Curriculum progression – Design & Technology



D & T Progression		Reception	Year 1/2	Year 3/4	Year 5/6
Designing	Understanding contexts, users & 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	• Is able to work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • Is able to describe the purpose of their products • Is able to indicate the design features of their products that will appeal to intended users • Is able to explain how particular parts of their products work • Is able to gather information about the needs and wants of particular individuals and groups • Is able to develop their own design criteria and use these to inform their ideas	• Is able to work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • Is able to describe the purpose of their products • Is able to indicate the design features of their products that will appeal to intended users • Is able to explain how particular parts of their products work • Is able to gather information about the needs and wants of particular individuals and groups • Is able to develop their own design criteria and use these to inform their ideas carry out research, using surveys, interviews, questionnaires and web-based resources • Is able to identify the needs, wants, preferences and values of



					particular individuals and groups • Is able to develop a simple design specification to guide their thinking
	Generating, developing, modelling & communicating ideas	• Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding.	• 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 information and communication technology, where appropriate, to develop and communicate their ideas	• Is able to share and clarify ideas through discussion • Is able to model their ideas using prototypes and pattern pieces • Is able to use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • Is able to use computer-aided design to develop and communicate their ideas • Is able to generate realistic ideas, focusing on the needs of the user • Is able to make design decisions that take account of the availability of resources	• Is able to share and clarify ideas through discussion • Is able to model their ideas using prototypes and pattern pieces • Is able to use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • Is able to use computer-aided design to develop and communicate their ideas • Is able to generate realistic ideas, focusing on the needs of the user • Is able to make design decisions that take account of the availability of resources • Is able to generate innovative ideas, drawing on research • Is able to make design decisions, taking account

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					of constraints such as time, resources and cost
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	• Is able to select tools and equipment suitable for the task • Is able to explain their choice of tools and equipment in relation to the skills and techniques they will be using • Is able to select materials and components suitable for the task • Is able to explain their choice of materials and components according to functional properties and aesthetic qualities • Is able to order the main stages of making	• Is able to select tools and equipment suitable for the task • Is able to explain their choice of tools and equipment in relation to the skills and techniques they will be using • Is able to select materials and components suitable for the task • Is able to explain their choice of materials and components according to functional properties and aesthetic qualities • Is able to order the main stages of making • Is able to produce appropriate lists of tools, equipment and materials that they need • Is able to formulate step-by-step plans as a guide to making
	Practical skills and techniques	• Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking	• Follow procedures for safety and hygiene • Use a range of materials and components, including construction materials and kits,	• Is able to follow procedures for safety and hygiene • Is able to use a wider range of materials and components than KS1, including construction	• Is able to follow procedures for safety and hygiene • Is able to use a wider range of materials and components than KS1, including construction



		• Children will safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	• 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	materials and kits, textiles, food ingredients, mechanical components and electrical components • Is able to measure, mark out, cut and shape materials and components with some accuracy • Is able to assemble, join and combine materials and components with some accuracy • Is able to apply a range of finishing techniques, including those from art and design, with some accuracy	materials and kits, textiles, food ingredients, mechanical components and electrical components • Is able to measure, mark out, cut and shape materials and components with some accuracy • Is able to assemble, join and combine materials and components with some accuracy • Is able to 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 • Is able to accurately assemble, join and combine materials and components • Is able to accurately apply a range of finishing techniques, including those from art and design • Is able to use techniques that involve a number of steps



					• Is able to demonstrate resourcefulness when tackling practical problems
Evaluating	Own ideas and products	• Share their creations, explaining the processes they have used	• 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	• Is able to identify the strengths and areas for development in their ideas and products • Is able to consider the views of others, including intended users, to improve their work • Is able to refer to their design criteria as they design and make • Is able to use their design criteria to evaluate their completed products	• Is able to identify the strengths and areas for development in their ideas and products • Is able to consider the views of others, including intended users, to improve their work • Is able to refer to their design criteria as they design and make • Is able to use their design criteria to evaluate their completed products • Is able to critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • Is able to evaluate their ideas and products against their original design specification • Is able to critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make



