

Design Technology

Intent

Through a variety of creative and practical activities, we design purposeful and functional products based on a design criteria. DT encourages children to become independent, creative problem solvers by working as individuals or as part of a team. At Brotherton and Byram, our Design and Technology curriculum provides children with real life contexts for learning, opening up their understanding of further opportunities in the wider world. Along with this, we encourage and strive for our children to become confident and critical thinkers.

Implementation

Design and technology is taught in accordance with our long term plan. Throughout the whole school, DT is covered with cross curricular links; through science, topic or the art curriculum. The curriculum has been carefully mapped out across the school to ensure clear progression across all year groups. It is covered by a skills based curriculum supported by children having the ability to use their understanding of a design criteria and the choice of a wide range of tools available for the required task. Lessons consist of a research, design, construct and evaluate format. Experimentation is greatly encouraged and through discussion and evaluation, the children become equipped to ask exploratory questions, develop their critical thinking and form opinions on their own work and that of others

Impact

Finished products will be evaluated by children. The learning process and creativity will be evidenced in creative curriculum books and on Seesaw. At Brotherton and Byram, we strive for our children to be independent learners using exploration and imagination, whilst embedding the key skills needed to generate a unique finished product. This allows pupils to combine practical, creative and reflective skills enabling them to become discriminating and informed consumers and innovators.

BB Design Technology Knowledge and Skills Progression Overview							
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Units	- Make boats - Den building - Make bug hotels - Box modelling vehicles	Shelter Building Design a Kite Picnic	School STEM and Vehicles Food and nutrition	Local produce,	Earthquake proof structures	Christmas Decorations (Textiles) Mars Rovers	Bread making Renewable energy - Harnessing the Power of the Wind
Developing, planning and communicating ideas.	- They represent their own ideas, thoughts and feelings through design and technology.	- Draw on their own experience to help generate ideas. - Suggest ideas and explain what they are going to do. - Identify a target group for what they intend to design and make. - Present their ideas in card and paper. - Develop their design ideas applying findings from their earlier research.	-Generate ideas by drawing on their own and other people's experience. -Develop their design ideas through discussion, observation, drawing and modelling. -Identify a purpose for what they intend to design and make. -Make simple drawings and label parts.	- Generate ideas for an item, considering its purpose and the user/s - Identify a purpose and establish criteria for a successful product. - Plan the order of their work before starting - Explore, develop and communicate design proposals by modelling ideas - Make drawings with labels when designing	-Generates ideas, considering the purposes for which they are designing. -Make labelled drawings from different views showing specific features. -Develop a clear idea of what has to be done, planning how to use the materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail. -Evaluate products and identify criteria that can be used for their own designs.	- Generate ideas through brainstorming and identify a purpose for their product. - Draw up specification for their design. - Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail. - Use results of investigations, information sources, including ICT when developing design ideas.	- Communicate their ideas through detailed labelled drawings. - Develop a design specification. - Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. - Plan the order of their work, choosing appropriate materials, tools and techniques.
Working with tools, equipment, materials and components to make quality products (inc-food)	- Create simple representations of events, people and objects. - Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.	- Make their design using appropriate techniques. - With help measure, mark out, cut and shape a range of materials. - Use tools e.g. scissors and hole punch safely - Assemble join and combine materials and components together using a variety of temporary methods e.g. glue and masking tape. - Select and use appropriate fruits and vegetables, processes and tools. - Use basic food handling, hygienic practices and personal hygiene. - Use simple finishing techniques to improve the appearance of their product.	-Begin to select tools and materials; use vocabulary to name and describe them. -Measure, cut and score with some accuracy. -Use hand tools safely and appropriately. -Assemble, join and combine materials in order to make a product. -Cut, shape and join fabric to make a simple garment. Use easy sewing techniques. -Follow safe procedures for food safety and hygiene. -Choose and use appropriate finishing techniques.	- Select tools and techniques for making their product - Measure, mark out, cut, score and assemble components with more accuracy - Work safely and accurately with a range of simple tools - Think about their ideas as they make progress and be willing change things if this helps them improve their work - Measure, tape or pin, cut and join fabric with some accuracy - Demonstrate hygienic food preparation and storage - Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT	-Select appropriate tools and techniques for making their product. -Measure, mark out, cut and shape a range of materials, using appropriate tools. -Join and combine materials and components accurately in temporary and permanent ways. -Sew using a range of different stitches. -Measure, tape or pin, cut and join fabric with some accuracy. -Use simple graphical communication techniques.	- Select appropriate materials, tools and techniques. - Measure and mark out accurately. - Use skills in using different tools and equipment safely and accurately. - Weigh and measure accurately (time, dry ingredients, liquids) - Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens. - Cut and join with accuracy to ensure a good-quality finish to the product.	- Select appropriate tools, materials, components and techniques - Assemble components to make working products. - Use tools safely and accurately. - Construct products using permanent joining techniques. - Make modifications as they go along. - Pin, sew and stitch materials together to create a product. - Achieve a quality product.
Evaluating processes and products	- Checking how well their activities are going - Changing strategy as needed - Reviewing how well the approach worked	- Evaluate their product by discussing how well it works in relation to the purpose. - Evaluate their products as they are developed, identifying strengths and possible changes they might make. - Evaluate their product by asking questions about what they have made and how they have gone about it.	- Evaluate against their design criteria. - Evaluate their products as they are developed, identifying strengths and possible changes they might make. - Talk about their ideas, saying what they like and dislike about them.	- Evaluate their product against original design criteria e.g. how well it meets its intended purpose - Disassemble and evaluate familiar products	-Evaluate their work both during and at the end of the assignment. -Evaluate their products carrying out appropriate tests.	- Evaluate a product against the original design specification. - Evaluate it personally and seek evaluation from others	- Evaluate their products, identifying strengths and areas of development, and carrying out appropriate tests. - Record their evaluations using drawings with labels. - Evaluate against their original criteria and suggest ways that their product could be improved.