



Offwell C of E Primary School Design Technology Curriculum Progression Map

EYFS – KS1 – KS2



Concept/ Strand	Sub-strand	EYFS – pre-requisite skills		Key Stage 1	Lower Key Stage 2	Upper Key Stage 2	
		3-4 Year olds	Reception & ELG	Across Ks1 pupils should:	In early KS2 (Year 3 and 4) pupils should:	In late KS2 (Year 5 and 6) pupils should:	
Designing	Understanding contexts, users and purposes	Explore how thingswork. (UW)	Explore, use and refine a variety of artistic effects to express their ideas and feelings. (EA&D)	work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment	gather information about the needs and wants of particular individuals and groups	carry out research, using surveys, interviews, questionnaires and web-based resources	
		state what products they are designing and making		identify the needs, wants, preferences and values of particular individuals and groups			
		Create closed shapes with continuous lines, and begin to use these shapes to represent objects. (EA&D)		say whether their products are for themselves or other users	develop their own design criteria and use these to inform their ideas	develop a simple design specification to guide their thinking	
				describe what their products are for			
				say how their products will work	Across Ks2 pupil should: work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment		
				say how they will make their products suitable for their intended users	describe the purpose of their products		
				use simple design criteria to help develop their ideas	indicate the design features of their products that will appeal to intended users		
				use simple design criteria to help develop their ideas	explain how particular parts of their products work		
	Generating, developing, modelling	Develop their own ideas and then decide which materials to use to expressthem. (EA&D)	generate ideas by drawing on their own experiences	generate realistic ideas, focusing on the needs of the user	generate innovative ideas, drawing on research		
			use knowledge of existing products to help come up with ideas	make design decisions that take account of the availability of resources	make design decisions, taking account of constraints such as time, resources and cost		
			develop and communicate ideas by talking and drawing	Across Ks2 pupil should: share and clarify ideas through discussion			
			model ideas by exploring materials, components and construction kits and by making templates and mock@ups	model their ideas using prototypes and pattern pieces			
use information and communication technology, where appropriate, to develop and communicate their ideas			use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas				
use information and communication technology, where appropriate, to develop and communicate their ideas			use computer-aided design to develop and communicate their ideas				
Making	Planning	Choose the right resources to carry out their own plan. (PD)	Progress towards a more fluent style of moving, with developing control and grace. (PD)	plan by suggesting what to do next	order the main stages of making	produce appropriate lists of tools, equipment and materials that they need	
				select from a range of tools and equipment, explaining their choices		formulate step-by-step plans as a guide to making	

Evaluating				select from a range of materials and components according to their characteristics	Across Ks2 pupil should: select tools and equipment suitable for the task	
		Use one-handed tools and equipment, for example, making snips in paper with scissors. (PD)	Develop their small motor skills so that they can use a range of tools competently, safely and confidently. (PD)		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	
	Practical skills and techniques	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.	Use a range of small tools, including scissors, paintbrushes and cutlery. (PD) (Fine Motor Skills)	follow procedures for safety and hygiene	measure, mark out, cut and shape materials and components with some accuracy	accurately measure, mark out, cut and shape materials and components
		Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park. (EA&D)	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (EA&D) (Creating with materials)	use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components	assemble, join and combine materials and components with some accuracy	accurately assemble, join and combine materials and components
				measure, mark out, cut and shape materials and components	apply a range of finishing techniques, including those from art and design, with some accuracy	accurately apply a range of finishing techniques, including those from art and design
		assemble, join and combine materials and components		use techniques that involve a number of steps		
		use finishing techniques, including those from art and design			demonstrate resourcefulness when tackling practical problems	
		Use large-muscle movements to wave flags and streamers, paint and make marks.				Across Ks2 pupil 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		
		Own ideas and products	Explore different materials freely, in order to develop their ideas about how to use them and what to make. (EA&D)	Create collaboratively, sharing ideas, resources and skills. (EA&D)	talk about their design ideas and what they are making	refer to their design criteria as they design and make
	make simple judgements about their products and ideas against design criteria				use their design criteria to evaluate their completed products	evaluate their ideas and products against their original design specification
	suggest how their products could be improved				Across Ks2 pupil 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	
	explore what products are				In early KS2 pupils should investigate and analyse:	In late KS2 pupils should also investigate and analyse:
explore who products are for						

