

Design and Technology



- At St Aidan's, we strive to provide our pupils with the opportunity to learn Design and Technology as an inspiring subject which offers our children the opportunity to be innovative and creative thinkers who have an appreciation for their product through the design cycle of research, ideation, creation, and evaluation. We want our pupils to develop their confidence and to take risks, through drafting design concepts, modelling, testing and to be reflective learners who evaluate their work and the work of others. Our aim is to build an awareness of the impact of design and technology in our lives; to understand how the world has changed and that products we use every day have been designed and manufactured to meet their intended purpose.
- We aim to, wherever possible, draw upon subject knowledge and skills within other curriculum areas such as mathematics, science, computing, and art.
- All teaching of Design and Technology should follow the Research, Design, Make, Evaluate cycle. In key stage 2 the pupils are given the opportunity to do a final make to improve their product using their evaluation. When designing, pupils should be provided with real-life issues and contexts to give a purpose to the process. During the making process, pupils should be able to access and choose from a range of equipment and tools. In the final stage, pupils should be able to evaluate their product using design criteria. Throughout each of these stages, pupils will be exposed to technical language, knowledge, and skills.
- The key skills and knowledge for Design and Technology have been mapped across the school to ensure skills progression between year groups.

- **Intent – What are we trying to achieve?**

Design and Technology is an inspiring subject that offers children the chance to work collaboratively and gain knowledge and skills to research, design, make and evaluate. They will design a product that has a purpose, which they can relate to everyday life and how it has an impact on theirs or other people's lives.

- **Implementation – How do we translate our vision into practice?**

The children will have the opportunity to develop their technical skills and understanding of:

- Safely taking risks and being made aware of dangers.
- To be reflective learners by evaluating theirs and others' products.
- Problem solving in a variety of contexts.

- Textiles and sewing techniques.
 - Structure such as how can you make your structure stronger.
 - Mechanisms - Which is the best mechanism to make a moving toy?
 - Food and Nutrition - How to design and make a healthy meal.
 - Electrical - To design and make lights to light up a ferris wheel
- Design and Technology is usually taught in short blocks during alternative half terms, although class teachers are able to decide how and when they deliver their lessons.
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- **Impact- What is the impact of the curriculum on our pupils?**
 - The ability to work constructively with others.
 - The ability to carry out research, ask questions to improve their understanding and knowledge of technology, as well as use their imagination and creativity to produce their product.
 - The ability to manage risks and produce products safely and hygienically.
 - The ability to understand and apply the principles of nutrition and learn how to plan and cook a healthy meal.
 - To be reflective in order to produce an even better product.

EYFS

The EYFS Framework is split into areas rather than subjects; the Early Learning Goals most relevant to Design and Technology are as follows:

- Physical development - Progress to a more fluent style of moving, with developing grace/ developing fine motor skills in order to use a wide range of tools competently, safely and confidently/ using core muscle strength to achieve a good posture when sitting at a table or sitting on the floor
- Expressive Arts and Design - Explore, use and refine a variety of artistic effects to express their ideas and feelings/returning to and build on previous learning, refining ideas and developing their ability to represent them//creating collaboratively, sharing ideas, resources and skills/ safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function/share creations, explaining the process they have used.

Please see the EYFS Curriculum Map for the Early Years Curriculum.

Curriculum Map - KS1 & KS2

	Autumn term	Spring term	Summer term
Year 1	Use own ideas to design a windmill with rotating sails and describe how their own idea works. Explain to someone else how they want to make their windmill and make a simple plan before making. Evaluate model.	Taste Ed What constitutes a 'healthy diet' and the principles of planning and preparing a range of healthy meals. Children will learn how to use their senses to explore different foods and finish by making a healthy sandwich.	Make a moving minibeast.
Year 2	Think of an idea for a fire engine with working wheel axles and build. Evaluate model.	Use own ideas to design a bird feeder. Ensure the design is practical for use by the birds.	Taste Ed What constitutes a healthy diet' and the principles of planning and preparing a range of healthy meals. Children will be able to explain how foods taste different when combined together.

Year 3	Design an automated shadow puppet, choosing suitable materials. Create a plan for making the puppet.	Taste Ed What constitutes a 'healthy diet'. Children will learn about how to balance foods to create salads and a beetroot hummus.	Design a woven piece investigating different textures. Practice ideas using paper weaving. Know how to tie off the ends of a woven item to prevent unraveling.
Year 4	Create a storybook.	Taste Ed What constitutes a 'healthy diet'. Children will learn how to design their own salad using food common during the Tudor period.	Produce an annotated plan for alarms and explain how the circuit works. Use research to inform ideas. Adapt work when original ideas do not work.
Year 5	Design and make a festive lavender cushion and sell at the Christmas Fair.	Taste Ed What constitutes a 'healthy diet'. Children will learn about the varieties of fruits and vegetables that are available.	Design a vehicle that requires cams or gears. Come up with a range of ideas after collecting information from different sources. Produce a detailed, step-by-step plan.
Year 6	Taste Ed What constitutes a 'healthy diet'. Children will learn how to make carrot soup.		Design a merry go round / Ferris wheel using a motor, pulleys, gears and a computer-based control system. Know how raspberry pi can be used to control the object.