



Bishop Bridgeman C.E. Primary School

Part of Archbishop Temple Multi Academy Trust

We Work, We Play, We Care, We Pray

“Love God, Love Yourself, Love Your Neighbour” Luke 10:27

Design & Technology Intent



Design Technology

	Autumn Term		Spring Term		Summer Term	
Nur	All about Me	Changes I can see	The Start of Spring	Our World	What's new!	What outside!
Rec	Marvellous Me	Changes and Celebrations	Spring All Around	It's a Wonderful World	New Life	Come Outside
Year 1			Textiles - Kites	Cooking and Nutrition - Farm to Fork		
Year 2	Structures - Soap Boxes			Mechanisms - Fire Engines		
Year 3			Textiles - Vikings	Mechanisms - Lake District		
Year 4	Structures - Roman Aqueducts				Cooking and Nutrition - Mexico	
Year 5			Cooking and Nutrition - Pizza	Computing / Electrical Systems - Junior STEM		
Year 6	Mechanisms - Islamic Civilisation				Structure	

	Autumn		Spring		Summer	
Nursery D/M						
Design	<ul style="list-style-type: none"> ● I can select and use activities and resources, with help when needed.* ● I can choose the right resources to carry out my own plan. ● I can develop my own ideas and then decide which materials to use to express them.* ● I can create closed shapes with continuous lines and begin into use these shapes to represent objects. 					
Make	<ul style="list-style-type: none"> ● I can explore how things work. ● I can use large-muscle movement wave flags and streamers, paint and make marks. ● I can use one-handed tools and equipment, for example, making snips in paper with scissors.* ● I can make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. ● I can explore different materials freely, in order to develop my ideas about how to use them and what to make. * 					
Evaluate	<ul style="list-style-type: none"> ● I can share my creations with others and begin to talk about them.* ● I can begin to build on simple ideas and develop them further.* 					
Technical Knowledge		I know how to use different techniques for joining materials, such as adhesive tape and different sorts of glue with guidance.*	I understand how to safely use some simple utensils and equipment to e.g. squeeze, grate and chop with guidance.	I can begin to talk about healthy foods, and begins to understand the importance of making positive decisions regarding eating plenty of fruit and vegetables.*	I can begin to explore simple techniques on how to make freestanding structures stronger or more stable (indoors and outdoors).*	I can begin to explore, with adult support, how to make things move using a range of materials including construction kits, split pins and treasury tags.
Key Vocabulary	Healthy, Stronger, Join*					
Additional Vocabulary	Fruits, Vegetables, , Squeeze, Tape, Glue, Structure, Equipment, Stable					

	Autumn		Spring		Summer	
Reception D/M	Continuous					
Design	<ul style="list-style-type: none"> I can return to and build on previous learning, refining ideas and developing my ability to represent them. (DM)* 					
Make	<ul style="list-style-type: none"> I can develop my small motor skills so that I can use a range of tools competently, safely and confidently (DM)* I can explore, use and refine a variety of artistic effects to express my ideas and feelings. (DM) I can create collaboratively, sharing ideas, resources and skills (DM) I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (ELG)* I can make use of props and materials when role playing characters in narratives and stories. (ELG) I can use a range of small tools, including scissors, paintbrushes and cutlery (ELG)* 					
Evaluate	<ul style="list-style-type: none"> I can share my creations, explaining the process I have used. (ELG) 					
Technical Knowledge	I understand different techniques for joining materials, such as adhesive tape and different sorts of glue*	I can talk about healthy foods, understanding the importance of making positive decisions regarding eating plenty of fruit and vegetables.*	I know about the different factors that support their overall well-being including healthy eating.	I understand how to safely use some simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop.	I know simple techniques on how to make freestanding structures stronger or more stable*	I know how to make things that move using a range of materials including construction kits.
Key Vocabulary	Structure, Equipment, Stable*					
Additional Vocabulary	Healthy, Stronger, Join, Fruits, Vegetables, Squeeze, Tape, Glue,					

