**Plumbland CE School, Design and Technology Statement**

Our curriculum is carefully designed to ensure coverage and progression. It provides pupils with memorable experiences, in addition to diverse and rich opportunities from which children can learn and develop a range of transferable skills. The children’s own community, its heritage and traditions are frequently used as a starting point for engaging interest. Our children are also able to further their knowledge and develop their skills within DT as part of our forest school’s programme. A primary focus of our curriculum is to raise aspirations, create a sense of personal pride in achievement, and provide a purpose and relevance for learning. Our annual whole school DT themed morning enables our children to further practise and develop their skills and knowledge.

**Year 1**

**By the end of Year 1 children will be able:**

Food

* To cut ingredients safely and hygienically.
* To assemble or cook ingredients.

Materials

* To cut materials safely using tools provided.
* To demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).

Textiles

* To shape textiles using templates.
* To colour and decorate textiles.

Construction

* To use materials to practise drilling, screwing, gluing and nailing to make and strengthen products.

Mechanics

* To create products using levers and wheels.

**Year 2**

**By the end of Year 2 children will be able:**

Food

* To cut, peel or grate ingredients safely and hygienically.
* To measure or weigh using measuring cups or electronic scales.

Materials

* To measure and mark out to the nearest cm.
* To demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).

Textiles

* To join textiles using running stitch.
* To colour and decorate textiles using a number of techniques.

Construction

* To use materials to practise drilling, screwing, gluing and nailing to make and strengthen products.

Mechanics

* To create products using winding mechanisms.

**Year 3**

**By the end of Year 3 children will be able:**

Food

* To prepare ingredients hygienically using appropriate utensils.
* To measure accurately.
* To follow a recipe.
* To assemble or cook ingredients.

Materials

* To cut materials accurately and safely by selecting appropriate tools.
* To select appropriate joining techniques.

Textiles

* To understand the need for a seam allowance.
* To join textiles with appropriate stitching.

Electricals and electronics

* To create series circuits.

Construction

* To choose suitable techniques to construct products or to repair items.

Mechanics

* To use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).

**Year 4**

**By the end of Year 4 children will be able:**

Food

* To prepare ingredients hygienically using appropriate utensils.
* To measure ingredients to the nearest gram.
* To assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking).

Materials

* To measure and mark out to the nearest mm.
* To apply appropriate cutting and shaping techniques that include cuts, within the perimeter of the material (such as slots or cut outs).

Electricals and electronics

* To create parallel circuits.

Textiles

* To select the most appropriate techniques to decorate textiles.

Construction

* To strengthen materials using suitable techniques.

Mechanics

* To use scientific knowledge to choose appropriate mechanisms for a product.

**Year 5**

**By the end of Year 5 children will be able:**

Food

* To understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms).
* To demonstrate a range of baking and cooking techniques.

Materials

* To cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).

Textiles

* To create objects (such as a cushion) that employ a seam allowance.
* To join textiles with a combination of stitching techniques (eg back stitch for seams and running stitch to attach decoration).

Electricals and electronics

* To create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).

Construction

* To develop a range of practical skills to create products (eg cutting, drilling and screwing, nailing, gluing, filling and sanding)

Mechanics

* To convey rotary motion to linear using cams.

**Year 6**

**By the end of Year 6 children will be able:**

Food

* To measure accurately and calculate ratios of ingredients to scale up or down from a recipe.
* To create and refine recipes, including ingredients, methods, cooking times and temperatures.

Materials

* To show an understanding of the qualities of materials to choose appropriate tools to cut and shape (eg. The nature of fabric may require sharper scissors than would be used to cut paper).

Textiles

* To use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).

Electricals and electronics

* To create circuits using electronics kits that empty a number of components with increasing confidence.

Construction

* To develop a range of practical skills to create products.

Mechanics

* To use innovative combinations of electronics (or computing) and mechanics in product designs.