

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Structures and mechanisms

	EYFS (ELGs)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<p>I can hold a pencil effectively in preparation for fluent writing, using the tripod grip in almost all cases.</p> <p>I can start to show accuracy and care when drawing.</p>	<p>I can ask questions about existing products and those that he/she has made.</p> <p>I can use pictures and words to describe what I want to do.</p>	<p>I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT</p> <p>I can design useful, pleasing products for myself and others based on a design brief.</p>	<p>I can use my knowledge of existing products to design my own functional product.</p> <p>I can investigate and analyse existing products and those I have made, considering a wide range of factors.</p> <p>I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes.</p> <p>I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.</p>	<p>I can create designs using exploded diagrams.</p> <p>I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience.</p> <p>I can use my knowledge of techniques and the functional and aesthetic qualities of a wider range of materials to plan how to use them.</p>	<p>I can use my research into existing products and my market research to inform the design of my own innovative product.</p> <p>I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.</p>	<p>I can use research I have done into famous designers and inventors to inform my designs.</p> <p>I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs.</p>
Make	<p>I can be confident to try new activities and show independence, resilience and perseverance in the face of challenges.</p> <p>I can use a range of small tools, including scissors, paint brushes and cutlery.</p> <p>I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function.</p>	<p>I can create simple designs for a product.</p> <p>I can use a range of simple tools to cut, join and combine materials and components safely.</p> <p>I can build structures, exploring how they can be made stronger, stiffer and more stable.</p>	<p>I can choose tools I would like to use and select materials based on my knowledge of their properties.</p> <p>I can safely measure, mark out, cut and shape materials and components using a range of tools.</p> <p>I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable</p>	<p>I can safely measure, mark out, cut, assemble and join with some accuracy.</p> <p>I can strengthen the frame with diagonal struts.</p>	<p>I can use techniques which require more accuracy to cut, shape, join and finish my work, e.g. cutting internal shapes, slots.</p> <p>I can apply techniques I have learnt to strengthen structures and explore my ideas.</p> <p>I can understand and use electrical systems in my products.</p>	<p>I can create prototypes to show my ideas.</p> <p>I can make careful and precise measurements so that joints, holes and openings are in exactly the right place.</p> <p>I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger and more stable.</p> <p>I can understand how to use more complex mechanical and electrical systems.</p>	<p>I can use a wider range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately.</p> <p>I can apply my understanding of computing to programme, monitor and control my products.</p>
Evaluate	<p>I can participate in small or large group or one-to-one discussions and be able to offer my own ideas using newly learnt vocabulary.</p> <p>I can express their ideas and feelings about their experiences using full sentences, including the use of past, present, and future tenses and making use of conjunctions, with modelling and support from their educator.</p> <p>I can share my creations, and be able to explain the process they have used.</p>	<p>I can ask questions about products and those that he/she has made.</p>	<p>I can evaluate and assess existing products and those that I have made using a design criteria.</p>	<p>I can investigate and analyse existing products and those I have made, considering a wide range of factors.</p>	<p>I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user.</p>	<p>I can make detailed evaluations about existing products and my own considering the views of others to improve my work.</p>	<p>I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities.</p> <p>I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.</p>

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Structures		EYFS - Boats	EYFS - Junk Modelling
Skills	Design	<ul style="list-style-type: none"> ❖ Designing a junk model boat. ❖ Using knowledge from exploration to inform design. 	<ul style="list-style-type: none"> ❖ Making verbal plans and material choices. ❖ Developing a junk model.
	Make	<ul style="list-style-type: none"> ❖ Making a boat that floats and is waterproof, considering material choices. 	<ul style="list-style-type: none"> ❖ Improving fine motor/scissor skills with a variety of materials. ❖ Joining materials in a variety of ways (temporary and permanent). ❖ Joining different materials together. ❖ Describing their junk model, and how they intend to put it together.
	Evaluate	<ul style="list-style-type: none"> ❖ Making predictions about, and evaluating different materials to see if they are waterproof. ❖ Making predictions about, and evaluating existing boats to see which floats best. ❖ Testing their design and reflecting on what could have been done differently. ❖ Investigating how the shapes and structure of a boat affect the way it moves. 	<ul style="list-style-type: none"> ❖ Giving a verbal evaluation of their own and others' junk models with adult support. ❖ Checking to see if their model matches their plan. ❖ Considering what they would do differently if they were to do it again. ❖ Describing their favourite and least favourite part of their model.
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To know that 'waterproof' materials are those which do not absorb water. 	<ul style="list-style-type: none"> ❖ To know there are a range to different materials that can be used to make a model and that they are all slightly different. ❖ Making simple suggestions to fix their junk model.
I can statements		Design I can hold a pencil effectively in preparation for fluent writing, using the tripod grip in almost all cases. I can start to show accuracy and care when drawing.	Make I can be confident to try new activities and show independence, resilience and perseverance in the face of challenges. I can use a range of small tools, including scissors, paint brushes and cutlery. I can safely use and explore a variety of materials, tools and techniques.
		Evaluate I can participate in small or large group or one-to-one discussions and be able to offer my own ideas using newly learnt vocabulary. I can express my ideas and feelings about my experiences using full sentences, including the use of past, present, and future tenses and making use of conjunctions, with modelling and support from their educators. I can share my creations, and be able to explain the process I have used.	

