BEECHWOOD PRIMARY SCHOOL
STATEMENT OF INTENT FOR DESIGN AND TECHNOLOGY

Summary Statement

At Beechwood Primary School we will give all children in school the opportunity to explore and investigate the world around them through a range of experiences in design and technology, encouraging them to become creative problem solvers, both as individuals and as part of a team. The Design and Technology curriculum is rooted in the school's underlying aims, ethos and values.

Aims

The Beechwood Design and Technology curriculum aims to:

- help pupils develop an awareness of the ways in which design and technology makes an essential contribution to daily life and the wider world;
- develop the technical and practical expertise needed to perform a range of 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;
- encourage pupils to take risks when they design and make products, becoming resourceful, innovative and enterprising.

Key concepts and ideas

Key concepts and ideas that are revisited throughout school are:

Generating Ideas: the generation and development of new ideas is based on an of evaluation of human needs and existing products;
Design and Making: the successful design and construction of new products is based on an understanding of materials and components and the selection of appropriate tools;
Technical Knowledge: successful design outcomes are based on the practical application of technical knowledge about mechanisms, structures and information technology;
Nutrition and Healthy Eating: how to apply the principles of nutrition and healthy eating in creating food products.

Rationale for the order of teaching

EYFS - Children are provided with a wide range of different media to help express their ideas and feelings linking to the world around them. Practitioners plan indoor and outdoor provisions around the children's interest so opportunities develop key skills and knowledge through multi-sensory experiences and experimentation which foster imagination, curiosity and cognition. Through interaction with others, children learn to collaborate and share ideas which leads to critical thinking. To support their gross and fine motor skills within the provision, there are a variety of different materials and tools available. This enables the developmentation of gross motor skills such as negotiating space and obstacles safely, with consideration for themselves and others. To add to this, children's fine motor skills are developed to achieve the ability to hold a pencil effectively, use a variety of small tools and begin to show accuracy and care when drawing.

Year 1 – Children have opportunities to investigate and explore basic mechanisms in old toys, games and structures from the past. Following the opportunity to investigate, children can design their own models and moving toys that include a lever or slider. They begin to learn how to use tools and techniques safely

such as different techniques for cutting with scissors and how to make holes in paper. Children visit local shops to examine where food comes from and are able to learn simple food preparation techniques. They begin to evaluate what they have produced.

Year 2 – Children use a wider range of tools and techniques while applying what they have learned previously. They join a range material such as wood, card and fabrics using needles, paper fasteners, glue and rope. They design and build more complex structures and products. Children use what they have learned to make model structures of shelters both inside and outside the classroom. They evaluate what they have produced and suggest possible changes they would like to make.

Year 3 – Children are now introduced to a wider range of tools including saws, bench hooks and lynx joiners. They begin to investigate and explain more complex mechanisms such as axles, wheels, gears and pulleys. Children investigate food products and how they are made. They understand a recipe and adjust it to make their own products. Children increasingly work to design criteria and evaluate their outcomes against this.

Year 4 – Children further develop their use of textiles inspired by landscapes studied in geography. This includes sequins, felt, tapestry threads, wool and quilting techniques to produce a piece of applique. They explore mouldable materials inspired by Ancient Greek theatre and design masks that include a hinged mechanism to allow a moveable part. Children extend their understanding of food from different countries, looking at Ghanaian fruit, vegetables and recipes. They use traditional recipes and learn to cook a variety of savoury dishes.

Year 5 – Children combine what they have learnt in science by applying series circuits that incorporate switches, buzzers, bulbs and motors in their design. They investigate food from a historical period and make comparisons with the present. Children produce their own recipes and cook from scratch, using seasonal produce where possible. In partnership with overseas visitors from India, the children look at a range of traditional crafts and extend their understanding of textile by learning about and then producing their own silk printing.

Year 6 – Inspired by the buildings of Paris, children have the opportunity to work with a local high school to reflect on key concepts and further their knowledge of stable structures. Through animation workshops and computer technology, pupils have the opportunity to design models using modelling clay, which they then animate using the camera and a stop-motion application on a tablet computer, to create their own short video clip. Children widen their understanding of food technology, understanding current thinking of what constitutes healthy eating, investigating vegetarian and vegan foods and sustainability for now and the future.

Relevance to School Curriculum **Aims**

The Beechwood science curriculum links to the whole school Foundations and Key Principles in the following ways:

Explicit development of pupils creative skills

DT is taught practically and creatively to ensure pupils are interested and engaged in their learning. Throughout each TSU children are given the opportunity to demonstrate their creative skills by designing making and evaluating.

Learning is meaningful, relevant and enjoyable

Children use the context of the TSU to develop a deep knowledge base to enhance their life skills and prepare them for the future.

High quality teaching of core skills

Throughout each TSU there are opportunities to apply their scientific, mathematical, artistic and computing skills.

Development of social and emotional literacy

The teaching and discussion of DT teaches children to develop the skills of emotional resilience as it is a safe environment to attempt to learn new skills and apply them without fear of failure.