Technical Knowledge	Key events		Share their creations, explaining the process they have used. (EA&D) (Creating with materials)	explore what products are for	who designed and made the products	how much products cost to make
				explore how products work	where products were designed and made	how innovative products are
				explore how products are used	when products were designed and made	how sustainable the materials in products are
				explore where products might be used	whether products can be recycled or reused	what impact products have beyond their intended purpose
				explore what materials products are made from	Across KS2 pupils should investigate and analyse: how well products have been designed	
				explore what they like and dislike about products	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	
					Across KS2 pupils should know: about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	
	Making products work		Return to and build on their previous learning, refining ideas and developing their ability to represent them. (EA&D)	know about the simple working characteristics of materials and components	how mechanical systems such as levers and linkages or pneumatic systems create movement	how mechanical systems such as cams or pulleys or gears create movement
				know about the movement of simple mechanisms such as levers, sliders, wheels and axles	how simple electrical circuits and components can be used to create functional products	how more complex electrical circuits and components can be used to create functional products
				know how freestanding structures can be made stronger, stiffer and more stable	how to program a computer to control their products	how to program a computer to monitor changes in the environment and control their products
				know that a 3-D textiles product can be assembled from two identical fabric shapes	how to make strong, stiff shell structures	how to reinforce and strengthen a 3D framework
				know that food ingredients should be combined according to their sensory characteristics	that a single fabric shape can be used to make a 3D textiles product	that a 3D textiles product can be made from a combination of fabric shapes
				know the correct technical vocabulary for the projects they are undertaking	that food ingredients can be fresh, pre-cooked and processed	that a recipe can be adapted by adding or substituting one or more ingredients
					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	
					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	

Cooking and Nutrition	Where food comes			that all food comes from plants or animals		that seasons may affect the food available
				that food has to be farmed, grown elsewhere (e.g. home) or caught		how food is processed into ingredients that can be eaten or used in cooking
	Food preparation, cooking and			how to name and sort foods into the five groups in The eatwell plate	that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate	that recipes can be adapted to change the appearance, taste, texture and aroma
				that everyone should eat at least five portions of fruit and vegetables every day		that different food and drink contain different substances – nutrients, water and fibre – that are needed for health
				how to prepare simple dishes safely and hygienically, without using a heat source		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
				how to use techniques such as cutting, peeling and grating		

Inclusive Provision for Design Technology	
SEND	Adaptations to meet the range of Special Educational Needs and Disabilities
Social & Emotional	Ensure high expectations of computing that raise learner's self belief. Build relationships with learners to identify opportunities to connect learning to their personal experience.
Communication & Interaction	Ensure learners are familiar with tier 2 vocabulary through lessons. This will empower them to access a higher level of language with which they can communicate and understand ideas across the curriculum.
Cognition & Learning	Practical opportunities to record/communicate ideas in a variety of ways. Teach learners the correct technical terminology within lessons, to ensure that misconceptions are not embedded early into their DT education. Learners should also be shown how to use equipment safely and responsibly.
Physical & Sensory	Provide a 'parallel' activity for pupils, so that they can work towards the same lesson objectives as their peers, but in a different way – eg using a computer simulation of a process rather than manipulating equipment. Carefully consider what inclusive practices are appropriate. For example, embedding the use of braille, allowing learners to orient themselves to the classroom space, careful selection of colours within resources, installing a screen reader and magnifier aids. Include examples of learners and professionals with disabilities, the representation of a diverse range of figures in design can send a powerful message to your learners. Prepare visual prompts, using images, photos or symbols, showing the order to carry out a sequence of activities for a particular process. Checklists allow pupils to see what they have completed, what to do next and where to finish.

EDI	Adaptations to promote equality and reflect diversity
Disability, race, gender	Adaptions and considerations to be made so as to not discriminate e.g. not making stereotypes around people who sew when teaching sewing. Representations of people engaged in technology reflects a broad range of people from diverse ethnic backgrounds. Reference made to the contribution of many cultures to the development of technology and its importance in all societies.
Religion or belief.	Considerations to be made around religious food restrictions (kosher, halal and other restrictions).