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Structures		Year 1 - Constructing a windmill			Year 2 - Baby bear's chair		
Skills	Design	<ul style="list-style-type: none"> ❖ Learning the importance of a clear design criteria ❖ Including individual preferences and requirements in a design 			<ul style="list-style-type: none"> ❖ Generating and communicating ideas using sketching and modelling ❖ Learning about different types of structures, found in the natural world and in everyday objects 		
	Make	<ul style="list-style-type: none"> ❖ Making stable structures from card, tape and glue ❖ Learning how to turn 2D nets into 3D structures ❖ Following instructions to cut and assemble the supporting structure of a windmill ❖ Making functioning turbines and axles which are assembled into a main supporting structure 			<ul style="list-style-type: none"> ❖ Making a structure according to design criteria ❖ Creating joints and structures from paper/card and tape Building a strong and stiff structure by folding paper 		
	Evaluate				<ul style="list-style-type: none"> ❖ Exploring the features of structures ❖ Comparing the stability of different shapes ❖ Testing the strength of own structures ❖ Identifying the weakest part of a structure ❖ Evaluating the strength, stiffness and stability of own structure 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To understand that the shape of materials can be changed to improve the strength and stiffness of structures ❖ To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses) ❖ To understand that axles are used in structures and mechanisms to make parts turn in a circle ❖ To begin to understand that different structures are used for different purposes ❖ To know that a structure is something that has been made and put together 			<ul style="list-style-type: none"> ❖ To know that shapes and structures with wide, flat bases or legs are the most stable ❖ To understand that the shape of a structure affects its strength ❖ To know that materials can be manipulated to improve strength and stiffness ❖ To know that a structure is something which has been formed or made from parts ❖ To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move ❖ To know that a 'strong' structure is one which does not break easily ❖ To know that a 'stiff' structure or material is one which does not bend easily 		
I can statements		Design I can ask questions about existing products and those that he/she has made. I can use pictures and words to describe what I want to do.	Make I can create simple designs for a product. I can use a range of simple tools to cut, join and combine materials and components safely. I can build structures, exploring how they can be made stronger, stiffer and more stable.	Evaluate I can ask questions about products and those that he/she has made.	Design I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT I can design useful, pleasing products for myself and others based on a design brief.	Make I can choose tools I would like to use and select materials based on my knowledge of their properties. I can safely measure, mark out, cut and shape materials and components using a range of tools. I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable	Evaluate I can evaluate and assess existing products and those that I have made using a design criteria.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Structures		Year 3 - Constructing a castle			Year 4 - Pavillions		
Skills	Design	<ul style="list-style-type: none"> Designing a castle with key features to appeal to a specific person/purpose. Drawing and labelling a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials needed and colours. Designing and/or decorating a castle tower on CAD software. 			<ul style="list-style-type: none"> Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight. 		
	Make	<ul style="list-style-type: none"> Constructing a range of 3D geometric shapes using nets. Creating special features for individual designs. Making facades from a range of recycled materials. 			<ul style="list-style-type: none"> Creating a range of different shaped frame structures. Making a variety of free standing frame structures of different shapes and sizes. Selecting appropriate materials to build a strong structure and cladding. Reinforcing corners to strengthen a structure. Creating a design in accordance with a plan. Learning to create different textural effects with materials. 		
	Evaluate	<ul style="list-style-type: none"> Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design. Suggesting points for modification of the individual designs. 			<ul style="list-style-type: none"> Evaluating structures made by the class. Describing what characteristics of a design and construction made it the most effective. Considering effective and ineffective designs. 		
Knowledge	Technical	<ul style="list-style-type: none"> To understand that wide and flat based objects are more stable. To understand the importance of strength and stiffness in structures. 			<ul style="list-style-type: none"> To understand what a frame structure is. To know that a 'free-standing' structure is one which can stand on its own. 		
I can statements		Design I can use my knowledge of existing products to design my own functional product. I can investigate and analyse existing products and those I have made, considering a wide range of factors. I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.	Make I can safely measure, mark out, cut, assemble and join with some accuracy. I can strengthen the frame with diagonal struts.	Evaluate I can investigate and analyse existing products and those I have made, considering a wide range of factors.	Design I can create designs using exploded diagrams. I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience. I can use my knowledge of techniques and the functional and aesthetic qualities of a wider range of materials to plan how to use them.	Make I can use techniques which require more accuracy to cut, shape, join and finish my work, e.g. cutting internal shapes, slots. I can apply techniques I have learnt to strengthen structures and explore my ideas. I can understand and use electrical systems in my products.	Evaluate I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Structures		Year 5 - Bridges			Year 6 - Playgrounds		
Skills	Design	<ul style="list-style-type: none"> ❖ Designing a stable structure that is able to support weight ❖ Creating frame structure with focus on triangulation 			<ul style="list-style-type: none"> ❖ Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs 		
	Make	<ul style="list-style-type: none"> ❖ Making a range of different shaped beam bridges ❖ Using triangles to create truss bridges that span a given distance and supports a load ❖ Building a wooden bridge structure ❖ Independently measuring and marking wood accurately ❖ Selecting appropriate tools and equipment for particular tasks ❖ Using the correct techniques to saws safely ❖ Identifying where a structure needs reinforcement and using card corners for support ❖ Explaining why selecting appropriating materials is an important part of the design process ❖ Understanding basic wood functional properties 			<ul style="list-style-type: none"> ❖ Building a range of play apparatus structures drawing upon new and prior knowledge of structures ❖ Measuring, marking and cutting wood to create a range of structures ❖ Using a range of materials to reinforce and add decoration to structures 		
	Evaluate	<ul style="list-style-type: none"> ❖ Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary ❖ Suggesting points for improvements for own bridges and those designed by others 			<ul style="list-style-type: none"> ❖ Improving a design plan based on peer evaluation ❖ Testing and adapting a design to improve it as it is developed ❖ Identifying what makes a successful structure 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To understand some different ways to reinforce structures ❖ To understand how triangles can be used to reinforce bridges ❖ To know that properties are words that describe the form and function of materials ❖ To understand why material selection is important based on their properties ❖ To understand the material (functional and aesthetic) properties of wood 			<ul style="list-style-type: none"> ❖ To know that structures can be strengthened by manipulating materials and shapes 		
I can statements		Design I can use my research into existing products and my market research to inform the design of my own innovative product. I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.	Make I can create prototypes to show my ideas. I can make careful and precise measurements so that joins, holes and openings are in exactly the right place. I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger and more stable. I can understand how to use more complex mechanical and electrical systems.	Evaluate I can make detailed evaluations about existing products and my own considering the views of others to improve my work.	Design I can use research I have done into famous designers and inventors to inform my designs. I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs.	Make I can use a wider range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. I can apply my understanding of computing to programme, monitor and control my products.	Evaluate I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Mechanisms		Year 1 - Moving story book			Year 2 - Wheels and axles (Yr1 unit)		
Skills	Design	<ul style="list-style-type: none"> ❖ Explaining how to adapt mechanisms, using bridges or guides to control the movement. ❖ Designing a moving story book for a given audience. 			<ul style="list-style-type: none"> ❖ Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. ❖ Creating clearly labelled drawings that illustrate movement. 		
