

Year 3 Curriculum

DT objectives (KS2)

Throughout the year

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

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 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

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.

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

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

	<u>Sticky knowledge</u>	<u>Core Vocabulary</u>	<u>Final product and differentiation</u>	<u>Links to Curriculum Drivers</u>
<u>Autumn</u> Textiles	Prove that a design meets a set criteria Design a product and make sure that it looks attractive Choose a material for both its suitability and its appearance Follow a step-by-step plan, choosing the right equipment and materials Select the most appropriate tools and techniques for a given task Work accurately to measure, make cuts and make holes.	Back stich, binca, bodkin, cotton thread, cross stitch, hook and eye, loom, pinking shears, press stud, running stitch, seam allowance, sewing machine, tacking, thimble, make, design, plan, product +KS1 vocabulary	Making a cushion Pupils with secure understanding indicated by: Their ability to make a cushion that includes appliqué and cross stitch. Pupils working at greater depth indicated by: Their ability to make a cushion that includes appliqué and cross stitch using small, neat stitches that closely matches their design sheet.	Possibilities – Interior design - Kelly Hoppen
<u>Spring</u> Mechanical systems	Make a product which uses both electrical and mechanical components Know how to strengthen a product by stiffening a given part or reinforce a part of the structure Use a simple IT program within the design Explain how to improve a finished model Know why a model has, or has not, been successful.	Tenon saw, vice, wire strippers, screws, nails, accurate, marking out, jointer, junior hacksaw, motor, pliers, rotary cutter, safety ruler, screwdriver, side cutters, snips, spanner, stapler, dowel, build, make, design, plan, product +KS1 vocabulary	Create a pneumatic toy Pupils with secure understanding indicated by: Creating a finished pneumatic toy that fulfils the design brief. Pupils working at greater depth indicated by: Creating a sophisticated pneumatic systems with linkages and decorative housing, showing creative use of materials and attention to detail.	Possibilities -
<u>Summer</u> Electrical systems	Prove that a design meets a set criteria Design a product and make	Battery, battery holder, light bulb, bulb holder, buzzer, build, make, design, plan, product	Static electricity	Possibilities – Computer

	<p>sure that it looks attractive Choose a material for both its suitability and its appearance Follow a step-by-step plan, choosing the right equipment and materials Select the most appropriate tools and techniques for a given task Make a product which uses both electrical and mechanical components.</p>	+KS1 vocabulary	<p>Pupils with secure understanding indicated by: Using a range of materials and equipment to make a game for their peers which uses static electricity.</p> <p>Pupils working at greater depth indicated by: Using a wide range of materials and equipment to make a game which uses static electricity in an imaginative way (possibly in multiple ways) which is suitable for their peers and fulfils the design criteria they identified at the beginning of the task.</p>	technician/Role in IT - Bill Gates
<u>Food technology</u>	<p>Describe how food ingredients come together Weigh out ingredients and follow a given recipe to create a dish Talk about which food is healthy and which food is not Know when food is ready for harvesting.</p>	<p>Grams/kilograms, hygiene, ladle, millilitre/litre, spatula, temperature, whisk</p> <p>+KS1 vocabulary</p>	<p>Making tarts</p> <p>Pupils with secure understanding indicated by: Their understanding of the basic rules of hygiene and safety when working with food, and their ability to follow the instructions within a recipe.</p> <p>Pupils working at greater depth indicated by: A thorough understanding of a how to work safely and hygienically when cooking and working independently to follow the steps within a recipe to create successful end result.</p>	Possibilities – Pastry chef - Lorraine Pascale