St Joseph's Catholic Primary School

Design Technology Policy

Mission Statement

Following in the footsteps of Jesus; we live, love and learn.

Inclusion Statement

In this school, we are educating our children to:

- know who they are - a special and unique gift from God
- know why they are here - we all have a purpose and responsibility to look after God's world
- work hard and aim high for their future - find and use their God given talents to become everything that God intends them to be

We are a Catholic community, in a modern society, where everyone is equal. As a Catholic School, we strive to reflect the teachings of Christ and live out the Gospel Values in everything that we do. The most loving and merciful Jesus Christ is our role model, and He welcomed everyone. All children are welcome in our school; they and their families become part of our St. Joseph's family. We will love and nurture them, and do our best to help them to become everything that God intends them to be.

At St Joseph's Catholic Primary School our values reflect our commitment to a school where there are high expectations of everyone. Children are provided with high quality learning opportunities so that each child attains and achieves all that they are able to. Everyone in our school is important and included. We promote an ethos of care and trust where every member of our school community feels that they truly belong and are valued. We work hard to ensure there are no invisible children here, recognising everyone's uniqueness and success. We recognise learning in all its forms and are committed to nurturing lifelong learners. We are a safe school, committed to improving children's confidence and self-esteem. We know that safe and happy children achieve.

Adopted by Governors	*(signed on hard copy)*
Date	**17.05.2022**
Review Date	**17.05.2024**

POLICY INTENT

The Intent of our Design and Technology curriculum is to provide children with a strong set of practical life skills through an engaging and relevant curriculum. All children will be able to undertake Design and Technology throughout their time at St Joseph's Catholic Primary School. We believe every child has a talent and a potential to fulfil and want to make available every opportunity for the children to discover it.

'And I have filled him with the Spirit of God, with wisdom, with understanding, with knowledge and with all kinds of skills – to make artistic designs for work in gold, silver and bronze, to cut and set stones, to work in wood and to engage in all kinds of crafts.' **Exodus 31:3-5**

AIMS

We follow the aims of the statutory Early Years Foundation Stage framework and the KS1 and KS2 National Curriculum.
These aims form the basis upon which our distinctive curriculum is built:

- Products are to be made for a purpose.
- Individuality should be ensured in children's design and construction of products.
- Delivery of the 5 strands: Research, Innovate and Make, Evaluate and Technical Knowledge.
- More emphasis to be given on creating 'innovative' products in KS2.
- Teaching the importance of making on-going changes and improvements during making stages.
- Looking into seasonality of ingredients and how they are grown, caught or reared.
- The introduction of computing and coding of products in KS2.
- Researching key events and individual designers in the History of Technology in KS2.

IMPLEMENTATION OF THIS POLICY

The subject leader for Design and Technology is **Mrs Emma France**.
The subject leader is responsible for the management of resources, keeping up to date with curriculum innovation, sharing good practice with staff and ensuring that planning for the subject is progressive and in-line with national expectations.
The subject leader for DT will be the 'expert' in school and can offer support to other staff including signposting where necessary.

Design and Technology is an inspiring, rigorous and practical subject, requiring creativity, resourcefulness, and imagination. Pupils design and make products that solve real and relevant problems within a variety of contexts. It offers many opportunities for cross-curricular teaching and draws upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Children learn to take risks, be reflective, innovative, enterprising and resilient. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday 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.

By the end of each key stage, pupils will know, apply and understand the matters, skills and process specified in the relevant programme of study. All children will know the 5 strands – Research, Innovate, Make, Evaluate and Technical Knowledge.

RESOURCES USED

At St Joseph's we aim to deliver a breadth of experiences for children to develop their skills in using tools, machinery, a variety of materials as well as being able to effectively research their intended product. This requires a wide range of tools from sewing needles to handsaws to kitchen utensils. An audit is carried out bi-yearly to ensure tools are in working order/safe to use and frequently used materials are restocked every year.

CURRICULUM PROGRESSION THROUGH THE STAGES

KS1

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 (i.e. home, school, gardens, local community, industry and wider environment).

In Years 1 and 2, when designing and making, children will be taught to:

Research

- research information about their products either through practical handling/tasting, images, videos or web pages.

Innovate

- 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, computing.

Make

- Select from and use a range of tools and equipment to perform practical tasks (i.e. 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 (i.e. levers, sliders, wheels and axels).

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 will be taught to:

*Use the basic principle of healthy and varied diet to prepare dishes.
*Understand where food comes from.

Key Stage 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 (i.e. home, school, leisure, culture, enterprise, industry and the wider environment).

When designing and making, pupils will be taught to:

Design

- 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.

Innovate

- 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 wide range of tools and equipment to perform practical tasks (i.e. cutting, shaping, joining, sawing, finishing and sewing) accurately.
- Select from and use a wide range of materials and components, including construction materials, textiles, and ingredients, according to their functional, aesthetic and nutritional 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 hoe to strengthen, stiffen, reinforce more complex structures.
- Understand and use mechanical systems in their products (i.e. gears, pulleys, cams, levers and linkages).
- Understand and use electrical systems in their products (i.e. 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.

The children will 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 ingredients are grown, reared and processed.

We will teach the children the principles of food hygiene and safe practice in food preparation.