	Make	<ul style="list-style-type: none"> ❖ Following a design to create moving models that use levers and sliders. 			<ul style="list-style-type: none"> ❖ Adapting mechanisms, when: they do not work as they should. when: they do not work as they should. to fit their vehicle design. to improve how they work after testing their vehicle. 		
	Evaluate	<ul style="list-style-type: none"> ❖ Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. ❖ Reviewing the success of a product by testing it with its intended audience. 			<ul style="list-style-type: none"> ❖ Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move. 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To know that a mechanism is the parts of an object that move together. ❖ To know that a slider mechanism moves an object from side to side. ❖ To know that a slider mechanism has a slider, slots, guides and an object. ❖ To know that bridges and guides are bits of card that purposefully restrict the movement of the slider. 			<ul style="list-style-type: none"> ❖ To know that wheels need to be round to rotate and move. ❖ To understand that for a wheel to move it must be attached to a rotating axle. ❖ To know that an axle moves within an axle holder which is fixed to the vehicle or toy. ❖ To know that the frame of a vehicle (chassis) needs to be balanced. 		
I can statements		Design	Make	Evaluate	Design	Make	Evaluate
		<p>I can ask questions about existing products and those that he/she has made.</p> <p>I can use pictures and words to describe what I want to do.</p>	<p>I can create simple designs for a product.</p> <p>I can use a range of simple tools to cut, join and combine materials and components safely.</p>	<p>I can ask questions about products and those that he/she has made.</p>	<p>I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT</p> <p>I can design useful, pleasing products for myself and others based on a design brief.</p>	<p>I can choose tools I would like to use and select materials based on my knowledge of their properties.</p>	<p>I can evaluate and assess existing products and those that I have made using a design criteria.</p>

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Mechanisms		Year 2 - Wheels and axles (Yr1 unit)			Year 2 - Fairground Wheel		
Skills	Design	<ul style="list-style-type: none"> ❖ Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. ❖ Creating clearly labelled drawings that illustrate movement. 			<ul style="list-style-type: none"> ❖ Selecting a suitable linkage system to produce the desired motion. ❖ Designing a wheel. 		
	Make	<ul style="list-style-type: none"> ❖ Adapting mechanisms, when: they do not work as they should. when: they do not work as they should. to fit their vehicle design. to improve how they work after testing their vehicle. 			<ul style="list-style-type: none"> ❖ Selecting materials according to their characteristics. ❖ Following a design brief. 		
	Evaluate	<ul style="list-style-type: none"> ❖ Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move. 			<ul style="list-style-type: none"> ❖ Evaluating different designs. ❖ Testing and adapting a design. 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To know that wheels need to be round to rotate and move. ❖ To understand that for a wheel to move it must be attached to a rotating axle. ❖ To know that an axle moves within an axle holder which is fixed to the vehicle or toy. ❖ To know that the frame of a vehicle (chassis) needs to be balanced. 			<ul style="list-style-type: none"> ❖ To know that different materials have different properties and are therefore suitable for different uses. 		
I can statements		Design	Make	Evaluate	Design	Make	Evaluate
		I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT	I can choose tools I would like to use and select materials based on my knowledge of their properties.	I can evaluate and assess existing products and those that I have made using a design criteria.	I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT	I can choose tools I would like to use and select materials based on my knowledge of their properties.	I can evaluate and assess existing products and those that I have made using a design criteria.
		I can design useful, pleasing products for myself and others based on a design brief.			I can design useful, pleasing products for myself and others based on a design brief.		

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Mechanisms		Year 3 - Pneumatic toys			Year 4 - Making a slingshot car		
Skills	Design	<ul style="list-style-type: none"> Designing a toy which uses a pneumatic system. Developing design criteria from a design brief. Generating ideas using thumbnail sketches and exploded diagrams. Learning that different types of drawings are used in design to explain ideas clearly. 			<ul style="list-style-type: none"> Designing a shape that reduces air resistance. Drawing a net to create a structure from. Choosing shapes that increase or decrease speed as a result of air resistance. Personalising a design. 		
	Make	<ul style="list-style-type: none"> Creating a pneumatic system to create a desired motion. Building secure housing for a pneumatic system. Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy. Selecting materials due to their functional and aesthetic characteristics. Manipulating materials to create different effects by cutting, creasing, folding and weaving. 			<ul style="list-style-type: none"> Measuring, marking, cutting and assembling with increasing accuracy. Making a model based on a chosen design. 		
	Evaluate	<ul style="list-style-type: none"> Using the views of others to improve designs. Testing and modifying the outcome, suggesting improvements. Understanding the purpose of exploded-diagrams through the eyes of a designer and their client. 			<ul style="list-style-type: none"> Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. 		
