St George's Central CE Primary School and Nursery

<u>Long Term Plan for Design Technology</u> <u>Nursery (2 – 3 year olds)</u>

Key	Children will be encouraged to explore materials/ resources finding out what they are/ what they can do, and decide how they want to use them. The practitioners will aim to
Learning	stimulate children's interest in modelling and support their ideas and scaffold their learning.
	Children will experience some simple cooking, baking and help to make playdough.
EYFS	Explore different materials, using all their senses to investigate them.
Statements	Manipulate and play with different materials.
	Use their imagination as they consider what they can do with different materials.
	Make simple models which express their ideas.
Continuous	In continuous provision the children will be provided with a range of found materials (junk) as well as blocks, clay, soft wood, card, off-cuts of fabrics and materials with
Provision	different textures. Children will be provided with appropriate tools and joining methods for the materials offered.

St George's Central CE Primary School and Nursery

<u>Long Term Plan for Design Technology</u> <u>Nursery (3 – 4 year olds)</u>

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Questions	All about Me/ Autumn	Dark/Light Celebrations	Weather/ It's cold	Spring/ New life	Our Town Tyldesley	Out and About
Key Learning	 Making Apple turnovers. Make bread. Leaf and twig collages. Modelling with clay. Construction in continuous provision. 		•	Design and make Easter cards. Make Easter baskets. Making Easter nests and Easter biscuits. Construction in continuous provision.	<u> </u>	 Design and make boats and test if they float. Work collaboratively to make large 3D train and aeroplane for role play. Make pizza. Den making, Construction in continuous provision.
EYFS Statements	 Uses various co Beginning to co Joins constructi Realises tools c Uses available r 	e interested in and describe the instruction materials instruct stacking blocks verticall on pieces together to build and an be used for a purpose. The sources to create props for rojences and responses with a rare	y and horizontally making end I balance. Ie play.			

St George's Central CE Primary School and Nursery

Long Term Plan for Design Technology Reception

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key	All about Me	Fairytales	Space	Minibeasts	Pirates	Where in the World
Questions						
Key Learning			e year the children will experie collage, cutting skills activities	<u> </u>	<u> </u>	
	 Making small world figures. Exploring colour mixing. Large and small scale constructions in continuous provision. Large/small scale construction, junk modelling and opportunities to develop cutting skills in continuous provision. 	 Following recipes to make toffee apples, gingerbread and mince pies. Design and make puppets. Christmas cards. Making a calendar Making salt dough decorations. 	 Exploring media and materials to create textures to represent moon craters Clay models of the moon Using and manipulating materials to create planet models Design and make pancakes Large/small scale construction, junk modelling and opportunities to develop cutting skills in continuous provision. 	 Research, design and make a bug hotel/wormery. Weaving skills. Design and make Easter cards. Large/small scale construction, junk modelling and opportunities to develop cutting skills in continuous provision. 	 Design and make a pirate costume with upcycling old clothes Exploring media and materials to make a treasure box/telescope Planning, making and evaluating smoothies Large/small scale construction, junk modelling and opportunities to develop cutting skills in continuous provision. 	 Research and designing flags Planning, making and evaluating recipes e.g. pizza, ice cream, scones Where in the worldLarge/small scale construction, junk modelling and opportunities to develop cutting skills in continuous provision.

EYFS Statements

- Understands that different media can be combined to create new effects.
- Manipulates materials to achieve a planned effect.
- Constructs with a purpose in mind, using a variety of resources.
- Uses simple tools and techniques competently and appropriately.
- Selects appropriate resources and adapts work where necessary.
- Selects tools and techniques needed to shape, assemble and join materials they are using.
- Chooses particular colours to use for a purpose.
- Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Children use what they have learned about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

Long Term Plan for Design Technology Year 1 and Year 2

			2024-2025			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Questions		What did the journey to Bethlehem look like?			What would you take on a picnic?	How will teddy get home?
Key Learning		Creating mechanisms using sliders and levers			Food-preparing fruit and vegetables	Creating mechanisms with wheels and axles
Narional		Designing			Designing	Designing
Curriculum objectives		 Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through drawings and mock-ups with card and paper. 			 Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. 	 Generate initial ideas and simple design criteria through talking and using own experiences. Develop and communicate ideas through drawings and mock-ups. Making
		 Making Plan by suggesting what to do next. Select and use tools, explaining their choices, to cut, shape and join paper and card. Use simple finishing techniques suitable for the product they are creating. 			Making • Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.	 Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.

