



Design Technology

Intent

At Chew Stoke Church School we aim to build a Design and Technology curriculum which develops learning resulting in the acquisition of both knowledge and skills. We will ensure that by the time children leave at the end of KS2, they will be able to actively participate in the technological world of our diverse and global society. Our Design and Technology Curriculum allows children make products that solve real and relevant problems within a variety of contexts based on a well-thought, child-led design brief and specification. Meaningful and purposeful cross-curricular links are made with Art and Design, Maths and Science to support children's breadth and depth of understanding, so children communicate their learning in a range of forms. We intend to design a curriculum that is inclusive of all pupils, which recognises the "whole child", equipping them with relevant subject knowledge, skills and understanding set out by the National Curriculum. We understand that schools must provide a balanced and broadly based curriculum which promotes the spiritual, moral, cultural, mental and physical development of pupils and prepares them for their future opportunities, responsibilities and experiences.

Implementation

To ensure high standards of teaching and learning in design and technology, we implement a curriculum that is progressive and purposeful throughout the whole school. Design and technology is taught through our cross curricular topics that link Maths, Science, Computing, Engineering and Art. Pupils develop key skills and explore their ideas through design and build projects using a range of media including food technology.

The design and technology curriculum at Chew Stoke Church School is based upon the 2014 Primary National Curriculum in England, which provides a broad framework and outlines the knowledge and skills taught in each Key Stage. Teachers plan lessons for their class with the support of 'Projects on a Page' and our progression of knowledge and skills document. Teachers can use these documents to plan their design and technology lessons suitable to their class's interests and what they want to learn about. The progression document ensures the curriculum is covered and the skills/knowledge taught is progressive from year group to year group.

When teaching design and technology, teachers should follow the children's interests to ensure their learning is engaging, broad and balanced. A variety of teaching approaches are used based on the teacher's judgement and their professional understanding of the pupils in their class. Larger projects and in class competitions are engaged with successfully by our pupils and their families, creating strong links between home and school. Our pupils also have the opportunity to experience Design and Technology in real life with involvement in local and regional STEM projects.

Educational visits are another opportunity for the teachers to plan for additional design and technology learning outside the classroom. At Chew Stoke Church School, the children have many opportunities to experience design and technology on educational visits. The children have visited local museums, food establishments and had visitors into school to share learning and have hands on experiences. Our teachers can also make use of our outdoor learning environment when planning for their students.

Impact

Children will have clear enjoyment and confidence in design and technology that they will then apply to other areas of the curriculum. Children will ultimately know more, remember more and understand more about Design Technology, demonstrating this knowledge when using tools or skills in other areas of the curriculum and in opportunities out of school. The large majority of children will achieve age related expectations in Design Technology. As designers children will develop skills and attributes they can use beyond school and into adulthood.

Progression of skills within Art & Design

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
S k i l l s	Design	Design purposeful, functional, appealing products for themselves Generate, develop, model and communicate ideas through talking and templates Explore existing products	Design purposeful, functional, appealing products for other users based on design criteria Generate, develop, model and communicate ideas through drawing, mock-ups and ICT Evaluate existing products	Develop design criteria to inform the design of functional products that are fit for purpose, aimed at an audience Generate, develop, model and communicate ideas through discussion and basic sketches Investigate a range of existing products	Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at an audience Generate, develop, model and communicate ideas through discussion and annotated sketches (from different angles) Analyse a range of existing products for their qualities	Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at an audience Generate, develop, model and communicate ideas through discussion, precise, annotated sketches (from different angles), cross-sections and exploded diagrams Analyse a range of existing products for their qualities and utility	Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at an audience Generate, develop, model and communicate ideas through discussion, precise, annotated sketches, cross-sections, exploded diagrams, prototypes, pattern pieces and CAD Analyse a range of existing products for their qualities, incl. aesthetics, and utility
	Make	Mark out and cut with support Use glue and sellotape with support Know how to be safe with scissors Use simple finishing techniques (i.e. going around the edge in black paint)	Begin to select tools and use correct vocab. to describe them; use the tools safely Measure, mark out and cut with some accuracy Assemble, join and combine materials Use finishing techniques to complete a project	Select tools for their work and begin to justify; use all tools safely Measure, mark out, score, cut and assemble with growing accuracy Use finishing techniques to complete a project and explain why it is improved (or not)	Select tools and techniques for their work and justify; use all tools safely Measure, mark out, cut and shape a range of materials Join and combine materials and components accurately	Select materials, tools and techniques for their work and justify; use all tools safely Measure, mark out, cut and shape a range of materials accurately Apply skills depending on the context (i.e. use of tools and equipment) Ensure a good quality finish to the product	Select materials, tools, components and techniques for their work and justify; use all tools safely Assemble components to make working models and modify where needed Apply skills depending on the context (i.e. use of tools and equipment) Ensure a high-quality finish to the product

	Evaluate	Discuss how well a product works in relation to its purpose Propose a change that could be made to improve their product	Discuss how well a product works and its strengths in relation to the design criteria Propose a change that could be made to improve their product and justify	Evaluate their product's strengths and weaknesses in relation to the design criteria Begin to evaluate how well the production of their product is going during the making stages	Evaluate their product's strengths and weaknesses in relation to the design criteria throughout the process Fully test out their product	In depth and detail, evaluate their product's strengths and weaknesses in relation to the design criteria throughout the process Peer evaluate with justification	In depth and detail, with multiple reasons, evaluate their product's strengths and weaknesses in relation to the design criteria throughout the process using drawings alongside writing Peer evaluate with detailed justification, esp. focused on improvements
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Design Technology - Class Curriculum Map

The majority of classes at Chew Stoke Church School are mixed age (will have a mix of 2 Year groups), as a result, the curriculum that has been developed runs over a two year cycle. This ensures that learning is never repeated and that knowledge builds on previous knowledge.

	Cycle	Autumn	Spring	Summer
Hedgehog Class				
Owl Class	A	Food- Design and make a healthy sandwich/ smoothie for a friend.	Mechanisms- wheels and axles. Design and make a vehicle for a toy.	Structures- Paper Mache. Design and make a friendship bracelet.
	B	Food- Christmas cakes/ gingerbread biscuits. Design and make food for a celebration.	Mechanisms- levers and sliders. Design and make a pop-up book for a pupil in Hedgehog class.	Textiles- design and make a bookmark for a friend or a character puppet to retell a favourite story.
Kingfisher Class	A	Structures	Food	Textiles
	B	Mechanisms	Textiles	Food
Woodpecker Class	A	Structures- flexible and stiff sheet materials.	Food- preparation and growing. Investigate a product (magnet game).	Complex structures (including electrical systems).
	B	Food (healthy diet).	Mechanisms- table top games.	Textiles- volcanoes
Fox Class	A	Food- design and make a mini quiche for a parents evening.	Gears, pulleys and levers.	Food theory- Health Squad.
	B	Food- design and make a veggie meal or veggie	Textiles- tree decoration.	Mechanisms- computer systems to control a

		parcel for Meat Free Mondays.		product.
Badger Class	A	Food - rationing and recipes. Structures - design and make an Anderson shelter.	Understand and use electrical systems in their products, e.g. series circuits incorporating switches, bulbs, buzzers and motors. <i>(Create a product for a chosen purpose; following on from Electricity in Science T1/2)</i>	Food theory - Health Squad.
	B			