St Anne's R.C Nursery and Primary School

Design & Technology Policy 2022-23

Design and Technology

Intent

At St Anne's R.C. Nursery and Primary School we intend to build a Design and Technology Curriculum which develops learning and results in the acquisition of knowledge and skills. Children will know more, remember more and understand more.

We intend to create a Design and Technology Curriculum with appropriate subject knowledge, skills and understanding as set out in the National Curriculum Design and Technology Programmes of study. We aim to fulfil the duties of the NC whereby 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 the opportunities and responsibilities and experiences for later life.

Implementation

- Clear and comprehensive scheme of work in line with the National Curriculum. The Design & Technology National Curriculum and EYFS is planned for and covered in full within the EYFS, KS1 and KS2 school curriculum. Whilst the EYFS and National Curriculum forms the foundation of our curriculum, we make sure that children learn additional skills, knowledge and understanding and enhance our curriculum as and when necessary.
- Delivery of D&T projects with a clear structure- each year group will undertake a construction topic, a textile topic and a food/drink topic.
- Delivery showing clear following of the design process where each project will follow: research, design, make and evaluate.
- A range of skills will be taught ensuring that children are aware of health and safety issues related to the tasks undertaken.
- Clear and appropriate cross curricular links to underpin learning across the curriculum, giving the children opportunities to learn life skills and apply skills to 'hands on' situations in a purposeful context.
- Children will undertake design tasks and use skills from across the curriculum to fully explore the design process, evaluating their work to ensure that it is of the highest possible quality. These projects will be assessed against the curriculum objective and children will self-evaluate their work.

- Independent learning: In D&T children will be asked to solve problems and develop their learning independently. This allows the children to have ownership over their curriculum and lead their own learning in D&T.
- Collaborative learning: In D&T children will be asked to work as part of a team, learning to support and help one another towards a challenging, yet rewarding goal.

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 and 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 and Technology.
- As designers, children will develop skills and attributes they can use beyond school and into adulthood.

Why is DT important at our school?

- Design and Technology is an inspiring, rigorous and practical subject, using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts
- Children consider their own and others' needs, wants and values
- Children acquire a broad range of subject knowledge and draw on disciplines such as maths, science, engineering, computing and art
- Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens
- Through evaluating past and present design and technology children 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 the nation.

What are the key knowledge concepts in Design & Technology at our school?

Skills and understanding	Creativity	Competence
Drawing Painting Sculpting Sketching Mixing Shape Space Nets Researching Manipulating malleables Joining methods Structures Mechanisms Materials Electrical knowledge Nutrition Plan Design Critique	Colour Pattern Texture Imagining Reasoning Designing Imitation Innovation Enterprise	Evaluating Analysing Invent Create Experiment Researching Selecting appropriate tools and media Sustainability
Cultural	**Language**	
History Craft workers Designers Architects Cultural trends Tradition Industry	Print Perspective Landscape Portrait Construction Characteristics Proportion Technical Aspects Prototype Product Consumer Plan Design Critique Structures	

What are the key D&T subject discipline skills?

- Children can experiment, invent and create their own works of design and technology
- Children can think critically and develop a more rigorous understanding of design
- Children know how design &technology reflects and shapes our history and contributes to the culture, creativity and wealth of our nation
- Children can produce creative work, exploring their ideas and recording their experiences
- Children are proficient in researching, designing, creating and evaluating products
- Children can evaluate and analyse creative works using the language of design technology
- Children develop their technical knowledge applying their understanding
- Children are taught to cook and apply their principles of nutrition and healthy eating

How does our school ensure progression in our key knowledge and concepts in DT?

- The curriculum identifies points where comparisons can be made
- Key concepts are revisited year on year to consolidate pupils understanding
- Knowledge that is taught builds on prior learning and is therefore more in-depth
- Increasing complexity of subject specific language and precision is expected
- Children are able to make comparisons between different artists, designers and craft makers that have been studied
- Children will develop their understanding and use of the language of design technology
- Children will be able to think critically and develop a more rigorous understanding of design technology

How we know children have made progress:

End of Foundation Stage

Children can

Expressive Arts and Design 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.
- Handle equipment and tools effectively

End of KS1

Children can

Cooking and Nutrition

- Understand the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

Design

- Design purposeful, functional, appealing products for themselves and other users based on a 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 (e.g. 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 and identify changes they would make.

Technical Knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms (e.g. levers, sliders, wheels and axles) in their products

End of KS2	
Children can 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 and processed Design • Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individual groups • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional, exploded diagrams, prototypes, pattern pieces and computer-aided design Make • Select from and use a wide range of tools and equipment to perform practical tasks • Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and according to their functional properities and aesthetic qualities according to their functional properities	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 work • Understand how key events and individuals in design and technology have helped shape the world Techical Knowledge • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures • Understand and use mechanical systems in products (e.g. gears, pulleys, cams, levers and linkages) • Understand and use electrical systems in their products (e.g. bulbs, buzzers, motors) • Apply their understanding of computing to program, monitor and control their products

St Anne's D&T Long-Term Overview:

Class	Autumn	Spring	Summer
1	Free standing structures	Cooking and nutrition: Titanic tea party	Mechanisms: wheels and axles
2	Mechanisms: sliders and levers	Textiles: puppets	Food technology: cooking around the world
3	Healthy lunchboxes	Linkages and levers	Structures
4	Food: bread	Textiles: Amazon animals	Electronics: simple circuits and switches Electronic game?
5	Mechanism: a moving card	Reactions: control	Food: Celebrating Culture
6	Textiles: making mittens	Construction/ electrical circuits Vehicle	Food: seasonality variety of ingredients are grown, reared, caught and processed.