

DESIGN TECHNOLOGY-FOOD PREPARATION & NUTRITION-ART & DESIGN: TEXTILES

In key stage 3 students are introduced to a number of new experiences in a range of subject areas that are not covered in depth at key stage 2. Music, Art (Fine and Textile), Food Preparation and Nutrition and Design and Technology allow students to engage with and develop knowledge and skills in the creative subjects within the school curriculum. Students will learn about health and safety in various environments, enabling them to work safely with a variety of materials/tools/media and instruments when responding to set tasks. They will gain an awareness of different art and design movements, as well as cultural and historical music, to aid their responses. In Food, students will gain an understanding of Food hygiene, the science behind food and nutrition. Learning of key skills are taught explicitly within each project. The curriculum in key stage 3 has been specifically developed to engage students in new subject areas and build knowledge and skills, year on year, in preparation for key stage 4.

Design & Technology Rationale-KS3

To prepare KS3 students in the best possible way for KS4 students create a foundation based on renewable and non-renewable sources. These sources are covered through practical learning during a physical outcome. Students will become competent in using tools and machines to prepare for the making element involved for the GCSE Non-Exam Assessment. All projects in KS3 are planned to entail and prepare them for all 6 stages involved for the NEA and cover theory knowledge required for the GCSE Exam.

Food Preparation and Nutrition Rationale-KS3

In preparation for KS4, in KS3 students will study 3 of the 5 elements of the GCSE course as a foundation for further study. Within the KS3 programme, students will understand and apply the principles of nutrition and health. They will cook a repertoire of 12 predominantly savoury dishes, so that they are able to feed themselves and others a healthy and varied diet. They will become competent in a range of cooking techniques and understand the characteristics of a broad range of ingredients.

They will understand the principles of nutrition and health in relation to energy, nutrients, water and fibre, diet and health and nutritional needs throughout life. The 12 dishes are in line with the principles of The Eatwell guide and use a range of food commodities, e.g. cereals, fruit, vegetables, meat, fish, eggs, fats/oils, milk/dairy food products.

Art & Design-Textile Design Rationale-KS3

In preparation for KS4, in KS3 students will be taught to develop their creativity and ideas, and increase proficiency in their execution. They will be taught to develop a critical understanding of artists, architects and designers, expressing reasoned judgements that can inform their own work. They will be taught to use a range of techniques to record their observations as a basis for exploring their ideas. They will be taught to use a range of techniques and media, to increase their proficiency in the handling of different materials. They will learn to analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work. They will also learn about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day.

Autumn term: Design & Technology			
Moving Toy Project Student's are to design and make a moving toy suitable for a child inspired by their own choice of theme creating a mood board for inspiration and learning how to present work to a high standard using computers in preparation for the GCSE course. Students will also be taught different softwoods, hardwoods and manufactured boards and will use all of these materials in this project. Students are to consider mechanisms, levers and cams during this project and will apply a mechanism in a practical outcome.			
Important vocabulary:			
<ul style="list-style-type: none"> • Input • Process • Output • Mechanism • Target • Theme • Initial • Create • Finite • Non-finite 		<ul style="list-style-type: none"> • File • Belt sander • Coping saw • Junior hacksaw • Tenon saw • Bench hook • Try square 	
Key knowledge students will learn:			Key practical skills students will learn:
<ul style="list-style-type: none"> • How to work safely in the Resistant Materials workshop when using tools and looking out for other students during a practical lesson. • How to create a mood board to GCSE standard. • The outline principles of the design process • How to reflect on work during evaluation • Investigate and experiment with mechanical systems • Develop analysis skills whilst constructing a user centred specification 			<ul style="list-style-type: none"> • Generate ideas, considering specification and manufacturing constraints. • Learn new practical techniques - sub assembling. • Learn new practical skills - joining wood • How to select and use simple hand tools such as: coping saw, junior hacksaw, bench hook, tenon saw, try square, nail punch, center punch, hammer, steel rule and files. • How to select and use specialist machinery such as the pillar drill and the belt sander
Spring term: Food Preparation & Nutrition			
The Food Science Project During this scheme of work, students will learn about the science behind food. How heat is transferred to food and appropriate cooking methods. We also look at the functional and chemical properties of food and gain knowledge about macronutrients, whilst creating a number of practical outcomes.			
Important vocabulary:			
<ul style="list-style-type: none"> • Denature • Coagulation • Gelation • Gluten • Foams • Gelatinisation 		<ul style="list-style-type: none"> • Dextrinisation • Caramelisation • Shortening • Plasticity • Aeration • Emulsification 	
Key knowledge students will learn:			Key practical skills students will learn:
<ul style="list-style-type: none"> • How and why heat is transferred to food- Convection-Conduction-Radiation • Methods of heat transfer • The Eatwell Guide and Macronutrients 1. Protein-Key terms-Sources-Nutrition-Function in Foods-High/Low biological value-Protein complementation-The Eatwell Guide 2. Carbohydrates-Key terms-Sources-Nutrition-Function in Foods-Sugars (Monosaccharides/Disaccharides) Complex Carbohydrates (Polysaccharides) -The Eatwell Guide 3. Fats-Key terms-Sources-Nutrition-Function in Foods-Chemical structures-High/Low density lipoproteins-Solid/Liquid animal/plant fats-The Eatwell Guide 4. Function of ingredients 			Skill 1: General practical skills Skill 2: Knife skills Skill 4: Use of the cooker Skill 8: Sauce making Skill 10: Dough Skill 11: Raising agents Skill 12: Setting mixtures

