

**St. Joseph's**



**Murtton**

## **DESIGN & TECHNOLOGY POLICY**



**UPDATED: JANUARY 2020**

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## St. Joseph's Catholic Primary School

### Design Technology Policy

#### Definition:

Design and Technology is a subject where children's capability in designing and making is developed through combining their designing and making skills with knowledge and understanding. At St. Joseph's we view D&T as a subject which allows children to use their imagination and creativity to come up with design ideas which can be developed and extended through the process of 'making' and the 'acquisition of skills and knowledge'.

*"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, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology they 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."* (National Curriculum Document 2014)



## Aims:

The National Curriculum for Design and Technology aims to ensure that all pupils:

- 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.

## Foundation Stage

We encourage creative work in our Reception class, as this is part of the Foundation Stage Curriculum. We relate the creative development of the children to the objectives set out in the Foundation Stage Assessment, which underpin the curriculum planning.

The children's learning includes art, music, dance, role-play and imaginative play. The range of experience encourages children to make connections between one area of learning and another and so extends their understanding.

Setting the children's learning, we provide a rich environment in which we encourage and value creativity. Children experience a wide range of activities both inside and outside of the classroom so that they respond to and use a range of senses. The activities that they take part in are imaginative and enjoyable.



# **KS1 Objectives**

Through a variety of creative and practical tasks/activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive developmental process of designing and making. They should be encouraged to work on a range of relevant contexts (eg. Home, school, gardens, 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

KS1 children will undertake one unit of work per term, at least. They will also have opportunities during D&T lessons to develop their own ideas and generate designs independently. Progression of D&T skills will be monitored by staff

formally and informally with reference to expectations from the National Curriculum.

*Planning will follow Medium term planning linked to National Curriculum guidelines.*



## **KS2 Objectives**

Through a variety of creative and practical tasks/activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive developmental process of designing and making. They should be encouraged to work on a range of relevant contexts (eg. 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

### **KS2 teachers must remember:**

- KS2 children should be encouraged to be creative and innovative when designing and making products.
- Throughout the ‘making’ process they should recognise the importance of making on-going changes and improvements in their designs in order to ensure that the final product is fit for purpose and is of a high quality.
- Where possible designs should link in with Computing and coding
- children should be provided with the opportunity to research key events and individuals that have made significant design influences on everyday life.
- D&T consists of two strands - Designing and Making + Cooking and Nutrition. Teachers should ensure that D&T lessons consider the seasonality of ingredients and how they are grown, caught or reared

### **Teaching and Learning:**

Design Technology activities are taught in a variety of ways across St. Joseph’s Catholic Primary School, sometimes in blocks of taught time, as part of a topic, or in short skills-based activities where necessary. Design Technology has relevance across the curriculum and links with other subjects throughout the school. For example, most of our Design Technology has been incorporated into St. Joseph’s long-term planning of Science, IT, History and Geography topics. These links can be seen on our whole-school planning grids.



## **Assessment and recording:**

- The D&T Subject Co-ordinator will keep a photographic portfolio of drawings, pictures and finished products – creating a floor book of exemplars which can be used for assessment purposes and for monitoring progression.
- Class teachers are responsible for accurately assessing pupils' D&T attainment – these assessments are carried out termly and are based on emerging, developing, secure and mastery within the standards of each Year group. This follows the agreed system which is in place covering all curriculum subjects at St. Joseph's.
- Assessments are completed at the end of each term and inputted into the online assessment trackers set up for D&T.
- The D&T Co-ordinator is responsible for collecting assessment data from the spread sheets and inputting percentages into the Subject Leaders' summary reports.
- Displays of D&T work are encouraged – these should include design ideas, drawings, patterns, quick models and final products to demonstrate the D&T process.
- One staff meeting a year will be held to carry out agreement trailing. Teachers will be asked to identify a child working at a specific level and bring examples of work. This work will contribute to the D&T portfolio.
- The D&T Co-ordinator will present at least one report to the Governing Body to inform governors of how well the subject is being taught.

## **EXPECTATIONS:**

By the end of Key Stage 1, the performance of the great majority of the pupils should be Y2 secure (2s+).

By the end of Key Stage 2, the performance of the great majority of the pupils should be Y6 secure (6s+).

## **Inclusion:**

We recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies that are essential to developing a more inclusive curriculum:

- Setting common tasks that are open-ended and can have a variety of outcomes
- Providing appropriate support to pupils to access information or aid fine or gross motor skills issues

### **Responses;**

- Setting tasks of increasing difficulty where not all children complete all tasks;
- Providing a range of challenges with different resources;
- Using additional adults to support the work of individual children or small groups.
- ICT programmes and appropriate tools and equipment are provided to ensure that all pupils have sufficient access to the Design Technology curriculum.
- Ensuring that children with Special Educational Needs will be given an equal opportunity to study Design Technology. These children will be provided with all of the necessary materials to succeed and be inspired, supported by their 1-1 support where necessary.

### **The Role of the D&T Co-ordinator is to:**

- Lead the development of D&T in school
- Provide guidance to individual members of staff
- Keep up to date with local and national developments in D&T and disseminate relevant information
- Review and monitor the success and progress of the planned units of work
- Order stock linked to the planned units of work at the end of each term
- Be responsible for the organisation and maintenance of D&T resources
- Co-ordinate any displays of D&T
- Co-ordinate the collection of samples of work for the D&T portfolio.
- Ensure governors are kept up-to-date with progress across the school – re data – assessments, quality of teaching and learning, workshops, training etc.



## **Health and Safety:**

All teachers must:

- Make sure that all children are aware of safety procedures and any potential dangers
- Make it clear which tools are for:
  - Teachers only
  - For use only under teacher (adult) supervision
  - For pupils use
- make sure that all pupils are shown how tools should be used – demonstrate good practice
- Position work stations in an appropriate place
- Clamp and remove vices – check work areas for dangers



## **The role of parents and carers:**

Parents and carers are encouraged to be involved with their pupils' learning through looking at Design Technology displays, and viewing and commenting on any work that has been added to St. Joseph's Catholic Primary School website.

## **Review:**

Curriculum plans, samples of pupils' work, classroom displays and discussions with staff will be used by the Design Technology Co-ordinator to evaluate the quality of the Design and Technology curriculum in the school.