Design and Technology at Parkend

**Intent**

The 2014 National Curriculum for Design and Technology aims to ensure that all children:

- 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

At Parkend Primary School, we value Design and Technology as an important part of the children’s entitlement to a broad and balanced curriculum. We aim to deliver an engaging, practical and problem solving based Design Technology curriculum; allow pupils to be curious and question. To offer children a chance to use creative thinking, where they follow a design, make and evaluate system. Technology of the modern world is rapidly changing and at Parkend, we aim to prepare the children in advance for this.

**Implementation**

**Early Years Foundation Stage**

- Children are taught to represent their own ideas, thoughts and feelings through design and technology, art, music and dance.
- Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.
- Children know about similarities and differences in relation to places, objects, materials and living things.
- Uses ICT hardware to interact with age-appropriate computer software
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### Key stage 1

Pupils are taught:

**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

**Cooking and Nutrition**
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

### Key stage 2

Pupils are taught:

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
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- 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
- Children need 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.

Impact
Children will learn a wide range of Design Technology skills, from cooking and nutrition, to computer coding and programming. These skills are integral life skills that will provide a basis for the real world. Children will be competent at designing and assessing each other’s work and skills, creating children who are confident self and peer-evaluators.