The Forest CE Federation

'Small enough to care. Large enough to inspire. Valuing all God's children.'

'All things are possible for one who believes' - Mark 9 v 23

Design and Technology Policy

Date: 20th June 2025

Date to be reviewed: 20th June 2027

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Our Curriculum Intent

The Forest CE Federation aims to provide children with an exciting, broad and balanced curriculum that will instil a love of learning. Our approach enables all children to become lifelong learners by developing transferable skills to equip them to succeed in a competitive world. A strong **Christian** ethos permeates through our daily lives ensuring our pupils are cared for in a safe, nurturing environment within our small **community.**

Everyone is valued as an individual and helped to develop and progress in their own unique way within a Christian environment. Our vision**,** ***'Small enough to care. Large enough to inspire. Valuing All God's children'*** is at the core of everything we do.

The curriculum we offer is not merely academic, but embraces the spiritual, moral, social and cultural development of all pupils and is deeply rooted in our vision that:

'All things are possible for one who believes' (Mark 9 v23)

We believe in the "whole child" and are committed to children's wider well-being through our **creative** inclusive curriculum, which is driven by our spiritual values.

Our curriculum is designed to spark **curiosity** in young minds through carefully planned opportunities for pupils to acquire, apply and master their knowledge and skills in a unique learning environment.

We know that a child who feels happy, safe and secure will have the **confidence** to try their best and achieve in all that they do. We endeavour to provide all children with the knowledge, skills and environment in which to thrive.

Our curriculum is underpinned by two main threads:

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- **For ALL our children to develop high levels of oracy. To have a rich and broad vocabulary, to be confident and literate within society.**

- **To know about the world: to know what it has to offer, how it differs from their locality and how others experience the world.**

We define progress as the widening and deepening of essential knowledge, skills, understanding and behaviours. This is done through how we deliver our curriculum: Continuous Provision.

Introduction

Design and Technology is an integral part of modern society. A practical understanding of key subject knowledge, critical thinking, and the application of wider disciplines - including those relating to Science, Engineering, English and Mathematics - coupled with creativity and imaginative thinking is vital for every child and is something that we are keen to foster within our federation of schools. The main areas of study will be determined by the updated National curriculum (September 2013).

Aims

- To develop pupils' interest in, and enjoyment of all aspects of Design and Technology, including Textiles, Structures and Mechanisms, Electrical Devices, Digital Literacy and Food and Nutrition.

- To provide pupils with opportunities to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- To familiarize children with and encourage the application a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users and purposes
- To provide opportunities to develop communication and reflection skills through critiquing, evaluating and testing their ideas and products as well as the work of others
- To ensure each child has the chance to develop their understanding of and apply the principles of nutrition to learn how to cook.
- To ensure children receive a D&T education in line with the expectations of the National Curriculum. This will cover the breadth of the national curriculum, across all strands, going into depth where possible.

Key Principles of Teaching and Learning

Differentiation and Promoting a Love of Learning

Design and Technology will be planned to ensure it is accessible and engaging for all pupils within the classroom. Work will be differentiated to support SEN pupils whilst being differentiated accordingly to allow all pupils to challenge themselves at all ability levels. Children's interests within a studied topic will be pursued and explored further wherever possible to foster children's enjoyment of the subject and emphasise the relevance of DT as a key skill for everyday life. In addition to this, extra-curricular activities and trips will be organised, wherever possible, to foster an intellectual interest in design and technology in general.

Depth and Balance

All staff will have a clear understanding of the teaching criteria, subject specific vocabulary, core concepts and technical skills being taught, with class teachers being able to respond to in depth questions regarding each core strand of Design and Technology. Where this is not possible, teachers will collaborate, aide and assist with research. This will promote research skills, an in-depth understanding of the subject, and an investigative and inclusive ethos where children feel it is ok not to know the answers and delight in researching and understanding more challenging concepts and ideas, alongside their peers and teachers.