Year 1	Textiles – Spring	Cooking and Nutrition - Summer
Designing	<ul style="list-style-type: none"> ● I can design appealing products with a purpose based on a simple design.* ● I can generate initial ideas through talking with others, my own experiences and looking at model designs. ● I can develop, model and communicate ideas through talking, 3D templates and drawings.* 	<ul style="list-style-type: none"> ● I can design appealing products with a purpose based on a simple design.* ● I can generate initial ideas through talking with others, my own experiences and looking at model designs. ● I can develop, model and communicate ideas through talking, 3D templates and drawings.*
Making	<ul style="list-style-type: none"> ● I can select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. * ● I can use a wide range of joining techniques such as gluing, pinning and stapling * ● I can explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. 	<ul style="list-style-type: none"> ● I can select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.* ● I can use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely*
Evaluating	<ul style="list-style-type: none"> ● I can explore and evaluate a range of existing products relevant to the project being undertaken. ● I can evaluate my ideas throughout and my final products against my original design criteria. * 	<ul style="list-style-type: none"> ● I can explore and evaluate a range of existing products relevant to the project being undertaken. ● I can taste and evaluate a range of fruit and vegetables to determine the intended user’s preferences.*
Technical Knowledge & Understanding	<ul style="list-style-type: none"> ● I can understand how simple 3-D textile products are made, using a template to create two identical shapes.* ● I can understand how to join fabrics using different techniques e.g. glue, stapling, pinning. ● I know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> ● I understand where food comes from using a range of fruit and vegetables e.g. farmed or grown at home. * ● I understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell plate. * ● Know and use technical and sensory vocabulary relevant to the project
Key Vocabulary	stapling, pinning, gluing*	peeling, slicing, grating*
Additional Vocabulary	tails, sail, kite line	healthy, diet, cutting, spreading

Year 2	Structures - Autumn	Mechanisms - Summer
Designing	<ul style="list-style-type: none"> ● I can design purposeful, functional and appealing products for myself and a chosen user based on a simple design criterion. ● I can generate, develop, model and communicate my ideas as appropriate through talking, mock-ups, templates and ICT* ● I can plan by suggesting what to do next 	<ul style="list-style-type: none"> ● I can design purposeful, functional and appealing products for myself and a chosen user based on a simple design criterion ● I can generate, develop, model and communicate my ideas as appropriate through talking, mock-ups, templates and ICT* ● I can plan by suggesting what to do next
Making	<ul style="list-style-type: none"> ● I can select and use tool, skills and techniques, explaining my choices* ● I can select and use a wide range of materials and components such as paper, card, plastic, wood or construction kits according to their characteristics. * ● I can use cube nets and tabs to join material.* ● I can use suitable, simple finishing techniques. 	<ul style="list-style-type: none"> ● I can select and use tools, skills and techniques, explaining my choices ● I can select and use a wide range of materials and components such as paper, card, plastic, wood or construction kits according to their characteristics. * ● I can explore and use mechanisms such as wheels, axles and axle holders.* ● I can use equipment to perform practical tasks such as cutting, joining to allow movement and finishing.*
Evaluating	<ul style="list-style-type: none"> ● I can explore a range of existing shell structures in school and the local environment. ● I can evaluate my product by discussing how well it works in relation to the purpose and whether it meets the original design criteria.* 	<ul style="list-style-type: none"> ● I can explore and evaluate a range of products with wheels and axles ● I can evaluate my product by discussing how well it works in relation to the purpose and whether it meets the original design criteria.*
Technical Knowledge & Understanding	<ul style="list-style-type: none"> ● I know how to make structures stronger, stiffer and more stable. * ● I know the purpose and how to create a basic shell structure* ● I know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> ● I can distinguish between fixed and freely moving axles. * ● I understand and can explain how mechanisms work including wheels and axles* ● Know and use technical vocabulary relevant to the project.
Key Vocabulary	nets, shell structure, tabs *	mechanism, movement, axles *
Additional Vocabulary	packaging, protect, contain, present,	vehicle, materials, chassis, wheels,