Knowledge	Technical	<ul style="list-style-type: none"> To understand how pneumatic systems work. To understand that pneumatic systems can be used as part of a mechanism. To know that pneumatic systems operate by drawing in, releasing and compressing air. 			<ul style="list-style-type: none"> To understand that all moving things have kinetic energy. To understand that kinetic energy is the energy that something (object/person) has by being in motion. To know that air resistance is the level of drag on an object as it is forced through the air. To understand that the shape of a moving object will affect how it moves due to air resistance. 		
I can statements		Design	Make	Evaluate	Design	Make	Evaluate
		I can use my knowledge of existing products to design my own functional product. I can investigate and analyse existing products and those I have made, considering a wide range of factors. I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.	I can safely measure, mark out, cut, assemble and join with some accuracy. I can strengthen the frame with diagonal struts.	I can investigate and analyse existing products and those I have made, considering a wide range of factors.	I can create designs using exploded diagrams. I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience. I can use my knowledge of techniques and the functional and aesthetic qualities of a wider range of materials to plan how to use them.	I can use techniques which require more accuracy to cut, shape, join and finish my work, e.g. cutting internal shapes, slots. I can apply techniques I have learnt to strengthen structures and explore my ideas.	I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Mechanisms		Year 5 - Making a pop-up book			Year 6 - Automata toys		
Skills	Design	<ul style="list-style-type: none"> ❖ Designing a pop-up book which uses a mixture of structures and mechanisms. ❖ Naming each mechanism, input and output accurately. ❖ Storyboarding ideas for a book. 			<ul style="list-style-type: none"> ❖ Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement. ❖ Understanding how linkages change the direction of a force. ❖ Making things move at the same time. ❖ Understanding and drawing cross-sectional diagrams to show the inner-workings of my design. 		
	Make	<ul style="list-style-type: none"> ❖ Following a design brief to make a pop up book, neatly and with focus on accuracy. ❖ Making mechanisms and/or structures using sliders, pivots and folds to produce movement. ❖ Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. 			<ul style="list-style-type: none"> ❖ Measuring, marking and checking the accuracy of the jelutong and dowel pieces required. ❖ Measuring, marking and cutting components accurately using a ruler and scissors. ❖ Assembling components accurately to make a stable frame. ❖ Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. ❖ Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set. 		
	Evaluate	<ul style="list-style-type: none"> ❖ Evaluating the work of others and receiving feedback on own work. ❖ Suggesting points for improvement. 			<ul style="list-style-type: none"> ❖ Evaluating the work of others and receiving feedback on own work. ❖ Applying points of improvement to their toys. ❖ Describing changes they would make/do if they were to do the project again. 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To know that mechanisms control movement. ❖ To understand that mechanisms can be used to change one kind of motion into another. ❖ To understand how to use sliders, pivots and folds to create paper-based mechanisms. 			<ul style="list-style-type: none"> ❖ To understand that the mechanism in an automata uses a system of cams, axles and followers. ❖ To understand that different shaped cams produce different outputs. 		
I can statements		Design I can use my research into existing products and my market research to inform the design of my own innovative product. I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.	Make I can create prototypes to show my ideas. I can make careful and precise measurements so that joins, holes and openings are in exactly the right place. I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger and more stable. I can understand how to use more complex mechanical and electrical systems.	Evaluate I can make detailed evaluations about existing products and my own considering the views of others to improve my work.	Design I can use research I have done into famous designers and inventors to inform my designs. I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs.	Make I can use a wider range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. I can apply my understanding of computing to programme, monitor and control my products.	Evaluate I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Textiles		EYFS - Bookmarks			Year 1 - Puppets		
Skills	Design	<ul style="list-style-type: none"> ❖ Discussing what a good design needs. ❖ Designing a simple pattern with paper. ❖ Designing a bookmark. ❖ Choosing from available materials. 			<ul style="list-style-type: none"> ❖ Using a template to create a design for a puppet. 		
	Make	<ul style="list-style-type: none"> ❖ Developing fine motor/cutting skills with scissors. ❖ Exploring fine motor/threading and weaving (under, over technique) with a variety of materials. ❖ Using a prepared needle and wool to practise threading. 			<ul style="list-style-type: none"> ❖ Cutting fabric neatly with scissors. ❖ Using joining methods to decorate a puppet. ❖ Sequencing steps for construction. 		
	Evaluate	<ul style="list-style-type: none"> ❖ Reflecting on a finished product and comparing it to their design. 			<ul style="list-style-type: none"> ❖ Reflecting on a finished product, explaining likes and dislikes. 		
Knowledge	Technical	<ul style="list-style-type: none"> ❖ To know that a design is a way of planning our idea before we start. ❖ To know that threading is putting one material through an object. 			<ul style="list-style-type: none"> ❖ To know that 'joining technique' means connecting two pieces of material together. ❖ To know that there are various temporary methods of joining fabric by using staples, glue or pins. ❖ To understand that different techniques for joining materials can be used for different purposes. ❖ To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. ❖ To know that drawing a design idea is useful to see how an idea will look. 		
I can statements		Design	Make	Evaluate	Design	Make	Evaluate
		<p>I can hold a pencil effectively in preparation for fluent writing, using the tripod grip in almost all cases.</p> <p>I can start to show accuracy and care when drawing.</p>	<p>I can be confident to try new activities and show independence, resilience and perseverance in the face of challenges.</p> <p>I can use a range of small tools, including scissors, paint brushes and cutlery.</p> <p>I can safely use and explore a variety of materials, tools and techniques.</p>		<p>I can ask questions about existing products and those that he/she has made.</p> <p>I can use pictures and words to describe what I want to do.</p>	<p>I can create simple designs for a product.</p> <p>I can use a range of simple tools to cut, join and combine materials and components safely.</p> <p>I can build structures, exploring how they can be made stronger, stiffer and more stable.</p>	

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Textiles		Year 1 - Puppets			Year 2 - Pouches		
Skills	Design	<ul style="list-style-type: none"> Using a template to create a design for a puppet. 			<ul style="list-style-type: none"> Designing a pouch. 		
