



Design and Technology Progression of Skills Framework

Skills by Key Stage

D&T - EYFS

D&T in EYFS is taught through expressive arts and design and incorporated into all areas of learning. Pupils are provided with the opportunity to explore and experiment with construction resources and develop their creative thinking learning to use tools and techniques safely.

Key Stages 1 and 2

National Curriculum 2014 – statements which are either derived directly from the programmes of study for D&T or provide an age-related interpretation of the requirements are shown in black

School Curriculum

Statements which are additional to the programmes of study for D&T are shown in *italic red font*

Cross Curricular Outcomes for Design and Technology

EYFS		
Autumn Term	Spring Term	Summer Term
- Use scissors correctly to cut along a line, join card together. Follow instructions to fold card accurately to make a hinge for an opening celebration card. - Make a fruit crumble. - Designing wrapping paper for Christmas gifts.	- Fold card to make a hinge for an opening Mother's Day/Easter card - Create food, props and masks for a dinosaur feast. - Create a plant pot out of clay.	- Exploring how things work and changing how they work – make a vehicle out of junk. - Return to and build on previous learning to refine ideas and represent them.

Year 1		
Autumn Term	Spring Term	Summer Term
<u>Food</u> - Why is it so important to eat fruit? Design, make and evaluate a delicious fruit-based snack to eat for yourself at break time. <u>Structures</u> - To design and make a Christmas tree decoration to sell at the Christmas fair.	<u>Textiles</u> How can we make the picnic more comfortable for Teddy and his friends? To design and make a picnic blanket for teddy	<u>Structures and Mechanisms</u> How can I make an illustration move? To design and make an illustration from a book with a moving picture.

Year 2		
Autumn Term	Spring Term	Summer Term
<u>Food</u> - Why is it so important to eat vegetables? Design, make and evaluate a delicious savoury wrap to take on a trip to the seaside. <u>Structures and mechanisms</u> - How can a fire engine move to put out the burning fire? Design and make a	<u>Textiles</u> What simple props could be used to make stories more interesting for younger children? Design, make and evaluate a character glove puppet to use with EYFS children to help make a story more interactive and engaging.	<u>Structures and Mechanisms</u> Wacky windmills - Are there windmills in Australia? Windmills are important for lots of things but today they are especially important for generating electricity. Design, make and evaluate a windmill.

moving fire engine which can travel to the fire. <u>Textile/Christmas</u> Design, make and evaluate a tree decoration in the shape of a Christmas tree.		
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Year 3		
Autumn Term	Spring Term	Summer Term
<u>Mechanisms</u> - Design, make and evaluate a puppet with different mechanisms in order to put on a performance. <u>Structures</u> - Design, make and evaluate a picture frame to sell at the Christmas fair.	<u>Food</u> - Design, make and evaluate the making of flat bread. <u>Structures</u> - Design, make and evaluate a serving pot.	<u>Textiles</u> Design, make and evaluate a money purse (join fabrics using a range of stitches with increasing independence and add a button for closure). Introduce blanket stitch.

Year 4		
Autumn Term	Spring Term	Summer Term
<u>Food</u> - Identify different vegetables which originate from Africa and prepare an African inspired soup/stew. <u>Textiles</u> - Design, make and evaluate seasonal stockings, with embellishment (join fabrics using a range of stitches with increasing independence and add further decoration using buttons, beads, sequins etc).	<u>Structure and Mechanisms</u> Design, make and evaluate a light box, using electricity.	<u>Mechanisms</u> Create a pop-up book

Year 5		
Autumn Term	Spring Term	Summer Term
<u>Food</u> - Design a healthy snack (breakfast bar) including packaging <u>Textiles</u> - Design, make and evaluate a seasonal gift, by creating and piecing a pattern together and demonstrate an awareness of seam allowance. They are taught how to cross-stitch.	<u>Mechanisms</u> Design, make and evaluate a moving toy powered by water	<u>Structures</u> Design, build and evaluate a bridge structure