Evaluating	Evaluating	Evaluating
Explore a range of existing	• Taste and evaluate a	 Explore and evaluate a
books and everyday	range of fruit and	range of products with
products that use simple	vegetables to determine	wheels and axles.
sliders and levers.	the intended user's	 Evaluate their ideas
Evaluate their product by	preferences.	throughout and their
discussing how well it	 Evaluate ideas and 	products against original
works in relation to the	finished products against	criteria.
purpose and the user and	design criteria, including	Technical knowledge and
whether it meets design	intended user and purpose.	understanding
criteria.	Technical knowledge and	 Explore and use wheels,
Technical knowledge and	understanding	axles and axle holders.
understanding	 Understand where a 	 Distinguish between fixed
Explore and use sliders	range of fruit and	and freely moving axles.
and levers.	vegetables come from e.g.	 Know and use technical
Understand that different	farmed or grown at home.	vocabulary relevant to the
mechanisms produce	 Understand and use basic 	project.
different types of	principles of a healthy and	
movement.	varied diet to prepare	
 Know and use technical 	dishes, including how fruit	
vocabulary relevant to the	and vegetables are part of	
project.	The eatwell plate.	
	Know and use technical	
	and sensory vocabulary	
	relevant to the project.	

Long Term Plan for Design Technology Year 1 and Year 2

			2025-2026			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key			How can you join fabric to		What makes a great	How did the Billy Goats
Questions			create a puppet?		tropical fruit salad?	Gruff cross the river?
Key			Textiles-templates and		Food-preparing fruit and	Structures-freestanding
Learning			joining techniques		vegetables	structures
Narional			Designing		Designing	Designing
Curriculum			Design a functional and		 Design appealing 	Generate ideas based on
objectives			appealing product for a		products for a particular	simple design criteria and
			chosen user and purpose		user based on simple	their own experiences,
			based on simple design		design criteria.	explaining what they could
			criteria.		 Generate initial ideas and 	make.
			 Generate, develop, 		design criteria through	• Develop, model and
			model and communicate		investigating a variety of	communicate their ideas
			their ideas as appropriate		fruit and vegetables.	through talking, mock-ups
			through talking, drawing,		 Communicate these ideas 	and drawings.
			templates, mock-ups and		through talk and drawings.	
			information and			Making
			communication		Making	Plan by suggesting what
			technology.		 Use simple utensils and 	to do next.
					equipment to e.g. peel, cut,	• Select and use tools, skills
			Making		slice, squeeze, grate and	and techniques, explaining
			Select from and use a		chop safely.	their choices.
			range of tools and		 Select from a range of 	Select new and reclaimed
			equipment to perform		fruit and vegetables	materials and construction
			practical tasks such as		according to their	kits to build their
			marking out, cutting,		characteristics e.g. colour,	structures.
			joining and finishing.		texture and taste to create	Use simple finishing
			 Select from and use 		a chosen product.	techniques suitable for the
			textiles according to their			structure they are creating.
			characteristics.			

	Evaluating	Evaluating	Evaluating
	Explore and evaluate a	 Taste and evaluate a 	•
	range of existing textile	range of fruit and	
	products relevant to the	vegetables to determine	the school and local
	•		
	project being undertaken.	the intended user's	environment e.g. everyday
	Evaluate their ideas	preferences.	products and buildings.
	throughout and their final	• Evaluate ideas and	•
	products against original	finished products against	discussing how well it
	design criteria.	design criteria, including	works in relation to the
	Technical knowledge and	intended user and purpose.	purpose, the user and
	understanding	Technical knowledge and	whether it meets the
	 Understand how simple 	understanding	original design criteria.
	3-D textile products are	 Understand where a 	Technical knowledge and
	made, using a template to	range of fruit and	understanding
	create two identical	vegetables come from e.g.	 Know how to make
	shapes.	farmed or grown at home.	freestanding structures
	 Understand how to join 	 Understand and use basic 	stronger, stiffer and more
	fabrics using different	principles of a healthy and	stable.
	techniques e.g. running	varied diet to prepare	 Know and use technical
	stitch, glue, over stitch,	dishes, including how fruit	vocabulary relevant to the
	stapling.	and vegetables are part of	project.
	Explore different finishing	The eatwell plate.	1
	techniques e.g. using	Know and use technical	
	painting, fabric crayons,	and sensory vocabulary	
	stitching, sequins, buttons	relevant to the project.	
	and ribbons.	relevant to the project.	
	Know and use technical		
	vocabulary relevant to the		
	project.		

