

Strand	Unit	KSI	Across Key Stage Two	Lower KS2	Upper KS2
Designing	Understanding contexts, users and purposes	 work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment state what products they are designing and making say whether their products are for themselves or other users describe what their products are for say how their products will work say how they will make their products suitable for their intended users use simple design criteria to help develop their ideas 	 work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment describe the purpose of their products indicate the design features of their products that will appeal to intended users explain how particular parts of their products work 	gather information about the needs and wants of particular individuals and groups develop their own design criteria and use these to inform their ideas	 carry out research, using surveys, interviews, questionnaires and webbased resources identify the needs, wants, preferences and values of particular individuals and groups develop a simple design specification to guide their thinking
	Generating, developing, modelling and communicating ideas	generate ideas by drawing on their own experiences use knowledge of existing products to help come up with ideas develop and communicate ideas by talking and drawing model ideas by exploring materials, components and construction kits and by making templates and mockups use ICT, where	 share and clarify ideas through discussion model their ideas using prototypes and pattern pieces use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas use computer-aided design to develop and communicate their ideas 	 generate realistic ideas, focusing on the needs of the user make design decisions that take account of the availability of resources 	 generate innovative ideas, drawing on research make design decisions, taking account of constraints such as time, resources and cost



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		appropriate, to develop and communicate their ideas			
Making	Planning	 plan by suggesting what to do next select from a range of tools and equipment, explaining their choices select from a range of materials and components according to their characteristics 	 select tools and equipment suitable for the task explain their choice of tools and equipment in relation to the skills and techniques they will be using select materials and components suitable for the task explain their choice of materials and components according to functional properties and aesthetic qualities 	order the main stages of making	 produce appropriate lists of tools, equipment and materials that they need formulate step-by-step plans as a guide to making
	Practical skills and techniques	 follow procedures for safety and hygiene use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components measure, mark out, cut and shape materials and components assemble, join and combine materials and components use finishing techniques, including those from art and design 	 follow procedures for safety and hygiene use a wider range of materials and components than KSI, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 	 measure, mark out, cut and shape materials and components with some accuracy assemble, join and combine materials and components with some accuracy apply a range of finishing techniques, including those from art and design, with some accuracy 	 accurately measure, mark out, cut and shape materials and components accurately assemble, join and combine materials and components accurately apply a range of finishing techniques, including those from art and design use techniques that involve a number of steps demonstrate resourcefulness when tackling practical problems



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	Own ideas and products	 talk about their design ideas and what they are making make simple judgements about their products and ideas against design criteria suggest how their products could be improved 	 identify the strengths and areas for development in their ideas and products consider the views of others, including intended users, to improve their work 	 refer to their design criteria as they design and make use their design criteria to evaluate their completed products 	 critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make evaluate their ideas and products against their original design specification
Evaluating	Existing products	 what products are who products are for what products are for how products work how products are used where products might be used what materials products are made from what they like and dislike about products 	 how well products have been designed how well products have been made why materials have been chosen what methods of construction have been used how well products work how well products achieve their purposes how well products meet user needs and wants 	 who designed and made the products where products were designed and made when products were designed and made whether products can be recycled or reused 	 how much products cost to make how innovative products are how sustainable the materials in products are what impact products have beyond their intended purpose
	Key events and individuals		about inventors, designers, engineers, chefs and manufacturers who have developed ground- breaking products		



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Technical knowledge	Making products work	YEAR ONE • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes YEAR TWO • about the movement of simple mechanisms such • as levers, sliders, wheels and axles	Lower Key Stage Two that food ingredients can be fresh, pre-cooked and processed Upper Key Stage Two that a recipe can be adapted by adding or substituting one or more ingredients	YEAR THREE how to make strong, stiff shell structures that a single fabric shape can be used to make a 3D textiles product how mechanical systems such as levers and linkages or pneumatic systems create movement YEAR FOUR how simple electrical circuits and components can be used to create functional products how to program a computer to control their products	YEAR FIVE how mechanical systems such as cams or pulleys or gears create movement how to reinforce and strengthen a 3D framework that a 3D textiles product can be made from a combination of fabric shapes YEAR SIX how more complex electrical circuits and components can be used to create functional products how to program a computer to monitor changes in the environment and control their products
Cooking and Nutrition	Where food comes from	 that all food comes from plants or animals that food has to be farmed, grown elsewhere (e.g. home) or caught 	 that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world 		 that seasons may affect the food available how food is processed into ingredients that can be eaten or used in cooking



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	Food Preparation, cooking and nutrition	•	how to name and sort foods into the five groups in The Guide that everyone should eat at least five portions of fruit and vegetables every day how to prepare simple dishes safely and hygienically, without using a heat source how to use techniques such as cutting, peeling and grating	•	how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	• • •	that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Guide that to be active and healthy, food and drink are needed to provide energy for the body	•	that recipes can be adapted to change the appearance, taste, texture and aroma that different food and drink contain different substances – nutrients, water and fibre – that are needed for health