



The Orchard Vision: *Inspiring Success*
Values: *Determination, Courage, Respect*

The Orchard Policy Statement for Design and Technology 2021

Aims

The Design and Technology curriculum aims to develop the pupils' knowledge, skills and understanding in the designing and making process and the subsequent investigation and evaluation of mechanisms, structures, products and applications, quality, health and safety and related vocabulary.

An important aim is to encourage pupils to think for themselves to work collaboratively and independently, sharing ideas and appraising their own and each other's work.

Opportunities will be provided to:

- Design and make purposeful and functional products, working with a range of materials, components and techniques
- Develop specific skills and knowledge through focused practical tasks
- Investigate, disassemble and evaluate simple products and designs to explore mechanisms, structures, materials and functionality
- Draw on knowledge and skills in other curriculum areas, particularly IT, maths, science and art
- To understand and apply the principles of nutrition and learn to follow a recipe and prepare a simple dish.

Guidelines for Implementation

The 'Design' section of the curriculum will be implemented in three ways:

1. Through activities which involve observation, investigation, disassembly and related discussion of designs of simple products.

2. Through focussed tasks to develop skills such as:

- Design generation – through drawings, written plans and ICT, clarifying ideas through discussion.
- Consideration of properties – strength, rigidity, texture, density, permeability, elasticity, hardness and appearance.
- Health and Safety awareness – during the making of the product as well as for its intended purpose.
- Exploration of different mechanisms – cogs, pulleys, levers, circuits, joints and fastenings, springs, and wheels.

3. Through assignments in which pupils design and make products drawing on the experience, skills and knowledge gained from the above activities.

The '**Making**' aspect of the curriculum develops skills such as: Planning, measuring and marking, cutting and shaping, exploration of assembly, application of finishing techniques and evaluation.

The "**Evaluate**" aspect of the curriculum involves exploring and evaluating a range of existing products and evaluating their own ideas and products against design criteria.

The "**Technical**" aspect of the curriculum involves investigating how to make structures stronger, stiffer or more stable and exploring mechanisms.

The "**Cooking and Nutrition**" aspect of the curriculum involves using the basic principles of a healthy and varied diet to prepare dishes and to understand where food comes from.

Continuity and progression

Reception

Build and construct a variety of objects, selecting resources, tools and techniques to join and assemble materials safely. Know that food comes from plants or animals. Name and sort food.

Year One

Generate ideas, drawing on own experience, discussing them through models and pictures to evaluate their work. Select materials, tools and techniques and talk about their choice. Use these safely to join them in several ways and begin to evaluate their work. To know that food has to be farmed or caught. Prepare simple dishes safely and hygienically without heat.

Year Two

Create designs to satisfy several requirements. Plan and suggest improvements using labelled diagrams. Sequence their work making accurate choices of materials, tools and techniques, producing a product that more closely matches their design. Pupils may be using tools that require greater precision and safety precautions, such as cutting tools, glue guns and hand drills. When cooking use simple techniques such as peeling, cutting and grating.

Monitoring and Assessing

Useful considerations when assessing and reporting on a pupils ability in Design and Technology might be: Level of independence, resilience and ability to solve problems, generate ideas, sequence the making process and evaluate their work.