Year 3	Textiles - Spring	Mechanisms - Summer
Designing	<ul style="list-style-type: none"> I can generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific users. I can create a specified design criterion fit for their product.* I can develop my design using discussions and annotated sketches.* I can plan the main stages of making. 	<ul style="list-style-type: none"> I can generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific users. I can create a specified design criterion fit for their product.* I can develop my design using discussions, annotated sketches and pattern pieces.* I can plan the main stages of making.
Making	<ul style="list-style-type: none"> I can select fabrics and fastenings according to their functional characteristics e.g. strength, pattern and aesthetic qualities.* I can use different stiches including back stitch, running stitch and blanket stitch to securely join two pieces of fabric * I can use practical finishing techniques suitable for the product I am creating. 	<ul style="list-style-type: none"> I can select and use a range of appropriate tools with some accuracy e.g. cutting, joining, and finishing.* I can explore and use mechanisms such as levers, linkages and gears in my product.* I can use practical finishing techniques suitable for the product they are creating.
Evaluating	<ul style="list-style-type: none"> I can investigate a range of 3D textile products relevant to the project. I can evaluate my ongoing work and test my product against the original design criteria and with the intended user.* I can consider others' views. I understand how a key event/individual has influenced the development of the chosen product* 	<ul style="list-style-type: none"> I can investigate and analyse books and, where available, other products with lever and linkage mechanisms. I can evaluate my ongoing work and test my product against the original design criteria and with the intended user.* I can consider others' views. I understand how a key event/individual has influenced the development of the chosen product and or/fabric.*
Technical Knowledge & Understanding	<ul style="list-style-type: none"> I know how to strengthen, stiffen and reinforce existing fabrics. I understand how to securely join two pieces of fabric together. * I understand the need for patterns and seam allowances. * I understand the differences between different stitches including back and running stitches.* Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> I understand how lever, linkage and gear mechanisms work.* I can distinguish between fixed and loose pivots. * I can build upon existing knowledge of wheels and axles I know and use technical vocabulary relevant to the project.
Key Vocabulary	running stitch, blanket stitch, textiles*	pivot, pulley, fastener*
Additional Vocabulary	back stitch, fabric, design.	flow, paddle, wheel, resistance, surface area, axles, rods.

Year 4	Structures - Autumn	Cooking and Nutrition - Summer
Designing	<ul style="list-style-type: none"> I can generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the products. * I can use research and investigation to inform, refine and develop design criteria. I can develop and model my ideas through discussion, cross sectional diagrams and prototypes.* I can plan the main stages of making 	<ul style="list-style-type: none"> I can generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the products. * I can use research and investigation to inform, refine and develop design criteria. I can develop and model my ideas through discussion, annotated sketches and prototypes.*
Making	<ul style="list-style-type: none"> I can explain my choice of materials according to functional properties and aesthetic qualities.* I can select from and use appropriate tools with some accuracy to cut, shape and join paper, plastic and card.* I can select from and use finishing techniques suitable for the product they are creating. 	<ul style="list-style-type: none"> I can plan the main stages of a recipe, listing ingredients, utensils and equipment.* I can select and use appropriate utensils and equipment to prepare and combine ingredients including the claw and bridge techniques. * I can select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.* I can select from and use finishing techniques suitable for the product I am are creating.
Evaluating	<ul style="list-style-type: none"> I can investigate and evaluate a range of freestanding structures including the materials, components and strengthening techniques. I can evaluate my ongoing work and test my product against the original design criteria, existing products and with the intended user.* 	<ul style="list-style-type: none"> I can carry out sensory evaluations of a variety of ingredients and products. * I can record the evaluations using tables and simple graphs.*
Technical Knowledge & Understanding	<ul style="list-style-type: none"> I can develop my knowledge of previous structures and joining techniques such as nets and tabs. I understand how to make freestanding structures stronger, stiffer and more stable* I understand how to use joining techniques such as the flange technique.* I know and use technical vocabulary relevant to the project 	<ul style="list-style-type: none"> I know how and what the claw/bridge cutting techniques are best used for.* I know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.* I know and use relevant technical and sensory vocabulary appropriately
Key Vocabulary	flange join, frame, strengthen *	bridge cut, claw cut, nutrition*
Additional Vocabulary	aqueduct, body of water, channel, gradient, flow, travel, purpose, settlement, resource,	coriander, balanced diet, ingredient, assemble, mix, chop, grind, dice, sauce, deseed, grate, peel, season, garnish, preparation, texture, aroma

