Sacred Heart Hindsford R.C. Primary School

Design and Technology Policy

Policy written by L. Delargy Design and Technology Leader December 2019

Accepted by Governors: *J. Carter* signed (chair)
J. McDermott signed (Head)

Shared with staff: date: September 2019

Mission Statement:

By living out our Catholic faith

TOGETHER

we ENCOURAGE

and ACHIEVE.

I have called you by name.

WHY DO WE TEACH DESIGN and TECHNOLOGY?

In teaching design and technology, at Sacred Heart, we aim to prepare our pupils for a rapidly changing society. Through mainly practical based activities, we will develop the skills of designing, making and evaluating functional products. The children will achieve their objectives by exploring the everyday products we use and the world we live in.

It is important to encourage creativity and innovation through design; using creativity and imagination, pupils will design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

Design and technology is an inspiring, rigorous and practical subject; a subject where we acquire and apply a broad range of subject knowledge and understanding of materials and components, mechanisms and control systems, structures, existing products, quality and health and safety. We will work with a wide variety of materials and ingredients (textiles, mechanical parts, foodstuffs, wood, plastics and computing).

The Design Technology Policy at Sacred Heart follows the Design and Technology Guidelines within The National Curriculum 2014 and 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.

Because the subject is about ‘material culture - products, places and images', design and technology touches practically every area of the curriculum and as such we apply knowledge, skills and understanding gained in other lessons. Design and Technology has links with Science, Art, History, Geography, Maths and English and will develop the use of computer skills and speaking and listening skills as children work in pairs or part of a larger group.

At Sacred Heart, we have designated design and technology weeks. In these weeks design and technology skills and activities are the focal point around which other curriculum areas are planned and taught. We develop long term plans to show when each aspect of design and technology will be taught for each year group. Short term plans guide teaching and learning for this aspect.

Teachers will also plan for and teach additional design and technology objectives through other areas of the curriculum where opportunities arise.

Early Years

At Sacred Heart, the development of knowledge and understanding of skills begins in the Reception class, as this is part of the Early Years Curriculum. We relate the knowledge, understanding and development of the children to the objectives set in the Early Learning Goals. We also assess the children in relation to the Foundation Stage Profile statements. The children’s learning includes developing confidence and control of the way they handle tools and equipment. We give all children the opportunity to ask questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction materials safely. The range of experiences encourage children to make connections between one area of learning and development and so extends their understanding. There are links with all curriculum areas.

Key Stage 1

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of relevant contexts.

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.

Key stage 2

Through a variety of creative and practical activities, pupils will 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.

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:

Key stage 1

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

Key stage 2

- 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.

Assessment.

Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable pieces of evidence.
The design and technology subject coordinator can review evidence of the children's work.

Throughout each unit of work, the teacher will use ongoing assessment for learning to monitor pupils' progress in knowledge, understanding and skills through:

- observations during lessons;
- marking of any written work ;
- discussions with pupils;
- observation of how children work during small group tasks;
- teacher's will make an annual assessment of progress for each child, as part of the annual report to parents.

Each teacher will pass this information on to the next teacher at the end of each year.

Equal Opportunities

At Sacred Heart, we recognise that our curriculum planning must allow pupils to gain a progressively deeper understanding and competency as they move throughout the school. We aim to ensure that all children have the right to access the curriculum and encourage all to reach their full potential through the provision of varied opportunities. A series of differentiated and open-ended planning activities are used to support and stretch children as appropriate.

Role of the Design and Technology Subject Leader:

- To lead staff meetings and discussions related to design and technology issues;
- Create an action plan for design and technology;
- Evaluate and update the design and technology policy;
- Monitor, evaluate whole school design and technology resources and budget;
- Organise and create long term plans for design and technology weeks;
- Give support to colleagues as appropriate;
- Carry out lesson observations and learning walks within Key Stage 1;
- Scrutinise work to identify strengths and weaknesses;
- Analyse design and technology results and feedback to head teacher and staff;
- Plan educational visits and visitors.

Health and Safety

Health and Safety issues are carefully considered, when creating, and are incorporated into the design and technology scheme of work.

Updated: December 2019

Next review: Autumn Term 2021