	Make	<ul style="list-style-type: none"> Cutting fabric neatly with scissors. Using joining methods to decorate a puppet. Sequencing steps for construction. 			<ul style="list-style-type: none"> Selecting and cutting fabrics for sewing. Decorating a pouch using fabric glue or running stitch. Threading a needle. Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. Neatly pinning and cutting fabric using a template. 		
	Evaluate	<ul style="list-style-type: none"> Reflecting on a finished product, explaining likes and dislikes. 			<ul style="list-style-type: none"> Troubleshooting scenarios posed by the teacher. Evaluating the quality of the stitching on others' work. Discussing as a class, the success of their stitching against the success criteria. Identifying aspects of their peers' work that they particularly like and why. 		
Knowledge	Technical	<ul style="list-style-type: none"> To know that 'joining technique' means connecting two pieces of material together. To know that there are various temporary methods of joining fabric by using staples, glue or pins. To understand that different techniques for joining materials can be used for different purposes. To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. To know that drawing a design idea is useful to see how an idea will look. 			<ul style="list-style-type: none"> To know that sewing is a method of joining fabric. To know that different stitches can be used when sewing. To understand the importance of tying a knot after sewing the final stitch. To know that a thimble can be used to protect my fingers when sewing. 		
I can statements		Design I can ask questions about existing products and those that he/she has made. I can use pictures and words to describe what I want to do.	Make I can create simple designs for a product. I can use a range of simple tools to cut, join and combine materials and components safely.	Evaluate I can ask questions about products and those that he/she has made.	Design I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT I can design useful, pleasing products for myself and others based on a design brief.	Make I can choose tools I would like to use and select materials based on my knowledge of their properties. I can safely measure, mark out, cut and shape materials and components using a range of tools.	Evaluate I can evaluate and assess existing products and those that I have made using a design criteria.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Textiles		Year 3 - Cross stitch and applique (cushions)			Year 4 - Fastenings		
Skills	Design	<ul style="list-style-type: none"> Designing and making a template from an existing cushion and applying individual design criteria. 			<ul style="list-style-type: none"> Writing design criteria for a product, articulating decisions made. Designing a personalised book sleeve. 		
	Make	<ul style="list-style-type: none"> Following design criteria to create a cushion or collar. Selecting and cutting fabrics with ease using fabric scissors. Threading needles with greater independence. Tying knots with greater independence. Sewing cross stitch to join fabric. Decorating fabric using appliqué. Completing design ideas with stuffing and sewing the edges (Cushions) or embellishing the collars based on design ideas . 			<ul style="list-style-type: none"> Making and testing a paper template with accuracy and in keeping with the design criteria. Measuring, marking and cutting fabric using a paper template. Selecting a stitch style to join fabric. Working neatly by sewing small, straight stitches. Incorporating a fastening to a design. 		
	Evaluate	<ul style="list-style-type: none"> Evaluating an end product and thinking of other ways in which to create similar items.a. 			<ul style="list-style-type: none"> Testing and evaluating an end product against the original design criteria. Deciding how many of the criteria should be met for the product to be considered successful. Suggesting modifications for improvement. Articulating the advantages and disadvantages of different fastening types. 		
Knowledge	Technical	<ul style="list-style-type: none"> To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces. To know that when two edges of fabric have been joined together it is called a seam. To know that it is important to leave space on the fabric for the seam. To understand that some products are turned inside out after sewing so the stitching is hidden. 			<ul style="list-style-type: none"> To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro. To know that different fastening types are useful for different purposes. To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions. 		
I can statements		Design I can use my knowledge of existing products to design my own functional product. I can investigate and analyse existing products and those I have made, considering a wide range of factors. I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.	Make I can safely measure, mark out, cut, assemble and join with some accuracy.	Evaluate I can investigate and analyse existing products and those I have made, considering a wide range of factors.	Design I can create designs using exploded diagrams. I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience. I can use my knowledge of techniques and the functional and aesthetic qualities of a wider range of materials to plan how to use them.	Make I can use techniques which require more accuracy to cut, shape, join and finish my work, e.g. cutting internal shapes, slots.	Evaluate I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Textiles		Year 5 - Stuffed toys			Year 6 - Tree decorations		
Skills	Design	<ul style="list-style-type: none"> Designing a stuffed toy, considering the main component shapes required and creating an appropriate template. Considering the proportions of individual components. 			<ul style="list-style-type: none"> Designing a decoration in accordance to a specification linked to a set of design criteria. Annotating designs, to explain their decisions. 		
	Make	<ul style="list-style-type: none"> Creating a 3D stuffed toy from a 2D design. Measuring, marking and cutting fabric accurately and independently . Creating strong and secure blanket stitches when joining fabric. Threading needles independently. Using appliqué to attach pieces of fabric decoration. Sewing blanket stitch to join fabric. Applying blanket stitch so the spaces between the stitches are even and regular. 			<ul style="list-style-type: none"> Using a template when cutting fabric to ensure they achieve the correct shape. Using pins effectively to secure a template to fabric without creases or bulges. Marking and cutting fabric accurately, in accordance with their design. Sewing a strong running stitch, making small, neat stitches and following the edge. Tying strong knots. Decorating a decoration, attaching features (such as appliqué) using thread. Learning different decorative stitches. Sewing accurately with evenly spaced, neat stitches. 		
	Evaluate	<ul style="list-style-type: none"> Testing and evaluating an end product and giving points for further improvements. 			<ul style="list-style-type: none"> Reflecting on their work continually throughout the design, make and evaluate process. 		
Knowledge	Technical	<ul style="list-style-type: none"> To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. To understand that it is easier to finish simpler designs to a high standard. To know that soft toys are often made by creating appendages separately and then attaching them to the main body. To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely. 			<ul style="list-style-type: none"> To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. To understand the importance of consistently sized stitches. 		
