Design and Technology Subject Content at 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 theirs.
- 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 to their products.

Cooking and Nutrition

- 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.

Lower Key Stage 2 **Design and Technology** Rolling Programme

Year A		Year B	
Autumn	**Edible Garden** Design and Make a healthy tasty meal using our harvested tomatoes. **Cooking and Nutrition**	**Autumn**	**The Great Bread Bake Off** Design and Make an innovative savoury bread roll for the harvest festival **Cooking and Nutrition**
Spring	**Battery Operated Light** Design and Make a battery operated light writing my own design criteria. **Electrical Systems**	**Spring**	**Mechanical Posters** Design and Make a mechanical Poster to promote recycling. **Mechanical Systems**
Summer	**Juggling Balls** Design and Make a tie die juggling ball for a circus themed day at school. **Textiles**	**Summer**	**Let's go Fly a Kite** Design and Make a kite developing my own design criteria. **Structures**

Upper Key Stage 2 **Design and Technology** Rolling Programme

Year A		Year B	
Autumn	**Felt Phone Cases** Design and Make a mobile phone case writing my own design criteria **Textiles**	**Autumn**	**Global Food** Design and Make a Mexican dish using savoury rice. **Cooking and Nutrition**
Spring	**Automata Animals** Design and Make an animal automata having developed my own design criteria. **Mechanical Systems**	**Spring**	**Marbulous Structures** Design and Make a marble run for indoor play time. **Structures**
Summer	**Moon Buggy** Design and Make a moon buggy using mechanical and electrical systems. **Structural, Mechanical and Electrical Systems**	**Summer**	**Programming Adventures** Design and Make an adventure map for a floor robot **Applying Programming and Control**