



ST. LAURENCE'S C.E. PRIMARY SCHOOL

## Design and Technology policy

Design and Technology provides opportunities for pupils to develop their capabilities, combining their designing and making skills with knowledge and understanding in order to create quality products. It involves inventive thinking, investigating, planning, evaluating and using a wide range of materials in many different situations. It is essential to prepare pupils to participate in tomorrow's rapidly changing technologies

### **Aims**

Through Design and Technology we aim to:

- develop children's design and making skills
- develop their knowledge and understanding
- encourage the use of imagination and creativity
- guide children to use an increasing range of techniques, processes

## **Early years foundation stage**

Important design and technology skills are addressed through Physical Development, Understanding the World and Expressive Arts and Design. It is also part of the Characteristics of Learning that are an essential part in the early years curriculum.

Pupils learn through practical activities and are given opportunities to develop and explore skills through both directed adult led activities and child initiated play. They have access to a rich, stimulating environment which encourages exploration, problem solving, prediction, critical thinking, decision making and discussion.

## **Key Stage 1**

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.

## **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 [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:

### **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.

At St Laurence's school we are fortunate to have our own garden. Each class is able to take ownership of one 'plot' and grow their own produce. Our school council are in the process of restarting our gardening club.

As a school we also take advantage of the Tesco Farm to Fork program and send several classes to their sessions to learn about where our food comes from and the processes it goes through. We will repeat this yearly if available.

At St Laurence's CE school we cover the curriculum through the following themes.

	Autumn	Spring	Summer
Foundation Stage	Ongoing opportunities through directed and child initiated activities led by children's own fascinations. Retrospective photographic planning shows a range of activities covered including healthy eating, growing our own vegetables and cooking.		
Y1	Clay pots, 2D shape pictures and fruit/vegetable kebabs	Castles	Batik flowers Trinity clay
Y2	Healthy pizzas, Christmas decorations (pivots and levers)	Materials and buildings 3D structures Bread	Textiles minibeasts
Y3	Design and make a healthy sandwich	Moving monsters	Egyptians - building pyramids, designing and making jewelry, masks
Y4	Sewing	Roman mosaics	Designing healthy picnics
Y5	Trojan horses	Claypots	Smoothies using fruit and vegetables
Y6	Clay candle holders	Design and make a healthy loaf (grains etc)	Sewing

## **Equal Opportunities**

At St Laurence's all children have access to and are encouraged to participate in all areas of Design and Technology.

## **Special Educational Needs and Disabilities**

St Laurence's is committed to promoting equality and opportunity for all pupils with learning difficulties and all pupils with special educational needs. When planning and teaching design and technology staff will make reasonable adjustments to promote equality of opportunity for disabled and non-disabled pupils. This may include allocating adult support, providing additional support materials, providing alternative support materials or modifying tasks.

## **Gifted and Talented**

Children who are gifted and talented in Design and Technology will be put on the gifted and talented register.

October 2017

Review date: October 2021