



## DT Curriculum

### Intent

At Newbold School our design and technology curriculum is designed to prepare children for the developing world. The subject encourages children to become creative problem-solvers, both as individuals and as part of a team. Through the study of design and technology children combine practical skills with an understanding of aesthetic, social and environmental issues, in order to design and make a product. Evaluation is an integral part of the design process and allows children to adapt and improve their product, this is a key skill which they need throughout their life. Design and Technology helps all children to become discriminating and informed consumers and potential innovators. We feel that the teaching of food and nutrition is of great importance and holds great relevance in current times.

### Implementation

At Newbold School our design and technology curriculum is built around essential knowledge, understanding and key skills. These are broken into year 1-2, year 3-4 and year 5-6 group expectations and show clear continuity and progress. All teaching of design and technology follows the design, make and evaluate cycle, along with gaining technical knowledge. The design process should be relevant in context, to give meaning to learning. While making, children should be given choice and a range of tools to choose freely from. When evaluating, children should be able to evaluate their own products against a design criteria. Cooking skills, knowledge of food and nutrition knowledge are gained through food-making activities in each year group, including Early Years.

### Impact

The impact of our design and technology curriculum can be seen not only in our children's DT books/Early Years scrap books but also through classroom displays, Tapestry observations (EY) and the school environment. Everything we do is with the child in mind, and strong relationships are built between pupils and staff which create an atmosphere for learning which is conducive to success.

We measure the impact of our curriculum through the following methods:

- Summative assessment of pupil discussions about their learning.
- Images of the children's practical learning.
- Interviewing the pupils about their learning (pupil voice).
- Observing DT activities during lessons.
- Pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work.
- Annual reporting of standards across the curriculum.
- Marking of work in books.

Children in Foundation Stage are assessed within Expressive Arts and Design and Understanding The World, and their progress is tracked termly. Activities are provided through a variety of adult-led and child-led (free-play) activities.

Impact statements are tracked using a DT Impact self-evaluation form which uses evidence from a variety of sources. This also helps identify children's progress, challenges, equipment needs, barriers, further skills to develop etc.

### **Level Expected at the End of EYFS (2020)**

We have aimed to select the Early Learning Goals that link most closely to the Design and Technology National Curriculum.

### **Pupils in F1 should have opportunities to be taught to:**

- Make imaginative and complex 'small worlds' with blocks and construction kits.
- Explore different materials freely, to develop ideas about how to use them and what to make.
- Develop their own ideas and then decide which materials to use to express them.
- Join different materials and explore different textures.

### **Pupils in F2 should have opportunities to be taught to:**

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.

Our EY curriculum includes woodwork, various resources in our construction, art and maths area, as well as food technology (making toast and seasonal food making linked to our themes). We also make playdough and DT is experienced in a variety of ways indoors and outdoors.

### **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

#### **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.

in KS1 should be taught to:

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

## **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.

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Pupils in KS2 should be taught 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.