Corporation Road Community Primary School

Design & Technology Policy

Approved by the Governing Body

Chair of Governors: Mrs Val Johnston

Date: October 2017

To be reviewed: October 2020

Purpose of Study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Core Aims

The national curriculum for design and technology aims to ensure that all pupils:

- 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 Corporation Road, Design and Technology is taught as part of 'Awe and Wonder' day. This day is completely topic based and focuses on the school's six overarching aims from the mission statement:

Challenge, Learn, Engage, Inspire, Independence and Fun

Teaching Objectives:

EYFS:

By the end of EYFS, children should be able to achieve the following:

Exploring and Using Media and Materials

Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Being Imaginative

Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

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.

Planning

EYFS

Planning in EYFS is topic based and can often change based on the interests and needs of the children. Topics are mapped out across the year and medium term planning is sketched out to cover all the areas of learning. Short term planning includes mapping out Design and Technology opportunities for the continuous provision in the EYFS environment for inside and outside.

KS1 and KS2

Design and Technology may not be taught each week, however it will be covered at least once every half term and this may involve a whole day of design and technology where progression of skills can be seen across the day e.g. nutrient information of bread, making simple bread, redesigning based on own preferences, packaging for bread etc.

Long Term Planning

Topics for the year are provided on a matrix. Topics are to be covered during the 'Awe and Wonder' days.

Medium Term Planning

Topic webs are created by teaching staff to show possible teaching and learning opportunities for the half term. On this web, main skills that are to be taught in Design and Technology are noted, included is an example of the end result e.g. a bird box. This then is shown in more detail in the short term planning.

Short Term Planning

Design and Technology short term planning is to be completed on the general daily planning sheet. On this planning, more detail information is provided about the objectives covered in the lesson(s) and progression of skills to be completed across the session.

Assessment and Monitoring

In EYFS, teachers will collect evidence in the children's learning profiles and use this alongside Development Matters to assess which age range they are working at or within. This is to be updated once every half term.

In KS1 and KS2, teachers are to use their own judgement against the Cornerstones Assessment Tool to assess children in Design and Technology. This is for each child per 'skill'. Children are expected to make age related progress. The assessment tool should be updated termly.

Design and Technology coordinators will periodically take examples of children's work and have professional conversations with teachers to assess accuracy of assessment.

Inclusion and Equal Opportunities

Care should be given to give each child the opportunity to learn about the global community, regardless of race, religion, language or gender. We pride ourselves on being an accepting community where everyone feels valued. Success is expected for all pupils. They should reach their full potential, recognising personal strengths and celebrating the achievements of themselves and others, both within the school and its wider community.