I can statements		Design I can use my research into existing products and my market research to inform the design of my own innovative product. I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.	Make I can create prototypes to show my ideas. I can make careful and precise measurements so that joins, holes and openings are in exactly the right place.	Evaluate I can make detailed evaluations about existing products and my own considering the views of others to improve my work.	Design I can use research I have done into famous designers and inventors to inform my designs. I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs.	Make I can apply my understanding of computing to programme, monitor and control my products.	Evaluate I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Electrical Systems		Year 4 - Torches			Year 5 - Doodlers		
Skills	Design	<ul style="list-style-type: none"> Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. 			<ul style="list-style-type: none"> Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product. Developing design criteria based on findings from investigating existing products. Developing design criteria that clarifies the target user. 		
	Make	<ul style="list-style-type: none"> Making a torch with a working electrical circuit and switch. Using appropriate equipment to cut and attach materials. Assembling a torch according to the design and success criteria. 			<ul style="list-style-type: none"> Altering a product's form and function by tinkering with its configuration. Making a functional series circuit, incorporating a motor. Constructing a product with consideration for the design criteria. Breaking down the construction process into steps so that others can make the product. 		
	Evaluate	<ul style="list-style-type: none"> Evaluating electrical products. Testing and evaluating the success of a final product. 			<ul style="list-style-type: none"> Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. Determining which parts of a product affect its function and which parts affect its form. Analysing whether changes in configuration positively or negatively affect an existing product. Peer evaluating a set of instructions to build a product. 		
Knowledge	Technical	<ul style="list-style-type: none"> To understand that electrical conductors are materials which electricity can pass through. To understand that electrical insulators are materials which electricity cannot pass through. To know that a battery contains stored electricity that can be used to power products. To know that an electrical circuit must be complete for electricity to flow. To know that a switch can be used to complete and break an electrical circuit. 			<ul style="list-style-type: none"> To know that series circuits only have one direction for the electricity to flow. To know when there is a break in a series circuit, all components turn off. To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. To know a motorised product is one which uses a motor to function. 		
I can statements		<p>Design</p> <p>I can create designs using exploded diagrams.</p> <p>I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience.</p> <p>I can use my knowledge of techniques and the functional and aesthetic qualities of a wider range of materials to plan how to use them.</p>	<p>Make</p> <p>I can use techniques which require more accuracy to cut, shape, join and finish my work, e.g. cutting internal shapes, slots.</p> <p>I can apply techniques I have learnt to strengthen structures and explore my ideas.</p> <p>I can understand and use electrical systems in my products.</p>	<p>Evaluate</p> <p>I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user.</p>	<p>Design</p> <p>I can use my research into existing products and my market research to inform the design of my own innovative product.</p> <p>I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.</p>	<p>Make</p> <p>I can create prototypes to show my ideas.</p> <p>I can make careful and precise measurements so that joins, holes and openings are in exactly the right place.</p> <p>I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger and more stable.</p> <p>I can understand how to use more complex mechanical and electrical systems.</p>	<p>Evaluate</p> <p>I can make detailed evaluations about existing products and my own considering the views of others to improve my work.</p>

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Electrical Systems		Year 5 - Doodlers		Year 6 - Steady hand game			
Skills	Design	<ul style="list-style-type: none"> Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product. Developing design criteria based on findings from investigating existing products. Developing design criteria that clarifies the target user. 	<ul style="list-style-type: none"> Designing a steady hand game - identifying and naming the components required. Drawing a design from three different perspectives. Generating ideas through sketching and discussion. Modelling ideas through prototypes. Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'. 				
	Make	<ul style="list-style-type: none"> Altering a product's form and function by tinkering with its configuration. Making a functional series circuit, incorporating a motor. Constructing a product with consideration for the design criteria. Breaking down the construction process into steps so that others can make the product. 	<ul style="list-style-type: none"> Constructing a stable base for a game. Accurately cutting, folding and assembling a net. Decorating the base of the game to a high quality finish. Making and testing a circuit. Incorporating a circuit into a base. 				
	Evaluate	<ul style="list-style-type: none"> Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. Determining which parts of a product affect its function and which parts affect its form. Analysing whether changes in configuration positively or negatively affect an existing product. Peer evaluating a set of instructions to build a product. 	<ul style="list-style-type: none"> Testing own and others finished games, identifying what went well and making suggestions for improvement. Gathering images and information about existing children's toys. Analysing a selection of existing children's toys. 				
Knowledge	Technical	<ul style="list-style-type: none"> To know that series circuits only have one direction for the electricity to flow. To know when there is a break in a series circuit, all components turn off. To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. To know a motorised product is one which uses a motor to function. 	<ul style="list-style-type: none"> To know that batteries contain acid, which can be dangerous if they leak. To know the names of the components in a basic series circuit, including a buzzer. 				
I can statements		Design	Make	Evaluate	Design	Make	Evaluate
		<p>I can use my research into existing products and my market research to inform the design of my own innovative product.</p> <p>I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.</p>	<p>I can create prototypes to show my ideas.</p> <p>I can make careful and precise measurements so that joins, holes and openings are in exactly the right place.</p> <p>I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger and more stable.</p> <p>I can understand how to use more complex mechanical and electrical systems.</p>	<p>I can make detailed evaluations about existing products and my own considering the views of others to improve my work.</p>	<p>I can use research I have done into famous designers and inventors to inform my designs.</p> <p>I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs.</p>	<p>I can use a wider range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately.</p> <p>I can apply my understanding of computing to programme, monitor and control my products.</p>	<p>I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities.</p> <p>I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.</p>

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Food		EYFS - Soup			Year 1 - Fruit and vegetables		
Skills	Design	<ul style="list-style-type: none"> ❖ Designing a soup recipe as a class. ❖ Designing soup packaging. 			<ul style="list-style-type: none"> ❖ Designing smoothie carton packaging by-hand or on ICT software. 		
