BERROW PRIMARY
Church Academy

Progression in DT

End of Year Expectations

DT Curriculum Intent

Children will be provided with the opportunity to work on design projects allowing them to showcase their creativity and critical thinking. They will follow the coverage of the National Curriculum and the fundamental elements of Design and Technology. Each project will incorporate the principles of:

• Design • Make • Evaluate • Technical knowledge

Each endeavour will work on the basis to: **1. Make Something 2. For Someone 3. With Some purpose.**

Specific focus units will be taught to enable children to develop the skills they need for designing and making through range of creative and practical activities, provide opportunities for children to work in a range of relevant contexts, reflecting the real world and understanding our design technology links to the world around us. We aim to develop children's ability to investigate, analyse and evaluate a range of products, applying their understanding and technical knowledge across a range of products and materials, develop the knowledge and skills needed to prepare and cook healthy food. Our units of work provide children with opportunities to develop all key skills and acquire knowledge that will support them in their lifestyle choices and equip them to succeed in the future.

	Development Matters 2 year olds will learn to:	**Development Matters** 3 & 4-year-olds will learn to:	**Development Matters** Children in Reception will learn to:	**Statutory Framework** Early Learning Goals
Development Matters and Statutory ELGs are not the EYFS curriculum. This outlined a top-level view of how children develop and learn. Children's early learning is not neat and orderly, as such these are used as a pathway to help practitioners assess each child's level of development and make informed decisions about what a child needs to learn and be able to do next.				
Expressive Arts and Design	Start to make marks intentionally. Explore paint, using fingers and other parts of their bodies as well as brushes and other tools. Express ideas and feelings through making marks, and sometimes give a meaning to the marks they make. Explore different materials, using all their senses to investigate them. Manipulate and play with different materials. Use their imagination as they consider what they can do with different materials. Make simple models which express their ideas.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Create closed shapes with continuous lines, and begin to use these shapes to represent objects.	Explore, use and refine a variety of artistic effects to express ideas and feelings. -Return to and build on their previous learning, refining ideas and developing their ability to represent them. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Create collaboratively, sharing ideas, resources and skills. Share their creations, explaining the process they have used.	**Creating with Materials** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Make use of props and materials when role playing characters in narratives and stories

Communication and Language	Identify familiar objects and properties for practitioners when they are described: for example: 'Katie's coat', 'blue car', 'shiny apple'. Understand simple questions about 'who', 'what' and 'where'	Use a wider range of vocabulary. Understand 'why' questions. Ask questions to find out more and to check they understand what has been said to them.	Learn new vocabulary. Use new vocabulary throughout the day. Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.	**Speaking** Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Offer explanations for why things might happen. Express their ideas and feelings about their experiences using full sentences.
Physical	Use large and small motor skills to do things independently. Develop manipulation and control. Explore different materials and tools.	Use large-muscle movements to wave flags and streamers, paint and make marks. Choose the right resources to carry out their own plan. Use one-handed tools and equipment, for example, making snips in paper with scissors.	Develop small motor skills so that they can use a range of tools competently, safely and confidently. Use a range of small tools, including scissors, paint brushes and cutler.	**Fine Motor Skills** Hold a pencil effectively in preparation for fluent writing - using the tripod grip in almost all cases. Use a range of small tools, including scissors, paintbrushes and cutlery. Begin to show accuracy and care when drawing.
Personal, Social, Emotional Development	Notice and ask questions about differences.	Make healthy choices about food, drink, activity and toothbrushing.	Know and talk about the different factors that support their overall health and wellbeing: healthy eating. - Manage their own basic hygiene and personal needs, including… understanding the importance of healthy food choices.	**Managing Self** Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly. Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Reception			Structure	Cooking and Nutrition	Textiles
	Skills	**Design**	• Making verbal plans and material choices. • Developing a junk model.	• Designing a soup recipe as a class. • Designing soup packaging.	• Discussing what a good design needs. • Designing a simple pattern with paper. • Designing a bookmark. • Choosing from available materials
		Make	• 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.	• Chopping plasticine safely. • Chopping vegetables with support.	• 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.
		Evaluate	• 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.	• 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.	• Reflecting on a finished product and comparing to their design.
	Knowledge			• 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.	• 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.