Children will cover concepts outlined for their year group by the National Curriculum using their interests, experiments and their research as a catalyst to promote their understanding and enjoyment. Teachers will build on the Kapow Primary scheme of work which provides a strong foundation for primary DT in accordance with the new National Curriculum. This will ensure children are enthused and engaged and receive full coverage of the National Curriculum areas for their year group.

Key teaching principles

As a teaching team we feel the Kapow scheme aids us in developing a strong foundation of understanding within Design and Technology. It helps us with some of our key principles by;

1.) **Developing a 'spirit of enquiry'-** through practical project-based work and research that will inspire all children.
2.) **Making tricky concepts meaningful for pupils-** It provides practical examples that scaffold and develop children's understanding of complex concepts or skills which may be utilised in later life. The scheme also

provides 'real life' examples of more abstract or tricky concepts to allow the children to see the relevance of their newly gained knowledge.

3.) **Providing clear progression and differentiation-** This allows children of all ability levels to be supported, enthused and challenged by the learning explored within lessons. This in turn helps all children to be supported and move forwards with their understanding in each session.

Cross-curricular links

Design and Technology, as well as the study of Creative Arts in EYFS, have close links with a wide range of other academic subjects. As such it is important to emphasise this. DT relies on and provides opportunities to further develop a pupil's literacy and mathematics. Furthermore, the focus on creativity, ingenuity and problem-solving provides an opportunity to link learning to Art and Design as well as Science. Within our school, we feel it is also key to highlight the fact that DT often links itself closely to other academic disciplines. This may be through discussion or using key literacy skills in creating a design brief or writing advertisements or numeracy skills in simple data analysis, use of measurements and application of geometry.

Continuity and Progression

Foundation Stage

Foundation Stage children will investigate Design and Technology through the Early Years Curriculum, specifically through the 'Physical Development' and 'Expressive Arts and Design' areas of learning. At an early age, we are keen to promote children's enthusiasm when it comes to DT and showcase DT as a multi-disciplinary subject area. Alongside this, we want children to view the subject as a discipline in which they can investigate and explore areas which they are interested in and view Design and Technology as a form of self-expression and to develop life skills, as well as a means to sate their curiosity

about the wider world. Within the Forest Federation we are in a strong position to do this due to:

- our topic-based learning approach;
- our implementation of continuous provision;
- and our practitioners using children's interests to lead their exploration of the EYFS curriculum.

Key Stage 1

Pupils within Key Stage 1 will be introduced to DT through a variety of creative and practical activities which will introduce them to the knowledge, understanding and skills necessary within the designing and making process. These aspects will aim to inspire children and further fuel their enthusiasm for DT, building on the strong foundations established in our foundation stage settings. Again, where possible children's interests within topic areas will be explored further. Children will gain an understanding of some key steps within the designing and making process, where relevant to their area of study, as outlined by the National Curriculum.

Pupils will learn to design purposeful, functional and appealing products for themselves, and others based on a design criterion; generate, develop, model and communicate their ideas 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] and select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Furthermore, pupils will also develop their technical knowledge through building structures, exploring how they can be made stronger, stiffer and more

stable explore and using mechanisms [for example, levers, sliders, wheels and axles] in their products as they progress through Key Stage 1.

Key Stage 2

Within KS2, pupils will be provided with opportunities to expand and develop their knowledge, understanding and skills needed to further engage in the iterative process of designing, making, and evaluating a variety of different products for a range of desired purposes and audiences. Throughout Lower and Upper Key Stage 2, our pupils will work in a range of relevant contexts, including those in the wider world beyond home and school, to further apply their technical skills across a range of Design and Technology units, including those focusing on Textiles, Structures and Mechanisms, Electronic Devices, and Food and Nutrition. Throughout these different projects, pupils in KS2 will strengthen their design skills by using research and developing a design-criteria to inform the design of increasingly innovative, fully functional, aesthetically appealing products that are fit for purpose, aimed at specific individuals or group demographics. They will also generate, develop, model and communicate their ideas through group or paired discussion, annotated sketches, including cross-sectional and exploded diagrams, demonstrate and discuss their prototypes, and utilise digital literacy skills and computer-based presentations to more effectively communicate their thoughts and ideas.