	Summer term: Art & Design-Textiles																				
Term 3	<p>The shapes project</p> <p>During this scheme of work, students will build upon their previous learning in Year 7 and progress into art movements from the 1940's-1960's, based in America, with a focus on colour field painting and abstract expressionism. Students will be taught about the elements and principles of art and how to use these to analyse artworks. They will learn to develop their creativity and ideas using art pieces from these movements, creating both 2D and 3D responses. This work will be further developed into textiles techniques, exploring Batik and Tie dye. The students will produce a cushion cover, which incorporates both resist techniques. The Batik section will be built upon with mixed media, to reflect the artist Frank Stella's style, whilst the Tie dye section will respond to the work of Clyfford Still. This unit is designed to enable pupils to develop a critical understanding of abstract expressionism and colour field painting and the motivation of the artists behind the production of these works.</p>																				
	<p>Important vocabulary:</p> <table> <tr> <td>Precise</td> <td>Proportion</td> </tr> <tr> <td>Convert</td> <td>Target Customer</td> </tr> <tr> <td>Initial</td> <td>Resist Techniques</td> </tr> <tr> <td>Emphasis</td> <td>Brand identity</td> </tr> <tr> <td>Enhance</td> <td>Industrial Manufacture</td> </tr> <tr> <td>Appropriate</td> <td>Aesthetics</td> </tr> <tr> <td>Potential</td> <td>Seam Allowance</td> </tr> <tr> <td>Primary</td> <td>Selvedge</td> </tr> <tr> <td>Establish</td> <td>Bias</td> </tr> <tr> <td>Generate</td> <td>Tension</td> </tr> </table>		Precise	Proportion	Convert	Target Customer	Initial	Resist Techniques	Emphasis	Brand identity	Enhance	Industrial Manufacture	Appropriate	Aesthetics	Potential	Seam Allowance	Primary	Selvedge	Establish	Bias	Generate
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	Key knowledge students will learn:	Key practical skills students will learn:																			
	<ul style="list-style-type: none"> • Health & Safety in the Textiles room • Art movement from 1940-1960's. • The elements and principles of art • Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes, creating initial design ideas (AO2) • How to develop ideas through investigations, demonstrating critical understanding of sources, researching a specific artist (AO1) • Colour theory • Batik and Tie dye techniques 	<ul style="list-style-type: none"> • How to draw using different types of line: <ol style="list-style-type: none"> 1. Continuous 2. Gestural 3. Expressive 4. Textural • How to control various media to respond to an artist's work. • How to use technology to research and produce artist response sheets • How to create textural effects using acrylic paint • How to communicate ideas using <ol style="list-style-type: none"> 1. Line 2. Shape 3. Colour 4. Texture • How to create patterns using resist techniques (Batik/Tie dye) • How to create and manufacture a product from 2D materials to a 3D finished product 																			

How can I help my child be successful in Design & Technology?

- Support your child when undertaking homework research tasks
- Use the grade descriptors at the front of the work booklets to ensure quality in work produced
- Enable your child to complete tasks successfully, by ensuring they have the resources required or communicating with teachers for further support
- Explore the key vocabulary often with your child to help them transfer it to long term memory
- Encouraging your child to be organised and plan ahead to ensure smooth progress through the rotation
- Practise tricky spellings together.

How will you assess my child's progress?

Assessment of learning takes many forms. We assess how your child is learning through their written, visual, practical and verbal responses.

In the creative arts we value the importance of providing students with feedback that enables them to progress. We therefore provide formative feedback that requires a response from our students, through a number of comparative marking sessions. All formative assessment is logged by students as a reference point for continual improvement. Lower attaining work will be required to be improved, using the logged feedback, to ensure individual progress. Written corrections require students to work in green pen, to highlight errors. They are then able to reflect clearly on where they have made progress.

Students appreciate the importance of the comparative marking sessions. We give feedback on work regularly, to enable students to track their progress in various disciplines, whether it be a research, design or practical tasks.

Each rotational subject will allow for students to produce one or a number of practical outcomes, based on sound research and design work. The projects are marked summatively at the end of each rotation to provide a 'snap shot' of the knowledge and skills the students have gained and those which still require work. This is used, along with their classwork and feedback, to inform the reports you receive home.