



St Kentigern's Catholic Primary School

MISSION STATEMENT:



Design & Technology Policy

Design Technology Subject Leader: Mr Willis

Intent – Why do we teach what we teach?

St Kentigern's intends to offer a relevant, broad, vibrant and ambitious Design & Technology curriculum that will:

- allow learners to become secure in the planning, design, making and evaluation of products to such an extent that they can go on to have careers within Design and Technology or make use of design and technology effectively in their everyday lives. Inspire children's creativity so that they will build upon the skills they learn and develop hobbies, interests in these areas.
- follow a sequence of learning which builds on previous learning to develop a genuine interest and positive curiosity about creativity and design. The scheme will allow children to see key areas of Design Technology where their ideas can be developed: these are textiles, cooking and nutrition, mechanical systems, digital systems, electrical systems and structures.
- allow children to gain experience and skills of a wide range of formal elements of design and concepts of technology in a way that will enhance their learning opportunities, enabling them to use design and technology skills in a range of other subjects to become creative and solve problems.

Statutory Requirements

Statutory requirements for the teaching and learning of Design Technology are laid out in the for Key Stage 2 in the National Curriculum 2014. Pupil provision is related to attainment, not age. All children will have exposure to the Curriculum of the Year group in which they are in, but may require the opportunity to secure and build upon learning where necessary.

In Key Stage One (Year 1 and 2) Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds,

the local community, industry and the wider environment].

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

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:

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

In Key Stage Two (Years 3, 4, 5 and 6) Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

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

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:

- 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.

Implementation – How do we teach what we teach?

All classes will have access to a very high-quality curriculum using a modified version of the Kapow scheme of work and resources. This will progressively develop pupil skills in Design Technology through regularly taught and well-planned lessons. Design Technology will be taught discretely in order to ensure the quality of the skills being taught and the vocabulary being learnt, yet links will be made to support other areas of the curriculum and enhance children's engagement. Children will progressively acquire, use and apply a growing bank of vocabulary, language skills and grammatical knowledge organised around age-appropriate topics and themes. The overview will allow children to develop their skills in key Design Technology areas: these are textiles, cooking and nutrition, mechanical systems, digital systems, electrical systems and structures.

The planning of different levels of challenge and which units to teach at each stage will be addressed dynamically and will be reviewed in detail annually as units are updated and added to the scheme. Lessons offering appropriate levels of challenge and stretch will be taught at all times to ensure pupils learn effectively, continuously building their knowledge of and enthusiasm for the subject they are learning.

Clear 'end points' for each unit ensure all children are progressing with their Design Technology learning and that appropriate skills are being taught. The curriculum overview of units and end points serves as an overall 'teaching map' outlining for all teachers within the school what each class in each year group will be taught and when it will be taught in each year group, yet learning will be modified to consolidate skills to meet the needs of the children so that learning progresses at a pace which allows children to build their skills and confidence.

Units are standalone, yet skills progressively develop as the learners move into a new year group. As pupils progress through the lessons in a unit they will build their knowledge and develop the complexity of the language they use. Pupil learning and progression will be assessed at regular intervals in line with school policy. Teachers will aim to assess children's attainment at the end of each unit, and then summatively at the end of the academic year.

In addition to following the lessons provided in the Kapow scheme of work and resources, Design Technology assemblies will be held in Key Stage to raise the profile of this subject within the school.

Impact – How do we know what students have learnt and how well they have learnt it?

Pupils will continuously build on their previous knowledge as they progress in their Design Technology learning journey. Previous vocabulary and skills will be recycled, revised, recalled and consolidated whenever possible and appropriate. The overview of different topics and end points will allow pupils to achieve their learning goals and progress through each unit. They will know and will be able to articulate if they have or have not met their learning objectives and build up their folder of acquired learning and vocabulary from unit to unit.

Our children will progress with their knowledge of the process of designing, making and evaluating and use

vocabulary, relevant to their learning. They will develop an understanding of the importance of planning and preparation, careful construction and then critical thinking and evaluation. This process aims to develop children who understand and develop a resilient attitude to the cycle of design, which will allow them to find success in later life.

