

Newfield Park Primary School

Design and Technology Curriculum Progression



	Food	Structures	Mechanisms	Textiles	Computing/ Electronics
Year 1	<p><u>Sandwiches/ Wraps</u></p> <ul style="list-style-type: none"> • Cut, peel or grate and assemble ingredients hygienically. • Begin to understand that all food comes from plants or animals. • Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. 	<p><u>Birds and Fish</u></p> <ul style="list-style-type: none"> • Cut and shape materials (tear, fold and curl) using tools provided • Build structures, exploring how they can be made stronger, stiffer and more stable. • Glue and join products with a range of materials. 	<p><u>Moving story books</u></p> <ul style="list-style-type: none"> • Create products using levers and slides. . 	<p><u>Puppets</u></p> <ul style="list-style-type: none"> • Shape textiles using templates. Colour and decorate textiles using a number of techniques. (dyeing, adding sequins) 	<p><u>Design Games online</u></p> <ul style="list-style-type: none"> • Begin to design using software.

Year 2	<p><u>Smoothies</u></p> <ul style="list-style-type: none"> • Measure or weigh and assemble ingredients. • Understand where food comes from. • Understand the importance of healthy eating and a balanced diet. • Start to understand how to name and sort foods into the five groups 	<p>Baby Bear's Chair</p> <ul style="list-style-type: none"> • Cut materials accurately and safely. Use a range of joining techniques. • Build structures and explore how to make stronger, stiffer and more stable 	<p><u>Tanks (WW2)</u></p> <ul style="list-style-type: none"> • Create products using wheels and axles. 	<p><u>Tie Die Pencil Case with Decoration</u></p> <ul style="list-style-type: none"> • Colour and decorate textiles using a range of techniques such as printing. 	<p>Designing Online Quizzes</p> <ul style="list-style-type: none"> • Model a design using software.
Year 3	<p><u>Healthy Pizza in a box</u></p> <ul style="list-style-type: none"> • Measure and cook a variety of ingredients. <ul style="list-style-type: none"> • Use a range of equipment (scales, jugs, spoons etc) • Begin to understand how to use a range of techniques such as chopping, slicing, kneading and baking. • Start to understand that a healthy diet is made up from a variety and balance of 	<p><u>Roman Fort</u></p> <ul style="list-style-type: none"> • Measure and mark out to the nearest centimetre. • Demonstrate a range of joining techniques. • Use hinges and combine materials to strengthen. • Make a range of cuts and holes. Measure, mark out, cut, score and assemble components with 	<p><u>Winding Mechanisms- Knex</u></p> <ul style="list-style-type: none"> • Create a product using winding mechanisms. • Start to understand that mechanical systems create movement. 	<p><u>Woven Placemat with Stitched Border</u></p> <ul style="list-style-type: none"> • Join textiles using running stitch. Start to measure, tape or pin, cut and join fabric with some accuracy 	<p><u>Tinker Cad Design</u></p> <ul style="list-style-type: none"> • Control and monitor models using software designed for this purpose.

	different food and drink.	more accuracy. Start to work safely and accurately with a range of simple tools. <ul style="list-style-type: none"> Choose a range of techniques to construct or repair products. 			
Year 4	<u>Biscuit Bake Off *</u> <ul style="list-style-type: none"> Select appropriate utensils. Follow a recipe. Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Know that a healthy diet is made up from a variety and balance of different food and drink. Know that to be active and healthy, food and drink are needed to provide energy for the body. 	<u>Boats (Gambia)</u> <ul style="list-style-type: none"> Measure and mark out materials to the nearest millimetre. Use appropriate cutting and shaping techniques independently. Understand how to reinforce and strengthen a 3d framework. 	<u>Pneumatics</u> <ul style="list-style-type: none"> Choose appropriate mechanisms for a product. Know how mechanical systems create movement. 	<u>Quilted Class Blanket for the Reading Corner.</u> <ul style="list-style-type: none"> Understand the need for a seam allowance. Select appropriate techniques to decorate textiles. 	<u>Torch</u> <ul style="list-style-type: none"> Create parallel circuits. Understand how more complex electrical circuits and components can be used to create functional products.
Year 5	<u>Seasonal Bread</u>	<u>Wooden Bridges with Tinker Cad design</u>	<u>Gears with a simple circuit including motor. Knex</u>	<u>Cushion</u>	<u>Links to Other Units Tinker Cad</u>

- Understand the importance of correct storage and handling of ingredients including micro-organisms.
- Demonstrate a range of baking and cooking techniques, using where appropriate, a heat source.
- Begin to understand that seasons may affect the food available.
- Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.

- Cut materials accurately and refine the finish with appropriate tools eg/sanding wood or using a more precise scissor cut after using a rough one.
- Use a range of practical skills to independently create products eg/ cutting, drilling, screwing, nailing, gluing, filling and sanding.

(London Eye)

- Convert rotary motion to linear eg/make a moving toy using a cam.
- Understand how mechanical systems such as cams or pulleys or gears create movement.

- Create an object eg/ cushion that require a seam allowance.
- Use the qualities of materials to create suitable and visual and tactile effects in the decoration of textiles.

Simple Circuit- London Eye

- Create circuits from kits which use a variety of components eg/ LEDs, resistors, transistors and chips.
- Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.
- Understand that mechanical and electrical systems have an input, process and output.
- Write code to control and monitor models or products.

Year 6

Seasonal Birmingham Pie

- Measure accurately and calculate ratios of ingredients to scale up or scale down from a recipe.
- Create and refine recipes, including ingredients, methods, cooking times and temperatures.
- Understand the seasonality of food.
- Understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.

Mayan playground

- Show an understanding of the qualities of materials to choose appropriate tools to cut and shape.
- Use a range of practical skills to independently create products eg/ cutting, drilling, screwing, nailing, gluing, filling and sanding.

Cams-Lego

- Use a combination of electronics (or computing) and mechanics in product design.
- Understand how mechanical systems such as cams or pulleys or gears create movement.

Stitch a flag for leavers' bunting.

- Join materials with a combination of stitching techniques such as back stitch for seams and running stitch to attach decoration.
- With confidence, pin, sew and stitch materials together to create a product.

Burglar and light Alarm

- Create circuits from kits which use a variety of components eg/ LEDs, resistors, transistors and chips.
- Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products
- Write code to control and monitor models or products.

