



Design and Technology

INTENT

At St Augustine's, we value Design and Technology as an important part of the children's entitlement to a broad and balanced curriculum. Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, we want children to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We want children to acquire a broad range of subject knowledge and work in a cross-curricular manner, making links to other subject areas such as mathematics, science, computing and art. We want children to learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. We believe that through the evaluation of past and present design and technology, children will develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of society.

Children at St Augustine's will have the opportunity to:

- 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.

IMPLEMENTATION

The implementation of Design and Technology at St Augustine's begins in the Early Years Foundation Stage, where children's learning is primarily delivered through the Expressive Arts and Design area of learning; in particular, the Creating with Materials and Being Imaginative and Expressive strands. Learning in the EYFS takes place in two forms, child initiated and adult directed activities. Both are an important and integral part of the Design and Technology journey that children will go on through their time at St Augustine's. In the Early Years, Expressive Arts and Design is delivered on a two-year cycle, ensuring a range of coverage throughout the one to two years' children are with us before starting their journey in KS1. The curriculum within EYFS provides a rich context for the pupils to begin to explore Design and Technology and a wide range of vocabulary, preparing them for progression to the National Curriculum in Year 1 and beyond.

At the end of the EYFS, children should:

- 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.

The implementation continues into KS1 with the National Curriculum objectives beginning to be delivered. At St Augustine's, we use the Design and Technology Association scheme, Projects on a Page, to enhance our delivery of the subject, whilst continuing to fulfil the National Curriculum objectives. Design and Technology is taught termly as a minimum expectation with ongoing projects completed throughout the year in a cross-curricular manner to support learning in other curriculum subjects.

Children will experience an exciting and varied design and technology curriculum which develops their knowledge and skills. Well planned and resourced projects provide children with a rich, hands-on experience of D&T and all it entails. Each project undertaken by the children will be broken down into 3

steps: investigative and evaluative activities, focused practical tasks and finally, the design, make, evaluate assignment. These three steps ensure a coverage of key D&T knowledge and skills, firmly embedding the core principles of a high quality D&T education.

At the end of KS1, children should:

- 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.
- 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.
- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.
- 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.
- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

At the end of KS2, children should:

- Work in a range of relevant contexts e.g. home, school, leisure, culture, enterprise, industry and the wider environment.
- 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
- 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
- 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
- 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.
- 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.

IMPACT

We measure the impact of our Design and Technology curriculum at numerous points throughout the year. We do this in a variety of ways:

- Children's work assessed against the design criteria decided upon at the end of a project
- Summative assessment completed by teachers termly

- Observations of classroom learning
- Photographs of completed projects
- Pupil voice interviews
- Moderating D&T practice as part of a wider collective MAC and Synergy network
- Annual reporting on D&T standards to school staff

By the time every child leaves St Augustine's they will have a bank of skills and knowledge as well as the confidence to be able to explore the skills involved in D&T for their own pleasure and well-being. They will have explored a range of techniques and developed an enjoyment of and confidence in their D&T work.