Key stage 1 Pupils should be taught to:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts. When designing and making, pupils should be taught to:

Design

♣ design purposeful, functional, appealing products for themselves and other users based on design criteria

♣ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology **Make**

♣ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]

♣ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

♣ explore and evaluate a range of existing products

♣ evaluate their ideas and products against design criteria

Technical knowledge

♣ build structures, exploring how they can be made stronger, stiffer and more stable

♣ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and Nutrition

♣ use the basic principles of a healthy and varied diet to prepare dishes

♣ understand where food comes from.

			Mechanisms	Structure	Cooking and Nutrition
Year 1	Skills	**Design**	• 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.	• Learning the importance of a clear design criteria. • Including individual preferences and requirements in a design.	• Designing smoothie carton packaging by-hand.
		Make	• Adapting mechanisms, when: • they do not work as they should. • to fit their vehicle design. • to improve how they work after testing their vehicle.	• Making stable structures from card. • 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. • Finding the middle of an object. • Puncturing holes. • Adding weight to structures. • Creating supporting structures. • Cutting evenly and carefully.	• Chopping fruit and vegetables safely to make a smoothie. • Juicing fruits safely to make a smoothie.
		Evaluate	• Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move.	• Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. • Suggest points for improvements.	• Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. • Comparing their own smoothie with someone else's.
	Knowledge		• 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. • To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles.	• 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. • To know that the sails or blades of a windmill are moved by the wind. • To know that a structure is something built for a reason. • To know that stable structures do not topple. • To know that adding weight to the base of a structure can make it more stable.	• To know that a blender is a machine which mixes ingredients together into a smooth liquid. • To know that a fruit has seeds. • To know that fruits grow on trees or vines. # • To know that vegetables can grow either above or below ground. • To know that vegetables is any edible part of a plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).

				• To know that design criteria is a list of points to ensure the product meets the clients needs and wants. • To know that a windmill harnesses the power of wind for a purpose like grinding grain, pumping water or generating electricity. • To know that windmill turbines use wind to turn and make the machines inside work. • To know that a windmill is a structure with sails that are moved by the wind. • To know the three main parts of a windmill are the turbine, axle and structure. • To know that windmills are used to generate power and were used for grinding flour.	

Year 2			Mechanisms	Textiles	Cooking and Nutrition
	Skills	**Design**	• Selecting a suitable linkage system to produce the desired motion. • Designing a wheel.	• Designing a pouch.	• Designing three wrap ideas based on a food combination which work well together.
		Make	• Selecting materials according to their characteristics. • Following a design brief.	• 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.	• Chopping foods safely to make a wrap. • Constructing a wrap that meets a design brief. • Grating foods to make a wrap. • Snipping smaller foods instead of cutting.
		Evaluate	• Evaluating different designs. • Testing and adapting a design.	• Troubleshooting scenarios posed by 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.	• 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 food by giving a score.
	Knowledge		• To know that different materials have different properties and are therefore suitable for different uses. • To know the features of a Ferris wheel include the wheel, frame, pods, a base an axle and an axle holder. • To know that it is important to test my design as I go along so that I can solve any problems that may occur.	• 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.	• 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 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 'ingredients' means the items in a mixture or recipe.

Key stage 2 Pupils should be taught to:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

♣ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

♣ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

♣ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

♣ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

♣ investigate and analyse a range of existing products

♣ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

♣ understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

♣ apply their understanding of how to strengthen, stiffen and reinforce more complex structures

♣ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

♣ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

♣ apply their understanding of computing to program, monitor and control their products

Cooking and Nutrition

♣ understand and apply the principles of a healthy and varied diet

♣ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

♣ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Year 3			Electrical Systems	Textiles	Mechanisms	Cooking and Nutrition
	Skills	**Design**	• 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.	• Designing and making a template from an existing cushion and applying individual design criteria.	• design a shaduf selecting appropriate materials, tools and equipment fit for purpose. • design joining techniques	• Creating a healthy and nutritious recipe for a historical dish using seasonal ingredients, considering the taste, texture, smell and appearance of the historical dish.
		Make	• 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.	• Following design criteria to create a cushion or Egyptian 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 (Egyptian collars).	• Measuring, marking, cutting and assembling with increasing accuracy. • Making a model based on a chosen design.	• 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.
		Evaluate	• Testing own and others finished games, identifying what went well and making suggestions for improvement.	• Evaluating an end product and thinking of other ways in which to create similar items	• Using the views of others to improve designs • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.	• 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 prehistoric meal.
	Knowledge		• To know the names of the components in a basic series circuit, including a buzzer. • To understand the diagram perspectives 'top view', 'side view' and 'back'.	•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.	• 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.	• To know that vegetables and fruit grow in certain seasons and when and how to forage. • To know that eating seasonal foods can have a positive impact on the environment. • To know how to identify which foods an be eaten and no eaten.