	Make	<ul style="list-style-type: none"> ❖ Chopping plasticine safely. ❖ Chopping vegetables with support. 			<ul style="list-style-type: none"> ❖ Chopping fruit and vegetables safely to make a smoothie. 		
	Evaluate	<ul style="list-style-type: none"> ❖ Tasting the soup and giving opinions. ❖ Describing some of the following when tasting food: look, feel, smell and taste. ❖ Choosing their favourite packaging design and explaining why. 			<ul style="list-style-type: none"> ❖ Tasting and evaluating different food combinations. ❖ Describing appearance, smell and taste. ❖ Suggesting information to be included on packaging. 		
Knowledge		<ul style="list-style-type: none"> ❖ To know that soup is ingredients (usually vegetables and liquid) blended together. ❖ To know that vegetables are grown. ❖ To recognise and name some common vegetables. ❖ To know that different vegetables taste different. ❖ To know that eating vegetables is good for us. ❖ To discuss why different packages might be used for different foods. 			<ul style="list-style-type: none"> ❖ Understanding the difference between fruits and vegetables. ❖ To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). ❖ To know that a blender is a machine which mixes ingredients together into a smooth liquid. ❖ To know that a fruit has seeds and a vegetable does not. ❖ To know that fruits grow on trees or vines. ❖ To know that vegetables can grow either above or below ground. ❖ To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber). 		
Target Tracker - I can statements		Design I can explore foods and identify differences. I can design a recipe.	Make I can use a knife safely. I can prepare ingredients.	Evaluate I can participate in small or large group or one-to-one discussions and be able to offer my own ideas using newly learnt vocabulary. I can express my ideas and feelings about my experiences, including the use of past, present, and future tenses and making use of conjunctions, with modelling and support from my educator. I can share my creations, and be able to explain the process that I have used.	Design I can identify where fruits grow. I can design my food.	Make I can safely prepare food. I can use simple tools safely.	Evaluate I can ask questions about products that I have made.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Food		Year 1 - Fruit and vegetables			Year 2 - Balanced diet		
Skills	Design	<ul style="list-style-type: none"> Designing smoothie carton packaging by-hand or on ICT software. 			<ul style="list-style-type: none"> Designing a healthy wrap based on a food combination which work well together. 		
	Make	<ul style="list-style-type: none"> Chopping fruit and vegetables safely to make a smoothie. 			<ul style="list-style-type: none"> Slicing food safely using the bridge or claw grip. Constructing a wrap that meets a design brief. 		
	Evaluate	<ul style="list-style-type: none"> Tasting and evaluating different food combinations. Describing appearance, smell and taste. Suggesting information to be included on packaging. 			<ul style="list-style-type: none"> Describing the taste, texture and smell of fruit and vegetables. Taste testing food combinations and final products. Describing the information that should be included on a label. Evaluating which grip was most effective. 		
Knowledge		<ul style="list-style-type: none"> Understanding the difference between fruits and vegetables. To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). To know that a blender is a machine which mixes ingredients together into a smooth liquid. To know that a fruit has seeds and a vegetable does not. To know that fruits grow on trees or vines. To know that vegetables can grow either above or below ground. To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber). 			<ul style="list-style-type: none"> To know that 'diet' means the food and drink that a person or animal usually eats. To understand what makes a balanced diet. To know where to find the nutritional information on packaging. To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. To understand that I should eat a range of different foods from each food group, and roughly how much of each food group. To know that nutrients are substances in food that all living things need to make energy, grow and develop. To know that 'ingredients' means the items in a mixture or recipe. To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy. To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'. 		
Target Tracker - I can statements		Design I can identify where fruits grow. I can design my food.	Make I can safely prepare food. I can use simple tools safely.	Evaluate I can ask questions about products that I have made.	Design I can generate, develop, model and communicate my ideas through talking, drawing, templates and mock-ups	Make I can choose tools I would like to use and select materials based on my knowledge of their properties. I can safely use equipment.	Evaluate I can evaluate and assess design criteria.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Food		Year 3 - Eating seasonally			Year 4 - Adapting a recipe		
Skills	Design	<ul style="list-style-type: none"> ❖ Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. 			<ul style="list-style-type: none"> ❖ Designing a biscuit within a given budget, drawing upon previous taste testing judgements. 		
	Make	<ul style="list-style-type: none"> ❖ Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination. ❖ Following the instructions within a recipe. 			<ul style="list-style-type: none"> ❖ Following a baking recipe, from start to finish, including the preparation of ingredients. ❖ Cooking safely, following basic hygiene rules. ❖ Adapting a recipe to improve it or change it to meet new criteria (e.g. from savoury to sweet). 		
	Evaluate	<ul style="list-style-type: none"> ❖ Establishing and using design criteria to help test and review dishes. ❖ Describing the benefits of seasonal fruits and vegetables and the impact on the environment. ❖ Suggesting points for improvement when making a seasonal tart. 			<ul style="list-style-type: none"> ❖ Evaluating a recipe, considering: taste, smell, texture and appearance. ❖ Describing the impact of the budget on the selection of ingredients. ❖ Evaluating and comparing a range of food products. ❖ Suggesting modifications to a recipe (e.g. This biscuit has too many raisins, and it is falling apart, so next time I will use less raisins). 		