Long Term Plan for Design Technology Year 3 and Year 4

			2024-20	25		
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key		What is the best way to		What is the best way to		What does a
Questions		costruct a desk lamp?		build a desk tidy?		Mediterranean diet look like?
Key		Electrical systems-simple		Structures-shell structures		Food-healthy and varied
Learning		circuits and switches				diet
Narional		Designing		Designing		Designing
Curriculum		Gather information about		Generate realistic ideas		 Generate and clarify ideas
objectives		needs and wants, and		and design criteria		through discussion with
		develop design criteria to		collaboratively through		peers and adults to develop
		inform the design of		discussion, focusing on the		design criteria including
		products that are fit for		needs of the user and		appearance, taste, texture
		purpose, aimed at		purpose of the product.		and aroma for an appealing
		particular individuals or		Develop ideas through		product for a particular
		groups.		the analysis of existing		user and purpose.
		 Generate, develop, 		products and use		 Use annotated sketches
		model and communicate		annotated sketches and		and appropriate
		realistic ideas through		prototypes to model and		information and
		discussion and, as		communicate ideas.		communication
		appropriate, annotated				technology, such as web-
		sketches, cross-sectional		Making		based recipes, to develop
		and exploded diagrams.		Order the main stages of		and communicate ideas.
				making.		
		Making		• Select and use		Making
		Order the main stages of		appropriate tools to		 Plan the main stages of a
		making.		measure, mark out, cut,		recipe, listing ingredients,
		Select from and use tools		score, shape and assemble		utensils and equipment.
		and equipment to cut,		with some accuracy.		• Select and use
		shape, join and finish with				appropriate utensils and

some accuracy. • Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.

Evaluating

- Investigate and analyse a range of existing battery-powered products.
- Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. Technical knowledge and understanding
- Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.
- Apply their understanding of computing to program and control their products.
- Know and use technical vocabulary relevant to the project.

- Explain their choice of materials according to functional properties and aesthetic qualities.
- Use finishing techniques suitable for the product they are creating.

Evaluating

- Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used.
- Test and evaluate their own products against design criteria and the intended user and purpose.
 Technical knowledge and understanding
- Develop and use knowledge of how to construct strong, stiff shell structures.
- Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.
- Know and use technical vocabulary relevant to the project.

equipment to prepare and combine ingredients.

 Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.

Evaluating

- Carry out sensory evaluations of a variety of ingredients and products.
 Record the evaluations using e.g. tables and simple graphs.
- Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.

Technical knowledge and understanding

- Know how to use appropriate equipment and utensils to prepare and combine food.
- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.
- Know and use relevant technical and sensory vocabulary appropriately.

Long Term Plan for Design Technology Year 3 and Year 4

			2025-2026			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key		How would you use a	What makes the basis of a			How does a flat paper
Questions		moving model to explain a	good soup recipe?			pattern turn into a pencil
		volcano?				case?
Key		Mechanical systems-levers	Food-healthy and			Textiles-2D shape
Learning		and linkages	varied diet			to 3D product
Narional		Designing	Designing			Designing
Curriculum		Generate realistic ideas	Generate and clarify			• Generate realistic ideas
objectives		and their own design	ideas through discussion			through discussion and
		criteria through discussion,	with peers and adults to			design criteria for an
		focusing on the needs of	develop design criteria			appealing, functional
		the user.	including appearance,			product fit for purpose and
		 Use annotated sketches 	taste, texture and aroma			specific user/s.
		and prototypes to develop,	for an appealing product			 Produce annotated
		model and communicate	for a particular user and			sketches, prototypes, final
		ideas.	purpose.			product sketches and
			Use annotated sketches			pattern pieces.
		Making	and appropriate			
		Order the main stages of	information and			Making
		making.	communication			 Plan the main stages of
		Select from and use	technology, such as web-			making.
		appropriate tools with	based recipes, to develop			Select and use a range of
		some accuracy to cut,	and communicate ideas.			appropriate tools with
		shape and join paper and				some accuracy e.g. cutting,
		card.	Making			joining and finishing.
		Select from and use	Plan the main stages of a			 Select fabrics and
		finishing techniques	recipe, listing ingredients,			fastenings according to
		suitable for the product	utensils and equipment.			their functional
		they are creating.				characteristics e.g.