			Structure	Textiles	Cooking and Nutrition
Year 4	Skills	**Design**	• Designing a stable colosseum structure that is aesthetically pleasing and selecting materials to create a desired effect. • Building frame structures designed to support weight.	• Writing design criteria for a product, articulating decisions made. • Designing a personalised book sleeve.	• Designing a healthy biscuit within a given budget, drawing upon previous taste testing judgements. • Designing packaging for a biscuit that targets a specific group.
		Make	• Creating a range of different shaped frame structures. • Making a variety of free standing frame structures. • 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.	• 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.	• Following a baking recipe, including the preparation of ingredients. • Cooking safely, following basic hygiene rules. • Adapting a recipe to meet the requirements of a target audience. • Using a cuboid net to create packaging.
		Evaluate	• Evaluating structures made by the class. • Describing what characteristics of a design and construction made it the most effective. • Considering effective and ineffective designs.	• 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.	• 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		• To understand what a frame structure is. • To know that a 'free-standing' structure is one which can stand on its own. • To know that cladding can be applied to structures for different effects. • To know that aesthetics are how a product looks. • To know that a product's function means its purpose. • To understand that the target audience means the person or group of people a product is designed for. • To know that architects consider light, shadow and patterns when designing	• 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.	• To know that the amount of an ingredient in a recipe is known as the 'quantity.' • To know that safety and hygiene are important when cooking. • To know the following cooking techniques: sieving, measuring, stirring, cutting out and shaping. •To understand the importance of budgeting while planning ingredients for biscuits. • To know that products often have a target audience.

Year 5			Mechanisms	Structure	Cooking and Nutrition
	Skills	Design	•Experimenting with a range of cams, creating a design for an automata sol system 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.	• Designing a stable structure that is able to support weight. • Creating a frame structure with a focus on triangulation.	• 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. • Researching existing recipes to inform ingredient choices.
		Make	• 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.	• Making a range of different shaped beam bridges. • Using triangles to create truss bridges that span a given distance and support 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.	• Adapting a traditional recipe to make it sustainable , 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. • Researching existing recipes to inform ingredient choices.
		Evaluate	• Evaluating the work of others and receiving feedback on own work. • Applying points of improvement to their solar system cardboard automata. • Describing changes they would make/do if they were to do the project again.	• 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.	. • Identifying the nutritional and sustainable differences between different products and recipes. • Identifying and describing healthy benefits of food groups
	Knowledge		• To know that an automata is a hand powered mechanical toy. • To know that a cross-sectional diagram shows the inner workings of a product. • To understand how to use a bench hook and saw safely. • To know that a set square can be used to help mark 90° angles.	• 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 properties. • To understand the material (functional and aesthetic) properties of wood. • To understand the difference between arch, beam, truss and suspension bridges. • To understand how to carry and use a saw safely.	• To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed. • To know that recipes can be adapted to suit nutritional needs and dietary requirements. • 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. • To know that coloured chopping boards can prevent cross-contamination. • To know that nutritional information is found on food packaging. • To know that food packaging serves many purposes but can be detrimental to sustainability.

