Progression of skills in Design and Technology

	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6		
	Bring on Breakfast	Our Fabric faces Sandwiches & sides	Constructing Castles	Fabric Bunting	Moving Pictures	Sensational Salads	The Great Bread Bake-Off Catapults	Juggling Balls	Game Controllers	Let's go fly a Kite	Mechanical Posters	Edible Garden	Victorian Sampler	Super Seasonal Cooking	Automata Animals	Marbulous Mazes	Global food	Programming Adventures
DESIGN **Understanding contexts, users and purposes**	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						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											
							Pupils should • gather information about the needs and wants of particular individuals and groups • develop their own design criteria and use these to inform their ideas						Pupils should • carry out research, using surveys, interviews, questionnaires and web-based resources • identify the needs, wants, preferences and values of particular individuals and groups • *develop a simple design specification to guide their learning.*					
Generating, developing, modelling and communicating ideas	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.						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											
							Pupils should • generate realistic ideas, focusing on the needs of the user • *make design decisions that take account of the availability of resources*						Pupils should • generate innovative ideas, drawing on research • *make design decisions, taking account of constraints such as time, resources and cost.*					
MAKING **Planning**	Pupils should • *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						Pupils should •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											
							Pupils should • *order the main stages of making*						Pupils should • *produce appropriate lists of tools, equipment and materials that they need* • *formulate step-by-step plans as a guide to making*					

<table>
<tr><td>Practical skills and techniques</td><td>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</td><td colspan="2">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</td></tr>
<tr><td rowspan="3">EVALUATING

Own ideas and products</td><td rowspan="3">Pupils should
• 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</td><td colspan="2">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</td></tr>
<tr><td>Pupils should
• refer to their design criteria as they design and make
• use their design criteria to evaluate their completed products</td><td>Pupils should
• 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</td></tr>
<tr><td></td></tr>
<tr><td>Existing products</td><td>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</td><td colspan="2">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</td></tr>
<tr><td></td><td></td><td>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</td><td>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</td></tr>
<tr><td>Key events and individuals</td><td>Not a requirement in KS1</td><td colspan="2">Pupils should
• Know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</td></tr>
<tr><td>TECHNICAL KNOWLEDGE

Making products work</td><td>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</td><td colspan="2">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
• that materials can be combined and mixed to create more useful characteristics
• that mechanical and electrical systems have an input, process and output
• the correct technical vocabulary for the projects they are undertaking</td></tr>
</table>

	• *that a 3-D textiles product can be assembled from two identical fabric shapes* • *that food ingredients should be combined according to their sensory characteristics* • *the correct technical vocabulary for the projects they are undertaking*		
		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 • *that a single fabric shape can be used to make a 3D textiles product* • *that food ingredients can be fresh, pre-cooked and processed*	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 • *that a 3D textiles product can be made from a combination of fabric shapes* • *that a recipe can be adapted by adding or substituting one or more ingredients*
COOKING AND NUTRITION **Where food comes from**	Pupils should know: • that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught	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	
			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	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	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	
		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	Pupils should also know: • *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
	Statements in italics are advised by The Design and Technology Association, but additional to the programmes of study		**Created from the Design and Technology Association Progression framework.**

Progression of skills in Design & Technology

EYFS- Expressive arts & design is a specific area of the EYFS curriculum

Design Technology forms part of the Expressive arts & design curriculum specific area of learning and physical development prime area of learning

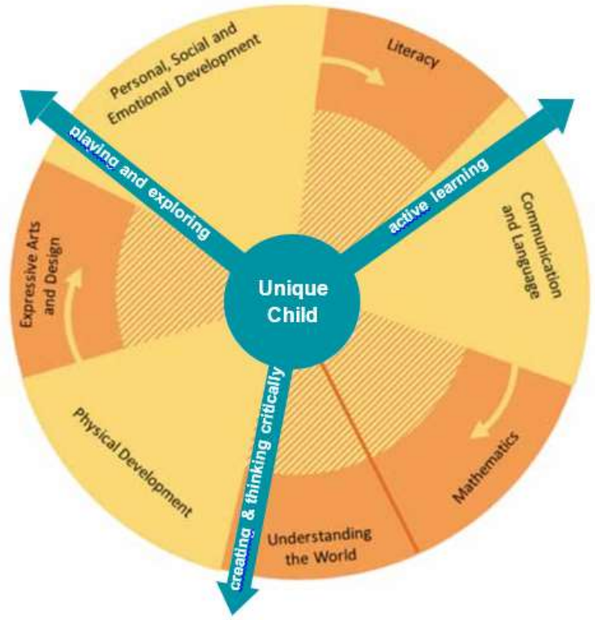
- The ways in which the child engages with people and their environment – playing exploring, active learning, and creating critically – underpin learning and EYFS. to remain an effective and motivated learner.
- The **prime** areas begin to develop quickly in response to relationships and experiences, and run through and support learning in all other areas. The prime areas continue to be fundamental development across all areas and support the child
- The **specific** areas include essential skills and other knowledge. They grow out of the prime areas, and and provide important contexts for learning. and thinking throughout the

The Unique Child reaches out to relate to people and things through the **Characteristics of Effective Learning**, which move through all areas of learning.

- playing and exploring
- active learning
- creating and thinking critically

Children develop in the context of relationships and the environment around them.

This is unique to each family, and reflects individual communities and cultures.



Specific areas include essential skills and knowledge for children to participate successfully in society.

- Literacy
- Mathematics
- Understanding the World
- Expressive Arts and Design