Year 5	Cooking and Nutrition - Autumn	Electrical Systems - Summer
Designing	<ul style="list-style-type: none"> I can generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.* I can develop, model and clarify my ideas through discussion, cross sectional diagrams and prototypes.* I can explore a range of initial ideas, and make decisions to develop a final product linked to user and purpose. 	<ul style="list-style-type: none"> I can generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.* I can develop ideas and designs through the use of computer-aided design. * I can explore a range of initial ideas, and make decisions to develop a final product linked to user and purpose.
Making	<ul style="list-style-type: none"> I can write a step-by-step recipe, including a list of ingredients, equipment and utensils.* I can make, decorate and present the food product appropriately for the intended user and purpose.* I can produce detailed lists of tools, equipment and materials. I can formulate step by step plans and, if appropriate, allocate tasks within a team. I can select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients including the julienne technique.* I can select from and use a wide range of finishing techniques to make products that are well finished 	<ul style="list-style-type: none"> I can plan the order of the main stages of making. I can use computer generated finishing techniques suitable for the product I am creating. I can select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with accuracy.* I can create a computer control program to enable my electrical product to respond.* I can select from and use a wide range of finishing techniques to make products that are well finished.
Evaluating	<ul style="list-style-type: none"> I can carry out sensory evaluations of a range of relevant products and ingredients. I can record my evaluations using tables/graphs/charts such as star diagrams.* I understand how key chefs have influenced eating habits to promote varied and healthy diets.* 	<ul style="list-style-type: none"> I can evaluate the final product with reference back to the design brief, design specification and consider the views of others when identifying improvement.* I can test products with the intended user in mind and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. I can investigate famous manufacturing and engineering companies.*
Technical Knowledge & Understanding	<ul style="list-style-type: none"> I know how to use utensils and equipment including heat sources to prepare and cook food.* I know how to use appropriate equipment and utensils to prepare and combine food including using the julienne technique. I understand about seasonality in relation to food products and the source of different products.* I know and use relevant technical and sensory vocabulary. 	<ul style="list-style-type: none"> I understand how electrical systems work in products. * I understand the use of computer control systems in products. * I can apply my understanding of computing to program, monitor and control products. I know and use technical vocabulary relevant to the project.
Key Vocabulary	dicing, julienne cut, claw cut*	switch, program, circuit*
Additional Vocabulary	nutrition, toppings, kneading, garnish, utensils	power generator, amps, charge, conductor, energy, fuse,

Year 6	Mechanisms - Autumn	Structures - Summer
Designing	<ul style="list-style-type: none"> I can generate, develop, model and communicate innovative ideas, through discussion and exploded diagrams.* I can develop a design specification to guide the development of my ideas and products, taking account of constraints including time, *resources and cost. I can carry out research into user needs and existing products, using surveys, questionnaires 	<ul style="list-style-type: none"> I can generate, develop, model and communicate innovative ideas, through discussion and cross-sectional diagrams.* I can develop a design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost.* I can carry out research into user needs and existing products, using surveys, questionnaires
Making	<ul style="list-style-type: none"> I can formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. I can competently select and accurately assemble materials, and securely join components and materials to produce a reliable, functional product.* I can incorporate pulleys, gears and CAMs into a functional product* I can choose from a wide range of finishing techniques, make deliberate explained choices to make products that are well finished around a theme for a target audience. 	<ul style="list-style-type: none"> I can formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. I can competently select and accurately assemble materials, and securely join components and materials to produce a reliable, functional product.* I can competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.* I can choose from a wide range of finishing techniques, make deliberate explained choices to make products that are well finished around a theme for a target audience.
Evaluating	<ul style="list-style-type: none"> I can investigate, analyse and evaluate a range of CAM types I can critically evaluate my products against my design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.* I can continually evaluate and modify the working features of the product to match the initial design specification.* I can test the system to demonstrate its effectiveness for the intended user and purpose.* 	<ul style="list-style-type: none"> I can investigate, analyse and evaluate a range of existing frame structures. I can critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.* I can continually evaluate and modify the working features of the product to match the initial design specification.* I can test the system to demonstrate its effectiveness for the intended user and purpose.* I can research key events and individuals relevant to frame structures.
Technical Knowledge & Understanding	<ul style="list-style-type: none"> I understand that mechanical and electrical systems have an input, process and an output.* I understand how gears, pulleys and CAMs can be used to speed up, slow down or change the direction of movement.* I know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> I understand how to strengthen, stiffen and reinforce 3-D frameworks*. I know and use technical vocabulary relevant to the project.
Key Vocabulary	CAM, follower, automation *	folding, reinforce, layering *
Additional Vocabulary	egg CAM, snail CAM, round CAM, gear, pulley, input, output	3D frames, durability, resistance, buckle, absorb,