Health and safety

Health and safety is paramount across both key stages. Children will be taught how to use the tools and equipment safely at a level that is appropriate to their age and development. Sharp knives and saws will be stored safely and away from children when not in use.

PLANNING AND SEQUENCING LEARNING

We carry out the curriculum planning in Design and Technology in two phases: long-term and medium-term/short-term.

The long-term plan maps out the units covered in each term over the course of the year. The Design and Technology subject leader oversees the progression of the subject in conjunction with teaching colleagues in each year group.

We plan the activities in Design and Technology so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned-progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

Activities include:

- Activities in which children investigate, disassemble and evaluate products (IDEAs). – This means that children will examine and test the products of others (either commercial or of their fellow classmates) to make judgements about the quality or the methods by which it was produced.
- Focused practical tasks in which children practice particular skills (FPTs) - This means that children are set tasks which enable them to practise a particular skill. This should not be undertaken in isolation, children can still produce an object even though the main aim is skill development. E.g. Children produce a Christmas card but the main intention was to provide an opportunity for children to practise folding card and creating moving parts in card accurately as well as using adhesive for small-scale work.
- Assignments in which children design and make products (DMAs) - This means that children are set a design task or brief from which there will be a variety of outcomes, i.e. an open ended task. Younger children can be set design tasks in which the teacher has specified the outcome but the children should be provided with some individual choice or decisions. Older children can work on a task in which the teacher has not given any indication of what the outcome might be, but assistance/feedback is given on an individual basis in response to their own design.

EQUALITY

All pupils at St Joseph's will be protected against discrimination according to the protected characteristics of the Equality Act. We aim to serve our community as our pupils deserve the best learning experience. All pupils should have equal access to the design and technology curriculum irrespective of race, gender or ability. Examples of technology from other cultures can be a rich resource in the curriculum. Pupils with special needs should be considered when planning units of work and opportunities for differentiation should be considered for both able and less able pupils. Design and Technology provides opportunities to address some of the gender stereotypes children may have. Steps should be taken in classroom organisation to ensure that all pupils experience all activities, tools and materials.

ENRICHMENT AND MASTERY

Children who show a particular flair/enthusiasm will be challenged and be given opportunities to hone and develop their skills as subject ambassadors for D&T. Any out of school opportunities aimed at children that focus on Design and Technology will be taken advantage of (within school budget and policy) to give children a wide range of experiences and knowledge banks in DT. Our Building the Kingdom curriculum, in the summer term, offers all pupils opportunities for additional enrichment in sewing using machines, cookery and food hygiene, bushcraft and construction in order to allow children to develop and implement their knowledge and skills.

EXPERIENCES THROUGH THE CURRICULUM

English: Design and technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. Discussion, drama and role-play are important ways that we now employ for the children to develop an understanding that people have different views about design and technology. We also ensure that we are letting the children write to allow them to evaluate their work and suggest improvements for following learning.

Maths: The frequent use of measuring tools etc provides children with opportunities to put into practice the skills they learn in mathematics. This practice allows them to become more confident while having a positive impact on their measure work in maths and developing a mastery in using measure in context.

Computing and E-Safety: We use computing to support design and technology teaching when appropriate. Children use software to enhance their skills in designing and making and use technology to collect information. Children will be made aware of suitable websites and how to filter specific images. During DT lessons children will have access to computers when needed but this will be monitored by the staff in the classroom and ensure that child friendly websites are being used. All websites will be checked first for suitability.

Personal, social and health education (PSHE) and citizenship: Design and Technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

Spiritual, moral, social and cultural development: The teaching of Design and Technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and cooperative work across a range of activities and experiences in design and technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups. Cross-curricular links are made wherever possible.

HOME SCHOOL AND COMMUNITY LINKS

Children are encouraged to explore their skills through homework projects related to their topic of the half-term. This allows them to work independently or with support from parents to design, innovate, make and evaluate at home.

Opportunities to use the community as a resource for lessons should be encouraged. Parents are welcomed into the school to talk to children about aspects of this subject. Reference to the agricultural and horticultural nature of the county should be made when dealing with food topics and agricultural machinery viewed.

MEASURING THE IMPACT OF OUR POLICY

RECORD KEEPING AND ASSESSMENT

Assessment of children's learning in Design Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher, throughout lessons. This assessment is then used to inform differentiation, support and challenge required by the children.
Assessment is conducted termly by class teachers across each year group of the school to inform the subject leader of progress or skills and knowledge still to be embedded. This is recorded on Target Tracker.

MONITORING, REVIEW AND EVALUATION

Design Technology is also monitored by the subject leader throughout the year in the form of book monitoring, looking at outcomes, and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place. Progression of skills will be compared across years to ascertain whether skills are progressing as they should and changing projects to ensure skills are being developed.

GOVERNOR INVOLVEMENT

The subject ambassador for Design Technology is Mrs Anne-Marie Doran. Subject leaders are asked to present their work to governors; this may be done in the form of a presentation to a committee or a professional dialogue with the linked governor. Action plans are shared with Governors. There is a formal written report to governors annually. Governors may come into school to watch lessons and take part in events or workshops. They may talk to pupils and look at written evidence.

STAFF DEVELOPMENT

CPD is via our links with the Yarrow Schools Teaching Alliance. Subject leader networks have been created within our local cluster in order to share good practice and advice through cross-moderation.