

Year 6 – Design & Technology Progression Curriculum Documents

Prior Learning	In Year 6	Future learning:	Key Vocabulary
<p>Designing: Investigate, analyse and evaluate a range of existing products. Create detailed plans when constructing my product.</p> <p>Making Measure, cut and shape a range of materials with increasing accuracy. I can assemble, join and combine components accurately. Sew a button onto material, threading a needle independently. Use pattern pieces and seam allowance to create a 3D product which includes decorative stitching. Use a range of construction tools (eg hand-drill, hammer, hacksaw, bench-hook) safely and accurately.</p> <p>Evaluating Evaluate finished products, suggesting alternative techniques which could achieve improvements, showing an awareness of fitness for purpose.</p>	<p>Designing</p> <ul style="list-style-type: none"> 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 <p>Making</p> <ul style="list-style-type: none"> 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. <p>Evaluate</p> <ul style="list-style-type: none"> 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 	<p>Design use research and exploration, such as the study of different cultures, to identify and understand user needs identify and solve their own design problems and understand how to reformulate problems given to them develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</p> <p>Make: select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties</p> <p>Evaluate analyse the work of past and present professionals and others to develop and broaden their understanding investigate new and emerging technologies test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups understand developments in design and technology, its</p>	<p>Mechanisms Transmit, annotated drawings, exploded diagrams, functionality</p> <p>Construction and textiles: Applique, annotate, evaluate, innovation, functionality, renewable, authentic, chain stitch Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief</p> <p>Cooking: Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in</p> <p>Electrical systems and Digital world Light dependent resistor, interface control, micro switch, latching switch</p>

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			impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.		
Common Misconceptions: Unaware of technical vocabulary Not having the skills to complete a task Inappropriate use of tools			Famous Designers: Bridge architects of the world Robert O Peterson		
Pedological Knowledge					
Cooking	Mechanisms	Construction	Textiles	Evaluating processes and products	Working with tools
Prepare food products taking into account the properties of ingredients and sensory characteristics Select and prepare foods for a particular purpose Taste a range of ingredients to develop a sensory food vocabulary and use when designing. Weigh and measure accurately using scales Join and combine food ingredients appropriately e.g. beating, rubbing in etc. Decorate appropriately. Understand and follow safe	Cut accurately and safely to a marked line. Join and combine materials with temporary, fixed or moving joins. Use craft knife, cutting mat and safety ruler under one to one supervision [if appropriate]. Choose an appropriate sheet material for the purpose.	Explore the sensory qualities of a wider range of materials and how to use appropriate materials and processes. Be aware of possible constraints Measure, mark out, cut and shape a range of materials, and assemble, join and combine components and materials with accurately Use appropriate skills for using finishing techniques and strengthen and improve the appearance of the	Create 3D products using pattern pieces and seam allowance Understand pattern layout Pin and tack fabric pieces together Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (close supervision). Decorate textiles appropriately often before joining components Make quality products	Reflect on the progress of their product as they work. Carry out appropriate tests before making any improvements. Recognise that the quality of the product depends on how well it is made and how well it meets its intended purpose. Recognise how well products meet social, economic and environmental considerations. Identify what does and does not work in the product. Make suggestions as how their	

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<p>procedures for food safety</p>		<p>product using a range of equipment and tools including ICT Explore how mechanisms such as those introduced in years 3 and 4 can be used to make things move in different ways using a range of equipment including ICT. Build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms. Understand, explain and follow safe procedures for using a range of tools.</p>		<p>design could be improved</p>	
<p>Key Questions What instructions will you need to give the programming device to make it fit for purpose? What mechanisms allow the movement in the automata toys? How can we ensure stability in our structures? What stitch will you use? <u>What decorative techniques may you use?</u></p>			<p>End of Unit Assessment: Navigating the world- digital Jack in a box- automata toys Bridge- structure Mayan clothing- textiles Steady hand game- electrical Cooking a meal- food</p>		