



Design and Technology Curriculum Statement

Intent

At Beechwood, we believe that Design and Technology is an inspiring, rigorous and practical subject. We aim for our students to use their creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts, while considering their own and others' needs, wants and values. Our students will acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Through Design and Technology, our students will learn how to take risks, allowing them to grow as resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, our pupils at Beechwood will develop a critical understanding of its impact on daily life and the wider world. We strive for a high-quality design and technology education, from EYFS to Year 6, which makes an essential contribution to the creativity, culture, wealth and well-being of our nation.

With guidance from the national curriculum, we aim to have all our pupils leaving Beechwood having developed the following skills:

- 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.

With our approach, our pupils will leave Beechwood equipped to know, apply and understand the matters, skills and process specified in the relevant programme of study.

Implementation

In every design and technology lesson the children will develop one of the design and technology key concepts we have at Beechwood; systems, complex structures, control and cooking and nutrition. They will be aware of previous learning that will support them in developing their new learning and will have a clear idea of where the unit they are currently study will take the. Within Design and Technology the children will get the opportunity to; explore their own learning using research and enquiry, discover new skills and learning through hands on experience and achieve when they bring all their learning together to showcase their understanding. At Beechwood, we believe our Design and Technology programme, which includes cooking and nutrition, should be integrated within our topic, and should introduce new skills, while revisiting and consolidating prior learning. For each topic, we aim to have at least one creative element to build pupils' knowledge and creativity in the world of design. Each Design and Technology unit should contain, but are not limited to, four components: research, design, build and evaluate; while also learning technical knowledge about their structures, mechanisms and designs.

Equity of implementation– At Beechwood we recognise that all children learn differently and all children have different strengths. A well rounded curriculum ensures that every one gets their chance to shine. We use a range of strategies to ensure all children are included with our curriculum some of these being; widgets to scaffold oracy and writing, use of ipads / laptops to support writing, pictures to support key vocabulary being used, learning logs to remind the children of the previous learning which will support them a lots of child centred learning to full immerse them in their new skills and knowledge

School Vision

Explore, Discover, Achieve

Explore –Research is a key part of our units at Beechwood because it allows our students to explore their topics before entering the designing and creating process. We value the importance of research skills, as it allows our students to seek understanding of their topic, beginning in foundation, and continuing through to Year 6.

Discover – Discovery happens at various stages of our Design and Technology units. When conducting our research, we encourage hand-on tests and experiments to gain more information on our products.

Achieve – Our students are proud of their work at the end of a Design and Technology unit—the research, planning and creativity that goes into each project is evident in the unique creations that are produced.

Curriculum coverage

Year	Autumn	Spring	Summer
1	<p>Christmas Biscuits</p> <p>Research - research recipes for biscuits and create success criteria for their biscuits</p> <p>Design apply their understanding to create their recipe for biscuits</p> <p>Make – Bake their biscuits</p> <p>Evaluate – evaluate their biscuits against their own success criteria</p>	<p>Moving pictures</p> <p>Research - Research moving pictures and what makes them successful. Create success criteria.</p> <p>Design communicate their ideas through discussion, and create annotated sketches</p> <p>Make – Create a moving picture using paper.</p> <p>Evaluate – evaluate their picture against their own success criteria</p>	<p>Igloos</p> <p>Research – look at igloos and what makes them successful. Create success criteria.</p> <p>Design – apply their learning to creating an igloo/house made of ice.</p> <p>Make – Use ice cubes and assemble to make an igloo.</p> <p>Evaluate – Evaluate their igloos/ice house against success criteria</p>
2	<p>Design Technology Great fire of London workshop (design technology day)</p>	<p>Design Technology</p>	<p>Design Technology</p>

