

SITHNEY PRIMARY SCHOOL

DT Progression of Skills



Design	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	<p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Choose the right resources to carry out their own plan</p>	<p>Explore, use and refine a variety of artistic effects to express ideas /feelings.</p> <p>Create collaboratively, sharing ideas, resources and skills.</p>	<p>Design purposeful, functional, appealing products for themselves and others based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, template, mock ups and where appropriate, ICT.</p>		<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>		<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>	
Progression	<p>Share creations.</p> <p>Explore a variety of materials and tools</p>	<p>Share creations, explaining the process they have used.</p> <p>Safely use and explore a variety of materials and tools</p>	<p>Use pictures and words to describe what they want to do.</p> <p>Select materials and tools from a limited range</p>	<p>Make a plan based on previous experience.</p> <p>Use construction kits to make a mock-up</p>	<p>Use existing products to help with design.</p> <p>Choose appropriate equipment, components and techniques</p>	<p>Plan order of work</p> <p>Understand the usefulness of making a prototype.</p>	<p>Use knowledge of existing products to help with design.</p> <p>Think of several ideas and select the most appropriate</p>	<p>Use various sources of information and market research</p> <p>Make a prototype first and use it to evaluate design.</p>

				Explain what they are making and which tools they are using	Recognise that design must meet a need	Draw labelled diagrams	Produce annotated diagrams and drawings	Use correct technical vocabulary produce step-by-step plans
Make - Structures	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Make imaginative and complex 'small worlds' with blocks and construction kits.	Return to and build on their previous learning, refining ideas and developing their ability to represent them.	Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) Select from and use a wide range of materials, textiles and ingredients, according to their characteristics	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities
Progression	Use construction kits to make. E.g. a city with different buildings and a park	Use construction kits to make with a specified purpose. e.g. Build a den for a Stick man.	Use construction kits to make working models	Choose and use a selection of materials for model-making (e.g. card, wood, tubes, cotton reels, straws) Cut, smooth and join wood with a hacksaw, sandpaper and glue	Use pre-drawn nets to make 3D card structures (links to Maths – shape) Cut, score and fold card accurately	Make stable frameworks using strengthening struts, etc. Cut wood to 10mm accuracy and sand evenly to produce a smooth finish	Create nets for 3D shapes Measure and cut wood neatly to 1mm accuracy	Design and make strong frameworks to hold mechanisms Sand wood to shape it for a purpose Use a hand drill to create holes in wood

			Join components using glue or tape; know which is appropriate for the material)	Show an understanding of how to strengthen structures		Use a glue gun (1-1 / 1-3 supervision)	Use a glue gun under supervision	Join materials with glue, nails or screws, as appropriate
Make - Mechanisms	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Explore how things work Use one-handed tools and equipment.		Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) Select from and use a wide range of materials, textiles and ingredients, according to their characteristics		Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities		Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	
Progression	Make snips in paper with scissors	Use scissors to cut straight lines	Use a hole punch and paper fasteners Make a sliding picture	Cut card with scissors following straight and curved lines Use levers and linkages to make a moving picture	Use scissors and hole punch with some accuracy Assemble complex linkages using card or string to make a figure move	Cut out slots and windows in card Use a balloon on a syringe to make a pneumatic model Use pulleys to form a transport system	Cut accurate slots in card using a craft knife and cutting mat (adult supervision) Use linked syringes to make a model move Use gears or pulleys to transfer movement from a motor to a model	Use cams to make an up/down mechanism Use linkages and cams together to make a more complex movement

			Put wheels on axles to make a moving vehicle	Make a simple mechanism using an axle and pulley				Describe the motions produced by various shaped cams Explain why small or large gears/pulleys are needed in a motorised model
Make – Textiles (links to Art)	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Use large-muscle movements to wave flags and streamers, paint and make marks. Create closed shapes with continuous lines	Develop their small motor skills so that they can use a range of tools safely	Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) Select from and use a wide range of materials, textiles and ingredients, according to their characteristics	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities		
Progression	Cut out fabric material to stick on to	Thread string on to beads to make a	Draw round a template and cut out fabrics		Create a pattern (template), taking seam allowances into account	Understand how a prototype improves a clothing design	Name and know the properties of some common fabrics	Understand how fabric properties can affect the structure

