

2022-2023 Year 8 Curriculum and Assessment Plan for Key Stage 3 Design & Technology.

The curriculum and assessment of pupils at this stage of education has been carefully designed to develop the creative, technical and practical skills needed to perform everyday tasks confidently. The curriculum is built to apply knowledge and understanding of skills to design and make high- quality prototypes and products for a range of different users.

Please note: Pupils may start the term on Half term 1 or Half term 4, then they will rotate between specialist teachers.

Half Term 1: Technology focus- Wood workshop	Subject specific skills being developed:	Half Term 2: Technology focus- Wood workshop	Subject specific skills being developed:	Half Term 3: Technology focus- CAD CAM- 2D Design software, plastics.	Subject specific skills being developed:
<p>All pupils will know:</p> <p>How to draw isometric shapes. How to apply this drawing technique to design ideas. Know the 4 different motions. Why tolerances are important. How to manufacture a finger joint from wood to make a container.</p> <p>All pupils will be assessed by: Knowledge quizzes End of unit test.</p> <p>Impact- Why do we teach this?</p> <p>To widen pupils drawing skills to show techniques to support design work. Why tolerances need to be taken into an account. How to accurately measure and mark a wood joint. Life skills.</p>	<ul style="list-style-type: none"> Measuring and marking dimensions to create a wood joint. Working within tolerances. Accuracy with hand tools in the wood workshop. <p>Reading Skills needed for this unit: Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Isometric Drawing technique Develop Softwood Manufactured boards Tenon saw Scroll saw Motion Tolerance Belt sander</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Art- Designing, drawing skills. Maths- Dimensions mm/ cm 	<p>All pupils will know:</p> <p>How to manufacture a wooden container using finger joints as a joining method and tools and equipment in the wood workshop. Research biomimicry and design a range of earphone holders using freehand sketching.</p> <p>All pupils will be assessed: Knowledge quizzes End of unit test.</p> <p>Impact - Why do we teach this?</p> <p>Pupils will gain the skills required to use a range of hand tools, equipment and machinery in the wood workshop to manufacture a wooden container with a rotating lid. To develop pupils manufacturing skills with timber to support the GCSE. Life skills.</p>	<ul style="list-style-type: none"> Use of cutting tools Use of shaping tools. Finishes for woods. <p>Reading Skills needed for this unit:</p> <p>Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Abrasive paper Coping saw File Adhesive Finger joints Dowelling Biomimicry Tolerance Sustainability Motion</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Art- designing. Maths- Dimensions 	<p>All pupils will know:</p> <p>Why modelling is important in design work. How to use Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) to produce an earphone holder based on nature.</p> <p>All pupils will be assessed: Knowledge quizzes End of unit test.</p> <p>Impact - Why do we teach this? Developing design ideas. To teach the importance of modelling, testing and evaluating to produce a product. CAD CAM supports the GCSE specification.</p>	<ul style="list-style-type: none"> CAD software which runs the laser cutter. How to develop designs further using the iterative design process. Problem solving Biomimicry designing. <p>Reading Skills needed for this unit: Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Developing Iterative design Modelling Evaluating</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Computer Science.

<p>Half Term 4: Technology focus- Food Technology</p> <p>All pupils will know: Know and understand and be able to apply rules of food hygiene and safety.</p> <p>Know the function and food sources of various micronutrients</p> <p>All pupils will be assessed: Knowledge quizzes DNA End of unit test.</p> <p>Impact - Why do we teach this? Matched against NC</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] 	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> safety in food room Knife skills Using oven & hob Use of small and large equipment Preparation of different food commodities <p>Reading Skills needed for this unit: Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Micronutrients Vitamin A,B,C,D Iron Calcium Bacteria Food hygiene Safety</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Science- nutrition Math- weights and measure English- reading and following recipes in a logical sequence PE- diet and exercise. 	<p>Half Term 5: Technology focus- Food Technology</p> <p>All pupils will know: Know what is meant by food provenance.</p> <p>What is meant by seasonality and its importance to the environment and diet and health.</p> <p>All pupils will be assessed: Knowledge quizzes DNA End of unit test.</p> <p>Impact - Why do we teach this? Match against NC</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] understand the source, seasonality and characteristics of a broad range of ingredients 	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> safety in food room Knife skills Using oven & hob Use of small and large equipment Preparation of different food commodities <p>Reading Skills needed for this unit: Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Provenance Seasonality Environment</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Science- nutrition Math- weights and measure English- reading and following recipes in a logical sequence PE- diet and exercise. Geography- food and the environment 	<p>Half Term 6: Technology focus. Food Technology</p> <p>All pupils will know: Understand the different ways in which our foods are produce (free range, organic, intensive), pros and cons of each.</p> <p>All pupils will be assessed: Knowledge quizzes DNA End of unit test.</p> <p>Impact- Why do we teach this? Matched against NC</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] understand the source, seasonality and characteristics of a broad range of ingredients 	<p>Subject specific skills being developed:</p> <ul style="list-style-type: none"> safety in food room Knife skills Using oven & hob Use of small and large equipment Preparation of different food commodities <p>Reading Skills needed for this unit: Skim/Scan, summarising key information, analysis and evaluating</p> <p>Key Vocabulary: Free range Organic Intensive farming Environment</p> <p>Opportunity for cross-curricular skill development</p> <ul style="list-style-type: none"> Science- nutrition Math- weights and measure English- reading and following recipes in a logical sequence PE- diet and exercise. Geography- food and the environment
<p>Ensuring this curriculum meets the needs of all pupils: this curriculum has been designed to ensure pupils from all starting points will develop the key curriculum skills and knowledge identified. The curriculum design ensures that each unit forms part of the overall learning journey and there are opportunities for revisiting skills and linking together key pieces of knowledge. Whole Academy policies and practices are followed to tailor the delivery of the curriculum for individuals and groups of students. For example SEND students have individual learning profiles that outline needs/strategies to be used, Whole group RIPs are in place to identify key teaching strategies that will be used with individual teaching groups. Ongoing formative assessment and clear summative assessment points allow individual staff and departments to identify misconception and adjust curriculum appropriately.</p>					
<p>Enrichment opportunities:</p> <ul style="list-style-type: none"> After school clubs 					
<p>Career opportunities/ links: Carpenter, product designer, website designer, graphic designer, engineer Food Technology, Nutritionist, Chef, Hotel /Restaurant Managers ,Dietician, Farmers, Food scientist</p>					