Sutton Bonington Primary School

Design and Technology Coverage

Elements of our Design and Technology Curriculum

- Knowledge and Understanding
- Designing
  - Understanding users and purpose
  - Ideas
- Making
  - Planning
  - Practical skills and techniques
- Evaluating
  - Investigating existing products
  - Own ideas and products

Strands:

- Textiles
- Mechanism
- Designers
- Structure
- Food

Early Years Foundation Stage – Expressive Arts and Design: Creating with Materials

Children at the expected level of development will:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;
- Share their creations, explaining the process they have used;
- Make use of props and materials when role playing characters in narratives and stories

The skills and knowledge that allow children to achieve the Early Learning Goal are taught within focused tasks and the continuous provision throughout the Reception year.

Key Stage 1 – National Curriculum Design and Technology

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.

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.

Year 1 - Autumn **Food (Biscuits)**	Year 1 - Spring **Wheels and Axles**	Year 1 - Summer **Templates and Joining**
Year 2 - Autumn **Sliders and Levers**	Year 2 – Spring **Freestanding Beach Huts**	Year 2 – Summer **Food (Smoothies)**

Key Stage 2 – National Curriculum Design and Technology

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.

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.

Year 3 - Autumn **2D to 3D products**	Year 3 – Spring **Shell structures**	Year 3 - Summer **Pizza**
Year 4 – Autumn **Soups**	Year 4 – Spring **Pneumatics**	Year 4 – Summer **Electrical**
Year 5 – Autumn **Cams**	Year 5 – Spring **Frame Structures**	Year 5 – Summer **Food (Bread)**
Year 6 - Autumn **Fairground**	Year 6 – Spring **Combining fabric shapes**	Year 6 - Summer **Food (Fish fingers)**