They will also develop practical skills by learning to select from and use a wider range of tools and equipment to perform practical tasks. For example, cutting, shaping, joining and finishing with greater finesse and accurately. Additionally, pupils will learn to select from and use a wider range of materials and components, including construction materials, electronic components, textiles and ingredients, according to their functional properties and aesthetic qualities.

Furthermore, within KS2, pupils will be provided with further opportunities to develop their evaluation and self-reflection skills through the investigation and analysis of a range of pre-existing products, discussing and identifying key features, potential strengths and shortcomings. They will learn to better

evaluate their ideas and products against their own design criteria and consider the views of others to help improve their work, offering suggestions which may be used were they to create additional prototypes. The teaching provided will ensure that pupils understand how key events and individuals in design and technology have helped shape the world through exploring different case studies from existing products and inventors.

KS2 pupils will further develop upon the foundations of technical knowledge established in KS1 by applying their understanding of how to strengthen, stiffen and reinforce more complex structures, using mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages), using electrical systems within their products (for example, series circuits incorporating switches, bulbs, buzzers and motors) and by applying their understanding of computing to program, monitor and control their products.

Equal Opportunities

All children are entitled to access the Design Technology curriculum in line with the school's policy for equal opportunities. As we teach mixed aged classes, teachers can adjust lessons to stretch and support all children regardless of age.

Resources and Health and Safety

Central resources in Design Technology are the responsibility of the DT lead and Class teachers. All planning and resource masters are stored on Teams in the Forest Federation Team, under 'All Planning'. In addition to this, resources related to DT can be located within the Subject Leadership file under 'Curriculum'. Practical resources are stored in individual school attics and sheds. Class teachers are expected to re-order consumables as necessary. Each class teacher has a responsibility to teach children how to use tools and techniques safely.

Assessment

Formative assessment is used to guide the progress of individual pupils in DT. It involves identifying each child's progress in each area of the Design and Technology curriculum (including within Food and Nutrition), determining what each child has learnt and what therefore should be the next stage in his/her learning. Teachers, over the course of their teaching, will typically carry out formative assessment informally. Tasks include:

- Small group discussions, usually in the context of a practical task;
- Specific arrangements for particular pupils;
- Individual discussions in which children are encouraged to approve their own work and progress;
- Utilising elements of peer-assessment via use of paired discussion or and open discussion wherein pupils are prompted to provide constructive feedback against the design criteria;
- Marking of and next steps (in the form of an observation, task, or question) of children's work;

Summative assessment may take place at the end of each term and will take place at the end of each academic year, when a representation of the child's

attainment is given. This assessment may be carried out through discussion and/or assessment sheets, often including a pupil's self-evaluation of a completed product. Wherever possible opportunities for practice-based work should form the basis for the teaching and assessment of Design and Technology. All pupils should be given many opportunities to demonstrate their theoretical understanding and to apply a range of studied design, construction and evaluation skills. During each term, a project will be assigned to assess children's knowledge and skills within each core discipline of Design and Technology (Textiles, Structures and Mechanisms, Electrical systems, the Digital World as well as Cooking and Nutrition).

The Role of the Science Coordinator

The Design and Technology Lead is to:

- Take the lead in policy development and the implementation of the Scheme of Work;
- Support colleagues in their development and implication of plans;
- Monitor the resources in DT and inform the Head Teacher of any action needed;
- Take responsibility for the purchase and organisation of central resources for DT;
- Keep up to date with developments in DT education and disseminate information to colleagues as appropriate;
- Monitor the teaching and learning of DT throughout the school.

Review

This policy will be reviewed in full at the end of the academic year by the DT Coordinator. It will also be looked at and amended in light of any changes to

the Forest Federation, the National Curriculum or if another relevant reason should arise. Amendments and changes will be passed on to the senior leadership team for approval and will be updated electronically within 2 working weeks.

Signed (D&T co-ordinator):

Mrs C. Howe

Mr J. Griffiths

Signed (Executive Headteacher):

Mrs E. Hollis