

Curriculum Quality
Design Technology

Subject Leader:
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Intent

At The Marchant Holliday School we plan our Design Technology lessons carefully as part of our cross curricular approach to learning experiences. We believe in providing opportunities for pupils to develop an understanding of the purpose of products, how they are designed and how their uses can benefit people's lives. We encourage the pupils to take risks, develop prototypes, evaluate their own products and make improvements. The students have a wide variety of materials to select from and make use of textiles, ceramics and ingredients in their design projects. We wish all pupils to have creative opportunities and feel that through planning, experimentation and construction the pupils will learn to be resourceful, innovative and capable citizens. Our experiential, hands-on curriculum enables the pupils to immerse fully in topics and bring links from maths, science, art and computing into their design and technology projects. The 24-hour curriculum we provide for our boarders and the extended curriculum that our day boys access allows greater opportunity to expand the pupils' DT knowledge in times outside the school day. For instance, there is a range of extra-curricular clubs, such as cooking and bike mechanics, which help pupils understand the importance of DT in their own lives and within society.

The national curriculum for design technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

The overarching concepts for design technology at The Marchant-Holliday School are for the children to develop an appreciation of innovations in design and technology from the time before they were born, within their own lifetimes and into their futures. We wish to encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Pupils at the MHS are encouraged to become innovators and risk-takers.

Implementation

The Design Technology Curriculum is planned as part of each learning experience and we believe the design process should be rooted in real life. Relevant contexts give meaning to learning. While making, the children are given a choice and a range of tools to use. To evaluate, children are able to judge their own products against existing designs that they can pick up, touch and use. We ensure that the majority of our 'hook days' (which introduce the new learning experiences) include at least one Design Technology session, either in classrooms or in the school's designated cooking room.

By planning in teams, staff ensure that they draw on the expertise of their colleagues to plan exciting, innovative and real life DT experiences for pupils. We take every opportunity to develop links with outside agencies and experts and over our two year rolling programme, we ensure that all pupils will have the chance to work with professional artists and designers

Curriculum Overview (Knowledge and Skills)

Term	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1/2 A	London's Burning Build replica structures of London in 1666	Amazing Animals Evaluate existing products - Christmas craft Design, make and evaluate functional products - Christmas decorations (textiles, food, materials)	Passport to China Food - Preparing dishes using different techniques and ingredients	Watch out there's a Monster about Textiles - felt monster cushions Work with local textile artist –Tamsyn Gregory	The Secret Garden Designing and creating a garden for their learning environment Food- combining ingredients - seasonal cookery Work with The Chefs and Lynne Franks, from the Seed Cafe to use organic food	I do like to be beside the seaside Replica structures using a range of materials and exploring and using mechanisms- Victorian bathing machine
Year 1/2 B	Dungeons and Dragons Replica structures using a range of materials - Motte and Bailey Exploring and using mechanisms - model trebuchet and testing its design Creating movement -3D dragons	Out of Africa Explore and evaluate existing products Food -Preparing dishes using different techniques and ingredients	Brilliant Brunel To evaluate existing Brunel's designs – tunnels Making model tunnels Building structures – suspension bridges	How to Grow a Human Food -principles of a healthy and varied diet around the world Food -Preparing dishes using different techniques and ingredients	A World of Art Design; purposeful, functional and appealing products-	Predators and Prey Evaluate existing products Design; purposeful, functional and appealing products-bird boxes
Year 3/4 A	The Ancient Egyptians Construct a model pyramid, test its strength and structure Making paper using raw ingredients Create designs for jewellery	The Electric Age Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Design and make a buzz-wire game.	What's the Matter? Food- combining ingredients- seasonal cookery Food -Preparing dishes using different techniques and ingredients	A Drop in the Ocean Consider aesthetic qualities and functional properties of textiles Visiting artists: Work with local textile artist –Tamsyn Gregory	Around the world in 80 Days Food -principles of a healthy and varied diet around the world Food -Preparing dishes using different techniques and ingredients Work with The Chefs and Lynne Franks, from the Seed Cafe to use organic food	Roll out the Romans Strengthen, stiffen and reinforce structures that are more complex. Understand and use mechanical systems in products - Moving Monsters from Roman Mythology Investigate and evaluate existing designs. Develop functional products –Roman shields and swords