					• Is able to evaluate their ideas and products against their original design specification
	Existing products		• Explore what products are • Explore who products are for • Explore what products are for • Explore how products work • Explore how products are used • Explore where products might be used • Explore what materials products are • made from • Explore what they like and dislike about • products	• Is able to investigate and analyse how well products have been designed • Is able to investigate and analyse how well products have been made • Is able to investigate and analyse why materials have been chosen • Is able to investigate and analyse what methods of construction have been used • Is able to investigate and analyse how well products work • Is able to investigate and analyse how well products achieve their purposes • Is able to investigate and analyse how well products meet user needs and wants • Is able to investigate and analyse who designed and made the products	• Is able to investigate and analyse how well products have been designed • Is able to investigate and analyse how well products have been made • Is able to investigate and analyse why materials have been chosen • Is able to investigate and analyse what methods of construction have been used • Is able to investigate and analyse how well products work • Is able to investigate and analyse how well products achieve their purposes • Is able to investigate and analyse how well products meet user needs and wants • Is able to investigate and analyse who designed and made the products



				• Is able to investigate and analyse where products were designed and made • Is able to investigate and analyse when products were designed and made • Is able to investigate and analyse whether products can be recycled or reused	• Is able to investigate and analyse where products were designed and made • Is able to investigate and analyse when products were designed and made • Is able to investigate and analyse whether products can be recycled or reused • Is able to investigate and analyse how much products cost to make • Is able to investigate and analyse how innovative products are • Is able to investigate and analyse how sustainable the materials in products are • Is able to investigate and analyse what impact products have beyond their intended purpose
	Key events and individuals		n/a	• Knows about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	• Knows about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
Technical Knowledge	Making products work		• Know about the simple working • characteristics of materials and components	• Knows how to use learning from science to help design and make products that work • Knows how to use learning from	• Knows how to use learning from science to help design and make products that work • Knows how to use learning from



			• Know about the movement of simple • mechanisms such as levers, sliders, wheels and axles • Know how freestanding structures can be made stronger, stiffer and more stable • Know that a 3-D textiles product can • be assembled from two identical fabric shapes • Know that food ingredients should be • combined according to their sensory characteristics • Know the correct technical vocabulary for the projects they are undertaking	mathematics to help design and make products that work • Knows that materials have both functional properties and aesthetic qualities • Knows that materials can be combined and mixed to create more useful characteristics • Knows that mechanical and electrical systems have an input, process and output • Knows the correct technical vocabulary for the projects they are undertaking • Knows how mechanical systems such as levers and linkages or pneumatic systems create movement • Knows how simple electrical circuits and components can be used to create functional products • Knows how to program a computer to control their products	mathematics to help design and make products that work • Knows that materials have both functional properties and aesthetic qualities • Knows that materials can be combined and mixed to create more useful characteristics • Knows that mechanical and electrical systems have an input, process and output • Knows the correct technical vocabulary for the projects they are undertaking • Knows how mechanical systems such as levers and linkages or pneumatic systems create movement • Knows how simple electrical circuits and components can be used to create functional products • Knows how to program a computer to control their products



				• Knows how to make strong, stiff shell structures • Knows that a single fabric shape can be used to make a 3D textiles product • Knows that food ingredients can be fresh, pre-cooked and processed	• Knows how to make strong, stiff shell structures • Knows that a single fabric shape can be used to make a 3D textiles product • Knows that food ingredients can be fresh, pre-cooked and processed • Knows how mechanical systems such as cams or pulleys or gears create movement Knows how more complex electrical circuits and components can be used to create functional products • Knows how to program a computer to monitor changes in the environment and control their products • Knows how to reinforce and strengthen a 3D framework • Knows that a 3D textiles product can be made from a combination of fabric shapes • Knows that a recipe can be adapted by adding or



					substituting one or more ingredients
Cooking & Nutrition	Where food comes from		• Know that all food comes from plants • or animals • Know that food has to be farmed, • grown elsewhere (e.g. home) or caught	• Knows 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	• Knows 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 • Knows that seasons may affect the food available • Knows how food is processed into ingredients that can be eaten or used in cooking
	Food preparation, cooking and nutrition		• Know how to name and sort foods • into the five groups in The Eatwell Plate • Know that everyone should eat at least five portions of fruit and vegetables every day • Know how to prepare simple dishes safely and hygienically, without using a heat source • Know how to use techniques such as • cutting, peeling and grating	• Knows how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • Knows how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • Knows that a healthy diet is made up from a variety and balance of different food and drink, as	• Knows how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • Knows how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • Knows that a healthy diet is made up from a variety and balance of different food and drink, as



				depicted in The Eatwell Plate • Knows that to be active and healthy, food and drink are needed to provide energy for the body	depicted in The Eatwell Plate • Knows that to be active and healthy, food and drink are needed to provide energy for the body • Knows that recipes can be adapted to change the appearance, taste, texture and aroma • Knows that different food and drink contain different substances – nutrients, water and fibre – that are needed for health