	flag design or streamers for a celebration	necklace/bracelet.						and appearance of a product Pin and tack pieces before sewing Use a seam allowance Assemble 3D products from patterns or templates
			Decorate fabrics e.g. paints, pens, ribbons, buttons, sequins	Sew using a running stitch	Join fabrics using a running stitch, back stitch or over-sewing Decorate fabric with ribbons, buttons, sequins and applique	Use simple fastenings, e.g. buttons, loops, velcro	Cut fabric accurately using pattern pieces Join fabrics using a variety of stitches Decorate products appropriately at a suitable point in the construction of the product	
Make – Control / Electronics (links to computing and Science)	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Explore different materials freely, in order to develop ideas	Use a range of small tools, including scissors, paintbrushes and cutlery.	Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) Select from and use a wide range of materials, textiles and ingredients, according to their characteristics	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	Select from and use a wider range of tools and equipment to perform practical tasks (e.g. cutting, shaping joining and finishing), accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Progression	<p>Control Be able to move a controled device forwards and backwards.</p> <p>Electronic s To move an object on an IWB to a specified place.</p>	<p>Control Use simple programabl e toys or apps e.g beebot</p> <p>Electronic s Be able to switch a light on and off.</p>	<p>Control Model designs using software</p> <p>Electronics Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).</p>		<p>Control Control a model or circuit using an appropriate program or switch</p> <p>Electronics Build a circuit with a bulb, battery and switch Make a simple switch with foil</p>		<p>Control Control a model using an appropriate program</p> <p>Use sensors (motion/light) to operate a model</p> <p>Electronics Use bulbs, buzzers, motors and switches effectively in models</p> <p>Understand how to use a circuit diagram</p> <p>Build a switch for a particular purpose Trouble-shoot a circuit which isn't working (e.g. dead battery, blown bulb, poor connection)</p>	
Evaluate	3-4 Year Olds	Reception	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Develop own ideas and decide which materials to express them	Explore, use and refine a variety of artistic effcts to express ideas and feelings	Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria		Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in Design and Technology have helped shape the world		Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in Design and Technology have helped shape the world	
Progression	Share a creation and name	Share a creation and explain	Explain how a product works	Compare to original design	Evaluate in relation to design		Evaluate different designs and select which one to use	Critically evaluate appearance and function

	a product used.	the process used	Show an awareness of the need for modification of original ideas	Recognise what has been done well Suggest things they could improve on	criteria and user's needs Recognise what isn't working and suggest a modification	Show where they have changed the design to make further improvements	justify choice of materials and construction methods	Modify during manufacture and explain why Develop own criteria for evaluation
Technical Knowledge	3-4 Year Olds	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Select and use activities and resources, with help when needed	Explore, use and refine a variety of artistic effects to express ideas and feelings	Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms (e.g. levers, sliders, wheels and axles) in their products	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products (e.g. gears, pulleys, cams, levers and linkages) Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors) Apply their understanding of computing to programme, monitor and control their products	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products (e.g. gears, pulleys, cams, levers and linkages) Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors) Apply their understanding of computing to programme, monitor and control their products			
Progression	Name some resources correctly. With support,	Name some tools and materials correctly. Use a range of	Showing understanding by explaining how things work Naming tools and materials correctly	Showing understanding by explaining how things work Naming tools and materials correctly Following their plans	Showing understanding by explaining how things work Naming tools and materials correctly Following their plans			

	use a range of small tools including paintbrushes and cutlery.	small tools, including scissors, paintbrushes and cutlery.	Following their plans Able to discuss some of the properties of materials Using tools and materials safely and accurately Identifying and trying to solve problems		Able to discuss some of the properties of materials Using tools and materials safely and accurately Identifying and trying to solve problems		Able to discuss some of the properties of materials Using tools and materials safely and accurately Identifying and trying to solve problems	
Cooking and Nutrition (Links to Science, PSHE, Maths and PE)			Y1	Y2	Y3	Y4	Y5	Y6
National Curriculum	Use one handed tools	Progress towards a more fluent style of moving Use core muscles to achieve good posture.	Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from		Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed		Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed	
Progression	Take part in sharing social meal times, sitting at a table to eat	Understand some healthy foods.	Know where food comes from Group familiar foods (e.g. as fruit or vegetables) and understand		Know and understand the components of a balanced diet Make healthy choices for snacks		Taste a range of foods and develop a food vocabulary Know how some foods are grown, reared, caught or processed	

	<p>and developing use of cutlery.</p>	<p>Sit at a table to eat food with good posture.</p> <p>Use cutlery to cut up soft fruit for a healthy snack.</p>	<p>the need for a mixture of foods in a healthy diet</p> <p>Work hygienically and safely</p> <p>Cut, grate and peel foods</p> <p>Uses simple measuring aids</p> <p>Mix ingredients</p> <p>Prepare foods for cooking in an oven</p>	<p>Follow a simple recipe</p> <p>Cut, chop, peel and slice food safely and hygienically</p> <p>Mix ingredients using the appropriate tools</p> <p>Combine food to make a tasty snack, taking flavour and texture into account</p> <p>Use an oven under close supervision</p>	<p>Choose foods for a purpose (e.g. a snack, cool drink, soup) showing awareness of the need for a balanced diet</p> <p>Choose foods which are in season and know where the food has come from or how it is grown</p> <p>Prepare foods safely and hygienically</p> <p>Cut, slice, peel and grate foods</p> <p>Weigh ingredients using kitchen scales</p> <p>Combine ingredients e.g. kneading, beating and whisking</p> <p>Cook foods on a stove or in an oven as appropriate</p>
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