



Bearpark Design & Technology Curriculum for Year 5 and 6 (Cycle B)

What are the aims and intentions of this DT curriculum?

Key Aims:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Skills

Generating ideas - designing	Making	Evaluating	Key Vocabulary
<p>Use research using surveys, interviews, questionnaires and web-based resources to develop a design specification for a range of functional products.</p> <p>Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost.</p> <p>Generate and develop innovative ideas and share and clarify these through discussion.</p> <p>Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.</p>	<p>Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.</p> <p>Competently select from and use appropriate tools to accurately measure, mark, cut and assemble materials, and securely connect electrical components to produce reliable, functional products.</p> <p>Use finishing and decorative techniques suitable for the product they are designing and making.</p>	<p>Continually evaluate and modify the working features of the product to match the initial design specification.</p> <p>Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>Test the system to demonstrate its effectiveness for the intended user and purpose.</p>	<p>function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype</p>



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Term	Topic	Knowledge	Assessment
Autumn	Structures	To investigate a collection of different structures.	
	Frame structures	To understand how to strengthen, stiffen and reinforce 3-D frameworks. To evaluate their product against the intended purpose. Key Vocabulary: frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	
Spring	Food	To learn where in the world a variety of ingredients flourish building on their understanding of the eatwell plate.	
	Food from around the world	To place different ingredients into the correct food groups. To learn some basic and advanced cooking techniques. Key Vocabulary: ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble.	
		Key Vocabulary: seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings.	
Summer	Mechanisms	Understand that mechanical and electrical systems have an input, process and an output.	
	Gears and pulleys	Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. Know and use technical vocabulary relevant to the project. Key Vocabulary: pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output	