Year 6		
Autumn Term	Spring Term	Summer Term
<u>Structures</u> - Design, make and evaluate a shelter <u>Textiles</u> - Design, make and evaluate a seasonal gift, using quality products, evidencing a range of textile skills of a particularly high standard incorporating all stitches learnt.	<u>Structures and Mechanisms</u> Fairground ride (Spring 2 - Summer1)	<u>Food</u> Healthy Mayan inspired meal (main and a dessert)

D & T - Designing

Skills	EYFS	KS1	LKS2	UKS2
Understanding contexts, users and purposes	• Begin to work within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds • Begin to say what products they are designing and making • Begin to say whether their products are for themselves or other users	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 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	
			In early 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	In late KS2 pupils 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	• Begin to generate ideas by drawing on their own experiences • Begin to develop and communicate ideas by talking and drawing • Begin to model ideas by exploring materials, components and construction kits and by making templates and mock-ups	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 and communicate their ideas	Across KS2 pupils should: • 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	
			In early KS2 pupils should also: • generate realistic ideas, focusing on the needs of the user • <i>make design decisions that take account of the availability of resources</i>	In late 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>

D & T - Making

Skills	EYFS	KS1	LKS2	UKS2
Planning	• Access problem solving activities e.g. cogs, wheels, building materials to begin to build with purpose and intent • Pouring and cutting skills, including the development of motor skills and control • Use tools and equipment safely • Access to the outdoors and the opportunity to use natural materials to design, create and build	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> • select from a range of materials and components according to their characteristics	Across KS2 pupils should: • select tools and equipment suitable for the task • <i>explain their choice of tools and equipment in relation to the skills and techniques they will be using</i> • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities	
			In early KS2 pupils should also: • <i>order the main stages of making</i>	In late KS2 pupils should also: • <i>produce appropriate lists of tools, equipment and materials that they need</i> • <i>formulate step-by-step plans as a guide to making</i>
Practical skills and techniques		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 materials and kits, textiles, food ingredients, mechanical components and electrical components	
			In early 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	In late 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

D & T - Evaluating

Skills	EYFS	KS1	LKS2	UKS2
Own ideas and products	Begin to evaluate their designs	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 <i>suggest how their products could be improved</i>	Across KS2 pupils should: - identify the strengths and areas for development in their ideas and products - consider the views of others, including intended users, to improve their work	
			In early KS2 pupils should also: - refer to their design criteria as they design and make - use their design criteria to evaluate their completed products	In late 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	Begin to understand - what products are - what products are for - how products work	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 products	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 purposes - how well products meet user needs and wants	
			In early KS2 pupils should also investigate and analyse: - 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	In late KS2 pupils should also investigate and analyse: - 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	Not a requirement in EYFS	Not a requirement in KS1	Across KS2 pupils should know: about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	

D & T – Technical Knowledge

Skills	EYFS	KS1	LKS2	UKS2
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 • <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 vocabulary for the projects they are undertaking</i>	Across KS2 pupils should know: • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • <i>that materials can be combined and mixed to create more useful characteristics</i> • that mechanical and electrical systems have an input, process and output • <i>the correct technical vocabulary for the projects they are undertaking</i>	
			In early KS2 pupils should also know: • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • <i>that a single fabric shape can be used to make a 3D textiles product</i> • <i>that food ingredients can be fresh, pre-cooked and processed</i>	In late KS2 pupils should also know: • how mechanical systems such as cams or pulleys or gears create movement • 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 • how to reinforce and strengthen a 3D framework • <i>that a 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 ingredients</i>

D & T – Cooking and Nutrition

Skills	EYFS	KS1	LKS2	UKS2
Where food comes from	Begin to understand 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 (e.g. 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	
				In late 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	• Have access to a healthy range of snacks to eat during their day and learn the importance of a nutritious diet • Take part in weekly Physical development lessons to learn the importance of exercise and nutrition	Across KS1 pupils should know: • how to name and sort foods into the five groups in 'The Eatwell Plate' • 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	Across KS2 pupils should know: • 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	
			In early 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	In late 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