



Cawston Church of England
Primary Academy

Design Technology Curriculum



Design and technology Vision

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making and evaluating products and systems.

Our vision at Cawston is to give all children a lifelong love of DT by **'Growing Excellence'** in all that they do.

- We begin by **'Planting'** knowledge, skills and enquiries throughout their time learning the skills within DT as they move between classes and key stages. Each skill and knowledge helps them to develop what they need to develop and progress onto the next stage.
- Jesus said that seeds will flourish if they are nurtured properly. All of the skills and knowledge a child needs in history are carefully developed by **'Nurturing'** them through quality first teaching, using excellent resources such as video demonstrations on Kapow. .
- Once all of this has been achieved, we will see them **'Flourishing'** as they apply all that they have learnt and communicate their findings in different ways including written and oral work.

Early Learning Goals Creating with Materials

ELG: Creating with Materials

Children at the expected level of development will:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;
- Share their creations, explaining the process they have used;
- Make use of props and materials when role playing characters in narratives and stories.

Key Stage 1 National Curriculum Expectations

When designing and making, pupils should be taught to:

- Design
 - Design purposeful, functional, appealing products for themselves and other users based on design criteria
 - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
- Make
 - Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
 - Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
- Evaluate
 - Explore and evaluate a range of existing products
 - Evaluate their ideas and products against design criteria
- Technical knowledge
 - Build structures, exploring how they can be made stronger, stiffer and more stable
 - Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
- Cooking and Nutrition
 - Use the basic principles of a healthy and varied diet to prepare dishes
 - Understand where food comes from.

Key Stage 2 National Curriculum Expectations

When designing and making, pupils should be taught to:

- Design
 - 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
 - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- Make
 - Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
 - 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
- Evaluate
 - Investigate and analyse a range of existing products
 - 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
- Technical knowledge
 - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
 - Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
 - Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
 - Apply their understanding of computing to program, monitor and control their products.
- Cooking and Nutrition
 - Understand and apply the principles of a healthy and varied diet
 - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
 - Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Intent

The aims of design and technology are:

- Develop the creative, technical and practical expertise needed to perform everyday tasks and to be able to participate successfully in an increasingly technological world.
- Build knowledge, understanding and skills to be able to design and make high-quality products for a wide range of users.
- Evaluate and test ideas and products.
- Understand and apply their knowledge of nutrition and learn how to cook.

To have a wide coverage of DT and ensure children are developing their skills and knowledge to give themselves the best grounding going forwards.

For children to think creatively, but also critically and be able to evaluate their work.

For children to be willing to experiment and have the resilience to adapt and change things when it doesn't go to plan.

To ensure that each year their knowledge builds upon what they have learnt before.

For all children to understand the principles of a healthy, varied diet.

As they move through the school, to prepare and cook a variety of dishes and to develop their cooking techniques.

To understand where ingredients come from and the journey they go on.

Implementation

An enquiry based approach has been implemented across the curriculum. Our aim is to focus on the knowledge and skills stated in the National Curriculum. Carefully planned topics ensure there is a progression of skills and knowledge across the school with teachers planning engaging lessons that follow our progression of knowledge and skills document. As our children progress through KS1 and KS2 they build upon these foundations and are able to apply and deepen their skills and understanding.

Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum. This is implemented through:

- A well thought out, whole school, yearly overview of the DT curriculum which allows for progression across year groups in all areas of DT (textiles, mechanisms, structures, food and electrical systems)
- Well planned and resourced projects providing children with a hands-on and enriching experience
- A range of skills being taught ensuring that children are aware of health and safety issues related to the tasks undertaken
- Teachers being given ownership and flexibility to plan for Design and Technology; often teaching DT as a block of lessons to allow the time needed for the children to be critical, inventive

and reflective on their work.

- Each project from Year 1 to Year 6 addresses the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.
- Pupils being introduced to specific designers, chefs, nutritionists, etc. helping to engender an appreciation of human creativity and achievement and increase the cultural capital from which they can draw in the future.

As a school, we promote Design and Technology in the wider school through an after school STEM club. We also tend to a school orchard where the children can begin to know where our food comes from. They also learn the importance of a balanced, healthy and varied diet and how to prepare this.

Early Years Foundation Stage

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

Impact

Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through carefully planned and implemented learning activities the pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They gain a firm foundation of knowledge and skills to see them equipped to take on further learning in High School. Pupil's skills and knowledge are assessed by the class teacher. This informs the Design and Technology coordinator of any further areas for curriculum development, pupil support and/or training requirements for staff. EYFS pupils' progress and attainment tells us whether each individual child is below expected, at expected or above expected attainment for their age.