			Textiles	Digital World	Cooking and Nutrition
Year 6	Skills	**Design**	• Designing a waistcoat in accordance to a specification linked to set of design criteria. • Annotating designs, to explain their decisions.	• Writing a design brief from information submitted by a client. • Developing design criteria to fulfil the client's request. • Considering and suggesting additional functions for my navigation tool. • Developing a product idea through annotated sketches. • Placing and manoeuvring 3D objects, using CAD. • Changing the properties of, or combining one or more 3D objects, using CAD.	• Writing a Greek recipe, explaining the key steps, method and ingredients. • Including facts and drawings from research undertaken.
		Make	• 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 waistcoat, attaching features (such as appliqué) using thread. • Finishing the waistcoat with a secure fastening (such as buttons). • Learning different decorative stitches. • Sewing accurately with evenly spaced, neat stitches.	• Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo). • Explaining material choices and why they were chosen as part of a product concept. • Programming an N,E, S, W cardinal compass.	• 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	• Reflecting on their work continually throughout the design, make and evaluate process. • To understand that it is important to design clothing with the client/ target customer/ purpose in mind. • 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.	• Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. • Developing an awareness of sustainable design. • Identifying key industries that utilise 3D CAD modelling and explaining why. • Describing how the product concept fits the client's request and how it will benefit the customers. • Explaining the key functions in my program, including any additions. • Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. • Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch. • Demonstrating a functional program as part of a product concept pitch.	• 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		• To understand that it is important to design clothing with the client/ target customer in mind. • 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.	• To know that accelerometers can detect movement. • To understand that sensors can be useful in products as they mean the product can function without human input. • To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request. • To know that 'multifunctional' means an object or product has more than one function. • To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.	• 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).

Key Stage 1 - National curriculum Design and technology content	Year 1			Year 2		
	Structure: Constructing a Windmill	Mechanisms: Wheels and Axes	Cooking and Nutrition: Smoothies	Mechanisms: Ferris Wheel	Textiles: Binocular Pouch	Cooking and Nutrition: Balanced Diet
Design purposeful, functional, appealing products for themselves and other users based on design criteria.	✓	✓	✓	✓	✓	✓
Design purposeful, functional, appealing products for themselves and other users based on design criteria.	✓	✓	✓	✓	✓	✓
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].	✓	✓	✓	✓	✓	✓
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	✓	✓	✓	✓	✓	✓
Explore and evaluate a range of existing products.	✓	✓	✓	✓	✓	✓
Evaluate their ideas and products against design criteria.	✓	✓	✓	✓		
Build structures, exploring how they can be made stronger, stiffer and more stable.	✓		✓	✓		
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	✓	✓	✓	✓		
Use basic principles of a healthy and varied diet to prepare dishes.						✓
Use basic principles of a healthy and varied diet to prepare dishes.			✓			✓

Key Stage 2 - National curriculum Design and technology content	Year 3				Year 4		
	Electronical systems: Steady Handy Games	Cooking and Nutrition; Prehistoric Cooking	Textiles: Egyptian Collars	Mechanisms: Shadufs	Structure: Colosseum	Textiles: Fastenings	Cooking and Nutrition: Adapting a Recipe
Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.	✓		✓	✓	✓	✓	✓
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	✓	✓	✓	✓	✓	✓	✓
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	✓	✓	✓	✓	✓	✓	✓
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	✓	✓	✓	✓	✓	✓	✓
Investigate and analyse a range of existing products.	✓			✓	✓	✓	✓
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	✓		✓	✓	✓	✓	✓
Understand how key events and individuals in design and technology have helped shape the world.	✓			✓			

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.					✓		
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].				✓			
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	✓						
Apply their understanding of computing to program, monitor and control their products.							
Understand and apply principles of a healthy and varied diet.		✓					
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.		✓					✓
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		✓					

Key Stage 2 - National curriculum Design and technology content	Year 5			Year 6		
	Structure: Invaded Bridges	Cooking and Nutrition: Sustainable cooking – developing a recipe	Mechanisms: Solar System CAMS	Digital World: Navigating the World	Textiles: Evacuee Waistcoats	Cooking and Nutrition: Come dine with me in Greece
Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.	✓	✓	✓	✓	✓	✓
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	✓	✓	✓	✓	✓	✓
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	✓	✓	✓	✓	✓	✓
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	✓	✓			✓	✓
Investigate and analyse a range of existing products.	✓	✓	✓		✓	
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	✓	✓	✓	✓	✓	✓
Understand how key events and individuals in design and technology have helped shape the world.		✓	✓			

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	✓					
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].			✓			
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].						
Apply their understanding of computing to program, monitor and control their products.		✓		✓		
Understand and apply principles of a healthy and varied diet.		✓				✓
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.		✓				✓
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		✓				✓