

DT Progression Framework

EYFS	Three and four year olds:	Children in Reception:	By the end of EYFS pupils should	Key vocab
	EA: -Take part in simple pretend play, using an object to represent something else even though they are not similar. -Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. -Explore different materials freely, to develop their ideas about how to use them and what to make. -Develop their own ideas and then decide which materials to use to express them. -Join different materials and explore different textures. -Create closed shapes with continuous lines, and begin to use these shapes to represent objects. PSED: -Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them. PD: -Choose the right resources to carry out their own plan. -Use one-handed tools and equipment, for example, making snips in paper with scissors. UW: -Explore how things work	EA: -Return to and build on their previous learning, refining ideas and developing their ability to represent them. -Create collaboratively, sharing ideas, resources and skills. PD: -Develop their small motor skills so that they can use a range of tools competently, safely and confidently.	EA (ELG): -safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function -share their creations, explaining the process they have used -know how to use scissors safely -cut along a straight line -join items using tape -use glue to fix things items together -know how to draw a plan -know that they can adapt and change something they have made -work with a friend, sharing ideas -know that some materials are better for building than others -explore and use a range of construction kits - talk about what they have made and why -explore the designed and made world through the indoor and outdoor environment and through roleplay	Scissors, cut, straight, join, hold, fix, glue, safely, colour, design, plan, make, explain, evaluate, why, change, together, pieces

Designing	KS1	KS2
Understanding contexts, users and purposes	Across KS1 pupils should: -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	Across KS2 pupils should: -work confidently within a range of contexts such as 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 Lower KS2 pupils should also: -gather information about the needs and wants of particular individuals and groups -develop their own design criteria and use these to inform their ideas Upper KS2 should also: Carry out research, using surveys, interviews, questionnaires and web-based resources -identify the needs, wants, preferences and values of particular individuals and groups -<i>develop a simple design specification to guide their thinking</i>
Generating, developing, modelling and communicating ideas	Across KS1 pupils should: -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 mock-ups -use information and communication technology, where appropriate to develop their ideas	Across KS2 pupils should: -share and clarify ideas through discussion -model their ideas using prototypes and pattern pieces -use annotated sketched, cross-sectional drawing and diagrams to develop and communicate their ideas -use computer-aided design to develop and communicate their ideas Lower KS2 pupils should also: -generate realistic ideas, focusing on the needs of the user - <i>make design decisions that take into account the availability of resources</i> Upper KS2 pupils should also: -generate innovative ideas, drawing on research -<i>make design decisions, taking account of constraints such as time, resources and cost</i>
Making	KS1	KS2
Planning	Across KS1 pupils should: -<i>plan by suggesting what to do next</i> -select from a range of tools and equipment, <i>explaining their choices</i>	Across KS2 pupils should: -select tools and equipment suitable for the task

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	-select from a range of materials and components according to their characteristics	<i>-explain their choice of tools and equipment in relation to the skills and techniques they will be using</i> -select materials and components which are suitable for the task -explain their choice of material and components according to functional properties and aesthetic questions Lower KS2 pupils should also: <i>-order the main stages of making</i> Upper KS2 pupils should also: <i>-produce appropriate lists of tools, equipment and materials they need</i> <i>-formulate step-by-step plans as a guide to making</i>
Practical skills and technique	Across KS1 pupils should: -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	Across KS2 pupils should: -follow procedures for safety and hygiene -use a wider range of materials and components than KS1, including construction kits and materials, textiles, food ingredients, mechanical components and electrical components Lower KS2 pupils should also: -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 Upper KS2 pupils should also: -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 <i>-use techniques that involve a number of steps</i> -demonstrate resourcefulness when tackling practical problems
Evaluating	KS1	KS2
Own ideas and products	Across KS1 pupils should: -talk about their design ideas and what they are making -make simple judgements about their products and ideas against design criteria	Across KS2 pupils should: -identify the strengths and areas for development in their ideas and products -consider the views of others, including users and improve their work

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	- <i>suggest how their products could be improved</i>	Lower KS2 pupils should also: -refer to their design criteria as they design and make -use their design criteria to evaluate their completed products Upper KS2 pupils should also: -critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make -<i>evaluate their ideas and products against their original design specification</i>
Existing products	Across KS1 pupils should explore: -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 a product	Across KS2 pupils should investigate and analyse: -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 purpose -how well products meet user needs and wants Lower KS2 pupils should also investigate and analyse: -who designed and made the products -where products were designed and made -whether the products can be recycled or reused Upper KS2 pupils should also investigate and analyse: -how much products cost to make -how innovative products are -how sustainable materials used in products are -what impact products have beyond their intended purpose
Key events and individuals	Not a requirement in KS1	Across KS2 pupils should: -know about inventors, designers, engineers, chefs and manufactures who have developed ground-breaking products
Technical knowledge	KS1	KS2
Making products work	Across KS1 pupils should know: -about the simple working characteristics of materials and components - about the movement of simple mechanisms such as levers, sliders, wheels and axles -how freestanding structures can be made stronger, stiffer and more stable	Across KS2 pupils should know: -how to use learning from science to help design and make products that work -how to use learning from maths to help design and make product that work -that materials how both functional and aesthetic qualities -<i>that materials can be combined and mixed to create more useful characteristics</i>

	<i>-that a 3-D textiles product can be assembled from two identical fabric shapes</i> <i>-that food ingredients should be combined according to their sensory characteristics</i> <i>-the correct technical vocab for the projects they are undertaking</i>	<i>-that mechanical and electrical systems have an input, process and output</i> <i>-the correct technical vocab for project they are undertaking</i> Lower KS2 pupils should also know: -how mechanical systems such as levers and linkages or pneumatic systems create movement -how simple electric circuits and components can be used to create functional products -how to program a computer to control their product -how to make strong, stiff shell structures -that single fabric shape can be used to make 3D textiles product -that food ingredients can be fresh, precooked or processed Upper KS2 pupils should also know: -how mechanical systems such as cams or pulleys or gears create movement -how more complex electrical components can be used to create functional products -how to program a computer to monitor changes in the environment and control their products - how to reinforce and strengthen a 3D framework <i>-that 3D textiles product can be made from a combination of fabric shapes</i> <i>-that a recipe can be adapted by adding or substituting one or more ingredient</i>
Cooking and nutrition	KS1	KS2
Where food comes from	Across KS1 pupils should know: -that all food comes from plants or animals -that food has to be farmed, grown elsewhere (eg. home) or caught	Across KS2 pupils should know: -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 Upper KS2 pupils should also know: -that seasons may affect the food available -how food is processed into ingredients that can be eaten or used in cooking
Food preparation, cooking and nutrition	Across KS1 pupils should know: -how to name and sort foods into five groups in the eatwell plate	Across KS2 pupils should know: -how to prepare and cook a variety of predominantly savoury dishes safely and

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	-that everyone should eat at least five portions of fruit and veg every day -how to prepare simple dishes safely and hygienically, without using heat source -how to use techniques such as cutting, peeling and grating	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 Lower KS2 pupils should also know: -that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the eatwell plate -that to be active and healthy, food and drink are needed to provide energy for the body Upper KS2 pupils should also know: -<i>that recipes can be adapted to change the appearance, taste, texture and aroma</i> -that different food and drink contain different substances-nutrients, water and fibre-that are needed for health
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