Design & Technology Curriculum Progression Map

The national curriculum for art & design 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.

Communication and Language – Understanding

 follow instructions involving several ideas and actions

EYFS

 answer 'how' and 'why' questions about their experiences

Speaking

 develop their own explanations by connecting ideas and events

Understanding the world-Technology

- Knows information can be retrieved from computers
- select and use technology for particular purposes

Physical Development-Moving and handling

- handles equipment and tools effectively and with increasing control
- uses simple tools to effect changes to materials

Health and self-care

 Shows understanding of the need for safety when tackling new challenges, considers and manages some risks 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:

KS1

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, mockups 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] 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].

Lower KS2

When designing and making, pupils should be taught to:

Design

- ♣ use research 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 and annotated sketches.

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,

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

Upper KS2

♣ 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 materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities and explain the reasons for their choices.

Evaluate

- 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

 Eats a range of healthy foodstuffs and understands the need for variety

Expressive arts and design – Exploring and using media and materials

- use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- selects appropriate resources; constructs with a purpose in mind and adapts work where necessary

Personal, Social and Emotional Development-

Self-confidence and self-awareness

- confident to try new activities and to say why they like some activities more than others
- talk about their ideas and choose the resources they need for their chosen activities

♣ 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.

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 given design criteria and consider the views of others to improve their work

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]

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

Technical knowledge

- 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

understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.