Knowledge		<ul style="list-style-type: none"> ❖ To know that not all fruits and vegetables can be grown in the UK. ❖ To know that climate affects food growth. ❖ To know that vegetables and fruit grow in certain seasons. ❖ To know that cooking instructions are known as a 'recipe'. ❖ To know that imported food is food which has been brought into the country. ❖ To know that exported food is food which has been sent to another country.. ❖ To understand that imported foods travel from far away and this can negatively impact the environment. ❖ To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. ❖ To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. ❖ To know safety rules for using, storing and cleaning a knife safely. ❖ To know that similar coloured fruits and vegetables often have similar nutritional benefits. 			<ul style="list-style-type: none"> ❖ To know that the amount of an ingredient in a recipe is known as the 'quantity.' ❖ To know that it is important to use oven gloves when removing hot food from an oven. ❖ To know the following cooking techniques: sieving, creaming, rubbing method, cooling. ❖ To understand the importance of budgeting while planning ingredients for biscuits. 		
I can statements		Design I can explain why foods come from around the world. I can explain the benefits of seasonal food.	Make I can safely cut and peel. I can make a dish.	Evaluate I can evaluate a dish.	Design I can evaluate existing products. I can plan a recipe. I can select ingredients.	Make I can make and test a prototype food.	Evaluate I can evaluate my food..

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Food		Year 5 - Developing a recipe			Year 6 - Come dine with me		
Skills	Design	<ul style="list-style-type: none"> Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. Writing an amended method for a recipe to incorporate the relevant changes to ingredients. Designing appealing packaging to reflect a recipe. 			<ul style="list-style-type: none"> Writing a recipe, explaining the key steps, method and ingredients. Including facts and drawings from research undertaken. 		
	Make	<ul style="list-style-type: none"> Cutting and preparing vegetables safely. Using equipment safely, including knives, hot pans and hobs. Knowing how to avoid cross-contamination. Following a step by step method carefully to make a recipe. 			<ul style="list-style-type: none"> Following a recipe, including using the correct quantities of each ingredient. Adapting a recipe based on research. Working to a given timescale. Working safely and hygienically with independence. 		
	Evaluate	<ul style="list-style-type: none"> Identifying the nutritional differences between different products and recipes. Identifying and describing healthy benefits of food groups. 			<ul style="list-style-type: none"> Evaluating a recipe, considering: taste, smell, texture and origin of the food group. Taste testing and scoring final products. Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. Evaluating health and safety in production to minimise cross contamination. 		
Knowledge		<ul style="list-style-type: none"> To understand where meat comes from. To know that I can adapt a recipe to make it healthier by substituting ingredients. To know that I can use a nutritional calculator to see how healthy a food option is. To understand that 'cross-contamination' means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects. 			<ul style="list-style-type: none"> To know that 'flavour' is how a food or drink tastes. To know that many countries have 'national dishes' which are recipes associated with that country. To know that 'processed food' means food that has been put through multiple changes in a factory. To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork). 		
I can statements		Design I can understand how foods are reared and processed. I can make adaptations to a recipe.	Make I can select and use appropriate tools. I can follow a recipe.	Evaluate I can evaluate my recipe and suggest improvements.	Design I can explain the use of complimentary flavours. I can research and design a meal. I can explain my recipe choices.	Make I can apply culinary skills and knowledge.	Evaluate I can refine and improve my recipe, evaluating its effectiveness.

St Thomas of Canterbury Design and Technology Skills and knowledge progression

Techniques progression:

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>To use the bridge knife technique for soft foods e.g. Strawberries</p> <p>To spread soft ingredients e.g. butter</p> <p>To spoon ingredients (from one container to another)</p>	<p>To use balance scales · To beat ingredients together</p> <p>To arrange ingredients e.g. sandwich fillings</p> <p>To use the claw knife technique for soft foods e.g. cucumber</p> <p>To use measuring spoons and cups</p> <p>To sieve flour</p> <p>To do all-in-one cake/muffin mixing</p> <p>To scrape out a bowl with a spatula</p> <p>To divide mixture into tins</p> <p>To spread with a table knife</p>	<p>To mix to form a bread dough</p> <p>To knead dough</p> <p>To garnish and decorate</p> <p>To glaze e.g. brushing with egg, milk, oil</p> <p>To use the bridge knife technique for harder foods e.g. apple</p> <p>To tear ingredients e.g. herbs</p> <p>To crumble cheese e.g. feta</p> <p>To use a rolling pin to flatten and roll out dough</p> <p>To use biscuit cutters</p>	<p>To cut out rolled pastry</p> <p>To core an apple</p> <p>To use a jug to measure liquids</p> <p>To use hand to rub fat into flour</p> <p>To use the claw knife technique for harder foods e.g. carrot</p> <p>To peel soft vegetables e.g. courgette</p> <p>To use digital scales</p> <p>To scoop e.g. removing kiwi from skin</p> <p>To mash e.g. avocado · To grate soft foods e.g. cheese or courgette</p>	<p>To grate harder foods e.g. carrot</p> <p>To use spring balance scales · To crack an egg</p> <p>To beat an egg</p> <p>To mix, knead and shape bread dough</p> <p>To garnish and decorate a finished product</p> <p>To cut and rub fat into flour</p> <p>To coat e.g. breadcrumbs ·</p> <p>To use a lemon squeezer</p>	<p>To use a simple combination of bridge and claw technique e.g. to chop an onion</p> <p>To finely grate e.g. parmesan or nutmeg</p> <p>To use a range of measuring equipment</p> <p>To handle, roll and cut out shortcrust pastry</p> <p>To whisk egg whites or cream</p> <p>To snip herbs using scissors</p> <p>To crush garlic</p> <p>To shape pizza dough with greater precision</p>	<p>To finely chop herbs</p> <p>To peel vegetables</p> <p>To use ratio to increase/decrease quantities</p> <p>To use a range of measuring equipment, using metric and imperial units</p> <p>To separate an egg</p> <p>To use the hob (only with adult supervision)</p> <p>To cream fat and sugar</p> <p>To fold flour into a creamed mixture</p> <p>To ice/decorate a cake</p> <p>To add garnish to food</p> <p>To season</p>