	Evaluating	 Select and use 		strength, and aesthetic
	Investigate and analyse			qualities e.g. pattern.
	books and, where	equipment to prepare and		quanties e.g. pattern.
	available, other products	combine ingredients.		Evaluating
	with lever and linkage	 Select from a range of 		• Investigate a range of 3-D
	mechanisms.			1
		ingredients to make		textile products relevant to
	Evaluate their own	appropriate food products,		the project.
	products and ideas against			Test their product against
	criteria and user needs, as	characteristics.		the original design criteria
	they design and make.			and with the intended user.
	Technical knowledge and	_		Take into account others'
	understanding	 Carry out sensory 		views.
	Understand and use lever	evaluations of a variety of		 Understand how a key
	and linkage mechanisms.	ingredients and products.		event/individual has
	Distinguish between fixed	Record the evaluations		influenced the
	and loose pivots.	using e.g. tables and simple		development of the chosen
	Know and use technical	graphs.		product and/or fabric.
	vocabulary relevant to the	 Evaluate the ongoing 		Technical knowledge and
	project.	work and the final product		understanding
		with reference to the		 Know how to strengthen,
		design criteria and the		stiffen and reinforce
		views of others.		existing fabrics.
		Technical knowledge and		 Understand how to
		understanding		securely join two pieces of
		 Know how to use 		fabric together.
		appropriate equipment		Understand the need for
		and utensils to prepare and		patterns and seam
		combine food.		allowances.
		 Know about a range of 		 Know and use technical
		fresh and processed		vocabulary relevant to the
		ingredients appropriate for		project.
		their product, and whether		-
		they are grown, reared or		
		caught.		
		 Know and use relevant 		
		technical and sensory		
		vocabulary appropriately.		
		, , , , , , , , , , , , , , , , , , , ,		
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Long Term Plan for Design Technology Year 5 and Year 6

			2024-2025			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key		How can 3 pieces of fabric	What foods typically form		How does a ferris wheel	
Questions		make a 3D object?	part of a South American diet?		turn?	
Key		Textiles-combining	Food-celebrating culture		Mechanical systems-	
Learning		different fabric shapes			pulleys or gears	
Narional		Designing	Designing		Designing	
Curriculum		 Generate innovative 	Generate innovative		 Generate innovative 	
objectives		ideas by carrying out	ideas through research and		ideas by carrying out	
		research including surveys,	discussion with peers and		research using surveys,	
		interviews and	adults to develop a design		interviews, questionnaires	
		questionnaires.	brief and criteria for a		and web-based resources.	
		 Develop, model and 	design specification.		Develop a simple design	
		communicate ideas	Explore a range of initial		specification to guide their	
		through talking, drawing,	ideas, and make design		thinking.	
		templates, mock-ups and	decisions to develop a final		 Develop and 	
		prototypes and, where	product linked to user and		communicate ideas	
		appropriate,	purpose.		through discussion,	
		computeraided design.	Use words, information		annotated drawings,	
		 Design purposeful, 	and communication		exploded drawings and	
		functional, appealing	technology as appropriate		drawings from different	
		products for the intended	to develop and		views.	
		user that are fit for purpose	communicate ideas.			
		based on a simple design			Making	
		specification.	Making		Produce detailed lists of	
			Write a step-by-step		tools, equipment and	
		Making	recipe, including a list of		materials. Formulate step-	
		Produce detailed lists of	ingredients, equipment		by-step plans and, if	
		equipment and fabrics	and utensils		appropriate, allocate tasks	
		relevant to their tasks. •	Select and use		within a team.	
		Formulate step-by-step	appropriate utensils and			

plans and, if appropriate, allocate tasks within a team.

• Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

Evaluating

- Investigate and analyse textile products linked to their final product.
- Compare the final product to the original design specification.
- Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.
- Consider the views of others to improve their work.

Technical knowledge and understanding

- A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.
- Fabrics can be strengthened, stiffened and reinforced where appropriate.

equipment accurately to measure and combine appropriate ingredients.

 Make, decorate and present the food product appropriately.

Evaluating

- Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams.
- Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.
- Know how to use utensils and equipment including heat sources to prepare and cook food.
- Know and use relevant technical and sensory vocabulary.

• Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

Evaluating

- Compare the final product to the original design specification.
- Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.
- Consider the views of others to improve their work.
- Investigate famous manufacturing and engineering companies relevant to the project.
 Technical knowledge and understanding
- Understand that mechanical and electrical systems have an input, process and an output.
- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.
- Know and use technical vocabulary relevant to the project.

St George's Central CE Primary School and Nursery

Long Term Plan for Design Technology Year 5 and Year 6

			2025-2026			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key	Where would a spider want		How do the seasons affect			How can you use electrical
Questions	to live?		the availability of food?			circuits to improve a game?
Key	Structures-frame		Food-seasonality			Electrical systems-more
Learning	structures					complicated systems and switches
Narional	Designing		Designing			Designing
Curriculum	Carry out research into		Generate innovative			 Use research to develop a
objectives	user needs and existing		ideas through research and			design specification for a
	products, using surveys,		discussion with peers and			functional product that
	interviews, questionnaires		adults to develop a design			responds automatically to
	and web-based resources.		brief and criteria for a			changes in the
	Develop a simple design		design specification.			environment. Take account
	specification to guide the		Explore a range of initial			of constraints including
	development of their ideas		ideas, and make design			time, resources and cost. •
	and products, taking		decisions to develop a final			Generate and develop
	account of constraints		product linked to user and			innovative ideas and share
	including time, resources		purpose.			and clarify these through
	and cost.		Use words, annotated			discussion.
	Generate, develop and		sketches and information			 Communicate ideas
	model innovative ideas,		and communication			through annotated
	through discussion,		technology as appropriate			sketches, pictorial
	prototypes and annotated		to develop and			representations of
	sketches.		communicate ideas.			electrical circuits or circuit
						diagrams.
	Making		Making			
	Formulate a clear plan,		Write a step-by-step			Making
	including a step-by-step list		recipe, including a list of			 Formulate a step-by-step
	of what needs to be done		ingredients, equipment			plan to guide making,
			and utensils			listing tools, equipment,

and lists of resources to be Select and materials and components. use used. appropriate utensils and · Competently select and Competently select from equipment accurately to accurately assemble and use appropriate tools measure and combine materials, and securely to accurately measure, appropriate ingredients. connect electrical mark out, cut, shape and • Make, decorate and components to produce a present the food product join construction materials reliable, functional to make frameworks. appropriately for the product. intended user and purpose. Create and modify a Use finishing and decorative techniques computer control program suitable for the product **Evaluating** to enable an electrical • Evaluate the final product they are designing and product to work with reference back to the making. automatically in response design brief and design to changes in the **Evaluating** specification, taking into environment. account the views of others Investigate and evaluate a range of existing frame when identifying **Evaluating** structures. improvements. · Continually evaluate and Critically evaluate their Understand how key chefs modify the working products against their have influenced eating features of the product to specification, habits to promote varied match the initial design design intended user and purpose, and healthy diets. specification. identifying strengths and Technical knowledge and Test the system to areas for development, and understanding demonstrate its carrying out appropriate Know how to use utensils effectiveness for the tests. and equipment including intended user and purpose. Research key events and Technical knowledge and heat sources to prepare individuals relevant to and cook food. understanding frame structures. Understand about Understand and use Technical knowledge and seasonality in relation to electrical systems in their food products and the understanding products. source of different food Apply their understanding Understand how to strengthen, stiffen and products. of computing to program, reinforce 3-D frameworks. Know and use relevant monitor and control their Know and use technical technical and sensory products. Know and use technical vocabulary relevant to the vocabulary. project. vocabulary relevant to the

project.