	<p>Research Use research alongside History and Science lessons to learn about the great fire of London and the materials used.</p> <p>Design Plan and design what is needed for each project.</p> <p>Make Use a range of materials creatively to design and make products.</p> <p>Evaluate evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	<p>Project – The Castle and The Sun</p> <p>Research Research castles as well as the artist Paul Klee and the work that he has produced.</p> <p>Design Plan and design how they are going to create a castle, using the style of ‘The Castle and The Sun’.</p> <p>Make Use a range of materials to make their final piece.</p> <p>Evaluate Evaluate their work against their own design criteria as well as making comparisons from the artists original work.</p>	<p>Project – Make catapults and weapons.</p> <p>Research Use research found about catapults and wagons to learn purpose and design.</p> <p>Design Plan and design a catapult and wagon.</p> <p>Make Use a range of materials creatively to design and make products.</p> <p>Evaluate evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>
3	<p>Stone Henge 3D Model -To record their observations and use them to review and revisit ideas -To improve their mastery of art and sculpture</p>	<p>Famous artist Rousseau -To replicate a piece of art by a famous artist - to improve their mastery of art and design techniques, including painting -To learn about great artists,</p> <p>Headdress – Research Amazon tribes head dresses, then design own.</p>	<p>Viking Shield Research Viking shields then design and make their own shield.</p>
4	<p>Design and Technology Romans Shields Mosaics</p> <p>Design and Technology Research - Research shield and mosaic designs. View examples from museums and ruins.</p> <p>Design</p>	<p>Design and Technology Transport - Aeroplanes</p> <p>Research - use research and develop design criteria to inform the design of a functional, appealing products that are fit for purpose.</p> <p>Design</p>	<p>Design and Technology Create! Tapestries Animation (ICT Link) Cookery – Pinchos (DT)</p> <p>Design and Technology Research - Pinchos: Use research and develop design criteria to inform the design of a functional, appealing product that is fit for purpose.</p> <p>Design</p>

	<p>apply their understanding to create a design criteria.</p> <p>Make – Make Shields using card and other materials. Mosiacs to be made both from coloured paper and stone.</p> <p>Evaluate – Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	<p>Experiment with design ideas, testing and recording their ability to fly.</p> <p>Make – Develop prototypes leading to a final model.</p> <p>Evaluate – Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	<p>Animation: Apply their understanding of video software to create a stop motion animation.</p> <p>Make – Pinchos: Bring ingredients to make final pincho design.</p> <p>Evaluate – Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>
5	<p>DT – Making Planets</p> <p>DT2/1.1 Design DT2/1.1a use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>DT2/1.2 Make DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>DT2/1.3 Evaluate</p>	<p>DT – Formula 1</p> <p>DT2/1.1 Design DT2/1.1a use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>DT2/1.2 Make DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>DT2/1.3 Evaluate</p>	<p>DT – To Make Tea with the King</p> <p>DT2/2.1 Cooking & Nutrition DT2/2.1a understand and apply the principles of a healthy and varied diet DT2/2.1b cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet DT2/2.1c 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] DT2/2.1c understand the source, seasonality and characteristics of a broad range of ingredients.</p>

	<p>DT2/1.3a investigate and analyse a range of existing products</p> <p>DT2/1.3b evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>DT2/1.3c understand how key events and individuals in design and technology have helped shape the world</p> <p>DT2/1.4 Technological Knowledge</p> <p>DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>DT2/1.4b understand and use mechanical systems in their products</p> <p>DT2/1.4c understand and use electrical systems in their products</p> <p>DT2/1.4d apply their understanding of computing to programme, monitor and control their products.</p> <p>Paper Mache & paint</p>	<p>DT2/1.3a investigate and analyse a range of existing products</p> <p>DT2/1.3b evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>DT2/1.3c understand how key events and individuals in design and technology have helped shape the world</p> <p>DT2/1.4 Technological Knowledge</p> <p>DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>DT2/1.4b understand and use mechanical systems in their products</p> <p>DT2/1.4c understand and use electrical systems in their products</p> <p>DT2/1.4d apply their understanding of computing to programme, monitor and control their products.</p> <p>Cardboard, plastic, glue, pens.</p>	
6	<p>Design and Technology Research - use research and develop design criteria to inform the design of a functional, appealing products that are fit for purpose – 3D structures</p> <p>Design apply their understanding of computing to program, monitor and control their products and computer aided design</p> <p>Make – develop prototypes</p> <p>Evaluate – evaluate their ideas and products against their own</p>	<p>Design and Technology Make a tomb</p> <p>Research - use research and develop design criteria to inform the design of functional, products that are fit for purpose</p> <p>Design generate, develop, model and communicate their ideas through discussion, annotated sketches</p> <p>Make – select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping,</p>	<p>To design and make a stage set. Lighting Music Atmosphere</p>

	design criteria and consider the views of others to improve their work	joining and finishing], accurately Evaluate – evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world (History lessons)	
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Impact

Before our pupils leave Beechwood, we aim for them to feel confident and proud of their achievements in Design and Technology. Through the teachings of various skills that build off one another, our process will allow our students to experience a variety of creative and practical activities, including the crucial life skill of learning how to cook, enabling pupils to feed themselves and others affordably and well.