<p>Year 3/4 B</p>	<p>History Rocks Construct a model of Stonehenge; test its strength and structure. Use a wider range of materials such as textiles - Weaving with wool.</p>	<p>Remember , Remember 3D paper craft: Guy Fawkes hat Designing appealing products and developing prototypes Hanging rockets Develop, make and evaluate functional products - reflective book bags</p>	<p>Exploding earth: Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes to design and test an earthquake proof structure</p>	<p>Metal Works Investigate and evaluate existing designs Clay and Earthenware</p>	<p>Chocolate: From Bean to Bar Investigate and analyse existing designs Food- combining ingredients- experimenting with flavours, tastes and textures Work with the chocolatiers from the Cheddar Gorge Chocolate Company</p>	<p>Go Ape Consider aesthetic qualities and functional properties of textiles Making dye from natural ingredients to dye cloth Create Mola art on dyed cloth</p>
<p>Year 5/6/7 A</p>	<p>Crime and Punishment Replica structures using a range of materials - Gallows Exploring and using mechanisms- model of village stocks- and testing its design Creating movement -3D Year 7s only in Aut. 1 The Norman Invasion 3 D structures replica castles</p>	<p>Robots Designing appealing products and developing prototypes of robots Traps and alarms Sound and light systems and computer programming</p>	<p>Can I fall into Space? Design and generate models of rockets from diagrams and prototypes Develop technical knowledge and apply it to the mechanical systems for a Moon Buggy</p>	<p>Explorers & Trailblazers Looking at the work of pioneering individuals in design, technology and engineering. Evaluating their ideas and products- links to the TDI Food- combining ingredients- seasonal cookery Food -Preparing dishes using different techniques and ingredients Work with The Chefs and Lynne Franks, from the Seed Cafe to use organic food</p>	<p>The Maya in The Americas Consider aesthetic qualities and functional properties of textile art Mayan inspired weaving Work with local textile artist –Tamsyn Gregory</p>	<p>Planet Earth Research landscape gardening Use computer-aided-design to create a garden landscape, which is functional. Practical and meets the design brief</p>
<p>Year 5/6/7 B</p>	<p>Ancient Greece Plan and design a Greek helmet paper craft to create a Greek Temple Investigate and analyse existing products Plan, design, make and evaluate products-boats</p>	<p>Magic & Muggles Using technical knowledge and using mechanical systems Designing and making models –Insulated cups</p>	<p>Blue Planet Investigate and analyse existing products Plan, design, make and evaluate products- Fish life cycle mobile</p>	<p>Raiders & Invaders Mixed materials, including textiles to make Anglo Saxon jewellery products Evaluate designs and improve Viking Long ships Make replica models</p>	<p>Being Human Food- combining ingredients- seasonal cookery Food -Preparing dishes using different techniques and ingredients</p>	<p>Incredible India Food -principles of a healthy and varied diet around the world Food -Preparing dishes using different techniques and ingredients</p>

Impact <p>By ensuring consistent high quality teaching of Design Technology at Marchant Holliday School, we ensure that all our pupils acquire knowledge and skills which are not only specific to this subject but also promote creativity and imagination in our students and across all our subjects. They will have experience of solving real and relevant problems in their own way, understanding first hand that the disciplines of Design and Technology encompass many other curriculum areas and are directly relevant to their future work as adults, whether in catering, engineering, computing or robotics. Over time, students will learn how to take risks, become more resourceful and build resilient thinking patterns. The knowledge gained regarding food, nutrition and combining ingredients will be essential to later life.</p> <p>Assessment of children's learning in Design Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher, throughout lessons. This assessment is then used to inform differentiation, support and challenge required by the children and to ensure that all children will have developed creative, technical and practical expertise in the subject.</p> <p>Design Technology is also monitored by the subject leader throughout the year in the form of book monitoring, looking at outcomes and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.</p> <p>By the end of Key Stage 1, our aim is that students will begin to develop their understanding of design and technology and thus be able to participate successfully in an increasingly technological world</p> <p>By the end of Key Stage 2, pupils will have the knowledge, understanding and skills needed to engage in the processes involved in evaluating, analysing, developing, and making. They will be able to produce a number of creative and practical design products.</p> <p>By the end of year 7, Children will have learned how to take risks and become more resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they will have developed a critical understanding of its impact on daily life and the wider world.</p>						