

	Design and Technology Progression in Key Concepts							
	User	Purpose	Functionality	Design criteria and specification	Sturdiness	Sustainability	Innovation	Finish and decoration
EYFS	Say who products are for within familiar contexts	Say what a product is for and how this helps people	Explore how simple products work	Make a simple product based on simple criteria	Know that some products need to be strong so they don't break	Know that making products will create waste & that waste needs to be reduced	Use familiar products to imitate; make simple innovations	Use simple finishing techniques to add aesthetic qualities
KS1	Say whether their products are for themselves or other users -Say how their product will be suitable for the intended user	State what products they are designing and making and identify the purpose -Begin to evaluate whether their own products achieved their purposes and how products could be improved	Explore how products work -Say how their own products will work -Understand the simple working characteristics of materials and components	Use simple design criteria to help develop their ideas -Make simple judgements about their products against design criteria -Suggest how their products could be improved	Explore the suitability of materials to particular products which need to be sturdy Explore how products can be made stronger, stiffer and more stable	Know that making products will create waste & know some ways to reduce waste -Know that some materials can be recycled or saved to make future and different products	Use knowledge of existing products to help come up with ideas -Generate ideas by drawing on experiences -Model ideas by exploring materials, components and kits and by making templates and mock-ups; use ICT where appropriate	Use finishing techniques and decoration, using more than one medium or material where appropriate, including those from art and design
Lower KS2	Gather information about the needs and wants of particular individuals and groups -Investigate and analyse how well products meet user needs and wants	Describe what their products are for and how this serves a purpose (e.g. the problem it solves) -Evaluate achievement of purpose & enhance design if needed	Explain how particular parts of products work -Know that materials have both functional properties and aesthetic qualities -Use learning from science & maths	Develop their own design criteria and use these to inform their ideas & refer to this as they design & make -Use their design criteria to evaluate completed products	Consider the need to create sturdy products at the design stage & plan to use materials & techniques to ensure strength so that products do not break	Begin to understand the concept of resourcefulness -Investigate whether products can be recycled and reused -Know that products have a cost	Model ideas using prototypes and pattern pieces -Use technical sketches, computer aided design and diagrams to develop ideas	Apply a range of finishing techniques, including those from art and design, with some accuracy
Upper KS2	-Carry out research, using surveys, interviews, questionnaires and web-based resources - Identify the needs, wants, preferences and values of particular individuals and groups -Consider the views of others, including intended users, to improve their work	Describe the purpose of products and evaluate how well existing products and their own achieve their purposes -Master the iterative process of designing and making to review, redevelop & enhance products -Consider what impact products have beyond their intended purpose	Apply learning from science & maths learning confidently. -Master understanding of how products work: products involving mechanical systems, electrical systems (inc. programming, monitoring and control), why food techniques are used and how to make strong structures to enable functionality.	Develop a simple design specification to guide their thinking 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	Know a range of techniques to strengthen products -Apply understanding of how to strengthen, stiffen and reinforce more complex structures -Consider sturdiness of products made when evaluating and use the iterative process of design to make improvements	Demonstrate resourcefulness when tackling practical problems -Investigate and analyse: - how much products cost to make - how sustainable the materials in products are - the impact on the environment and how this can be lessened	Investigate how innovative products are -Generate innovative ideas, drawing on research -Make innovative design decisions considering constraints such as time, resources and cost	Accurately apply a range of finishing techniques, including those from art and design -Use techniques that involve a number of steps, materials or media where appropriate