Assessment and Reporting

Formative Assessment

Formative assessments are carried out in each lesson to ensure children are making progress. They enable the teacher to determine what each child has learned and what should be the next step in their learning. Staff will use their professional judgement through observation of children when working and using materials, looking at their work in lessons and assessing attainment of the learning objectives to decide what steps will be next on the child's learning journey and where support is required. An end of unit assessment is created to identify which children have found difficulty with the learning and comment upon the reasons this may be.

Summative Assessment

Termly summative judgements are made in relation as to whether pupils are working at age related expectations, towards age related expectations (entering) or if they are exceeding age-related expectations based upon the progress within each of the topic areas.

Monitoring and Progression

Monitoring

At least termly, the Design Technology Subject Leader will:

- Monitor children's Design Technology work/photos to check the whole-school approach to the teaching of Design Technology (as outlined in this policy) is being followed;
- Carry out learning walks to monitor learning environments;
- Conduct pupil voice sessions in which children will be given the opportunity to express their feelings towards learning Design Technology and showcase their learning and understanding of vocabulary. The Design Technology subject lead will use this opportunity to judge children's progress and attainment towards the end points in each year group in order to make recommendations to the teachers about which direction to progress next with the teaching of Design Technology.

Updates with Design Technology will be communicated with during staff meetings with all teaching staff so that staff can share the same, correct, consistent approach to delivering Design Technology and assessing Design Technology in line with the most recent guidance.

Following on from any monitoring that is carried out, feedback is provided to staff. Any areas that require improvement are discussed with staff, with support offered (where necessary) and steps for moving forward agreed.

Progression

Teachers use the school overview, the end points documentation and Kapow resources to ensure lessons are planned to match the statutory requirements of the National Curriculum 2014.

Inclusion and Interventions

Inclusion

We aim to provide for all children so that they achieve as highly as possible in Design Technology, according to their individual abilities. Staff will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Higher attaining children are identified and suitable learning opportunities are provided in order to ensure adequate challenge and opportunities for progression.

Interventions

Intervention opportunities are identified through teacher assessment and these are noted on the end of unit assessment. Key areas of learning requiring further development and support are identified by the class teacher and the subject lead in order to identify the direction that key learning is to take. The subject lead will gather the

teacher assessments and then will liaise with the Family Support Worker, who will carry out small intervention groups which focus on various fine-motor and equipment skills where children have found difficulty e.g. chopping vegetables, using equipment such as scissors, using a needle and thread etc.

Home/School links

Parent/carer – teacher dialogue and co-operation is encouraged at all stages of a child’s school life, and in all aspects of the X curriculum.

Reporting to parents/carers:

Formal reporting to parents/carers of attainment, progress and targets takes place annually in the end of year report. Parents/carers are given the opportunity to discuss their child’s report and progress by appointment, when necessary.

Teachers communicate frequently with parents and carers via the Class Dojo app; they can use this to share what the child is learning and the learning intentions each half-term are communicated.

The role of the parent/carer

Parents/carers can play a key role in their child’s Design Technology development and progress by encouraging children to discuss their learning in class as well as by discussing the overviews shared with parents each half term. Resources are sent home to parents/carers to assist them in helping their child – for example, home learning tasks which support the learning and skills taught in each topic and documents such as vocabulary banks and knowledge organisers.

Equal Opportunities

All children are provided with equal access to the Design Technology curriculum, through suitable learning opportunities, regardless of gender, ethnicity, religion or home background.

Children with specific writing difficulties or physical disabilities are identified and supported through support programmes in school and, where necessary, external help is sought.

The Governing Body

The School X Governor (Caron Walker) works closely with the Design Technology Subject Leader to monitor the subject. They meet frequently to:

- Discuss developments in Design & Technology;
- Share key documents such as the annual Subject Improvement Plan;
- Share findings of learning walks, lesson visits, book scrutinies and any other moderations carried out, and discuss how the results of these will inform future practice and next steps in the subject.

Supported by the Subject Leader, the School Design & Technology Governor writes reports to Governors, sharing any relevant Design & Technology updates and detailing the impact and effectiveness of the current provision in school. Reports are shared with Governors in Full Governing Body meetings, providing all Governors with the opportunity to discuss, question and monitor the effectiveness of the teaching and learning of Design & Technology.

This policy will be reviewed every two years or in the light of changes to legal requirements.

Policy written by: Claire McGrath (Design & Technology Subject Leader)

Date reviewed: December 2023

Next review date: December 2025