an innovative product.

Acquire	Product Design - LED light	Food Technology
	● Recap on health and safety expectations, specific to specialist areas, students will know how to identify a risk and prevention and create a range of risk assessments. ● Develop knowledge of PIES and the sectors it links to. ● Introduction to measuring, marking and creating lines. ● Understand the difference between need and want and apply to the TMG. ● Be able to analyse a task and create a range of justified sentences linking to ACCESSFM ● Know how to convert units to achieve the correct measurement working within tolerances ● Be able to work with independence in the lesson to develop a product safely ● Be able to understand the difference between different types of production ● Be able to identify and name the use of hand tools and machinery ● Be able to identify the difference between manufactured woods and natural woods ● Be able to learn about a designer and their influence on the world ● Understand how to identify a range of different drawing styles	Nutrition and Health; Advice for healthy diet ● Revisit Eatwell guide Focus on: Proteins and fats ● Further develop understanding of nutrients through the function and source of protein (HBV and LBV) and fats (trans, saturated and unsaturated) ● Planning nutritional needs at different life stages including toddlers, older adults, teenagers and pregnancy. Food safety; Demonstrate effective and safe cooking skills; ● Allergens and intolerances; symptoms and causes ● Key temperatures when preparing, cooking and serving food, the effect temperature has on pathogens ● The role of an Environmental Health Officer Food science; Functional properties and chemical processes of food ingredients; ● Denaturation and coagulation of proteins ● The effect cooking has on nutrient value Food choice; Factors which influence food choice: ● Medical, moral and religious diets ● Sensory analysis of a range of cooking methods

Apply	● Identify drawing styles and their application ● Watch teacher demonstration and apply knowledge verbally and physically ● Set up the workshop ready to manufacture, ensuring everyone is safe and ready to learn ● Watch teacher demonstrations and apply knowledge in practical and explain in own words ● Be able to use tools and equipment accurately and develop a product in line with the WAGOLL provided ● Manufacture a product with awareness of how to use the tools and equipment correctly whilst being safe. ● Understand how to use specialist equipment and machinery to create a desired outcome. ● Understand how to use the line bender and manipulate plastic to create a desired effect. ● Identify tools and recall their names and use them safely and correctly to complete an activity with a successful outcome. ● Create a diary of making explaining each step and issues overcome ● State, describe and explain key points about a designer and link to own opinion ● Evaluate and identify areas to modify and improve	Nutrition and Health; Advice for a healthy diet. ● Organise a range of food commodities into the types of fats and proteins and discuss how to reduce fat intake during cooking and preparation, and create a meal using protein complementation. ● Research a particular life stages' nutritional needs and produce an infographic Food safety; Demonstrate effective and safe cooking skills; ● Demonstrate effective and safe cooking skills throughout a range of practical lessons including marinated kebabs, Salt & Pepper fakeaway, stuffed flatbreads, burger and wedges and mini quiches. ● Identifying hazards and demonstrating the preventative control measures when cooking. Independently testing foods following key temperatures during storage and cooking ● Produce a time plan for a special diet which will be followed in exam conditions, including contingencies and timings Food science; Functional properties and chemical processes of food ingredients ● Participate in a presentation challenge to cook an egg demonstrating your understanding of denaturation and coagulation ● Work as a group to conduct a sensory analysis whilst discussing the effect a variety of cooking methods have on the nutrients Food choice; Factors which influence food choice: ● Read a newspaper article and to make specific links about the effects of food allergens and intolerances ● Match a range of medical, moral and religious diets to their definitions
Vocabulary	● Screw ● Acrylic ● Portable drill ● Tolerance ● Orthographic ● Mondrian art ● drill bit ● masking tape ● assembly line ● Isometric	● Protein ● Vitamins ● Minerals ● Fat ● Carbohydrate ● Antioxidant ● Sensory analysis ● Hygiene ● Hazard ● Protein complementation ● Macronutrient

	• ACCESSFM • Fret saw • Bench hook • Sharp pencil • Steel rule • Try square • Pine • Plywood • Panel pins • Centre punch • Softwoods • Hardwoods • Manufacture boards • Template • Pin hammer • Bench vice • Hazard • Risk, hazard • Prevention • Control measure • PPE Personal protective equipment • Belt sander	• Micronutrient • The Eatwell Guide • Whisk • Denaturation • Coagulation • Vegan • Allergen • Intolerance • Coeliac • Lactose • Amino Acid • Bridge • Claw • Food provenance • Cuisine • Cross contamination • Poultry • El Dente • Pathogens • Listeria • Salmonella • Staphylococcus • Campylobacter
Assessment	Baseline assessment – multiple choice Questioning, Self and Peer assessment FAR Marking – theory and practical tasks End of project assessment – multiple choice End of year assessment (covers all curriculum areas)	