



St Mary's – DT Knowledge, Skills and Vocabulary Progression



		Developing, planning and communicating ideas	Working with tools, equipment, materials and components to make quality products	Evaluating processes and products	Food Technology
F1: Building vehicles using recycled materials	Knowledge	Be familiar with a variety of materials and begin to know their basic properties. i.e. strong, soft, shiny etc. PRE KS1 iv	Understand simple joining techniques. PRE KS1 iii Look at simple hinges, wheels and axles. PRE KS1 v		Explore familiar food products e.g. fruit and vegetables. PRE KS1 x, PRE KS1 ix Begin to develop a food vocabulary using taste, smell, texture and feel. PRE KS1 x, PRE KS1 ix Start to think about the need for a variety of foods in a diet. PRE KS1 ix
	Skills	Begin to draw on their own experience to help generate ideas. PRE KS1 i Create open ended products that support their imaginative play. PRE KS1 iv Explore ideas by interacting with different materials. PRE KS1 i, Begin to develop their ideas through talk and drawings. PRE KS1 i, PRE KS1 ii	Begin to create their design using basic techniques i.e. folding and joining. PRE KS1 iii Start to build simple structures using simple joining techniques i.e. glue and cello tape. PRE KS1 iii, PRE KS1 vii With support, safely use scissors to cut straight and curved edges and hole punches to create holes. PRE KS1 iii	Say what they like and do not like about items they have made. PRE KS1 vi With support begin to make suggestions about how to improve their product. PRE KS1 vi	Stir, spread, knead and shape a range of food and ingredients. PRE KS1 ix Begin to work safely and hygienically. PRE KS1 ix Measure and weigh food items, non-statutory measures e.g. spoons, cups. PRE KS1 ix
	Vocab	Design, Materials	Folding, Joining, Structures, Scissors, Cello tape, Glue, Wheel, Axle	Changes	Taste, Smell, Texture, Feel, Stir, Spread, Knead, Diet, Weigh
F2: Building a 3d boat	Knowledge	Be familiar with a variety of materials and know their basic properties. i.e. strong, soft, shiny etc. PRE KS1 iv	To know some simple joining techniques that can join components together. PRE KS1 iii To be familiar with some simple tools. PRE KS1 iii		Begin to develop a food vocabulary using taste, smell, texture and feel. PRE KS1 x, PRE KS1 ix Explore familiar food products e.g. fruit and vegetables. PRE KS1 x, PRE KS1 ix Start to think about the need for a variety of foods in a diet. PRE KS1 ix
	Skills	Begin to draw on their own experience to help generate ideas. PRE KS1 i Start to suggest ideas and explain what they are going to do. PRE KS1 i, PRE KS1 ii Select materials from a limited range that will meet a simple design criterion e.g. shiny. PRE KS1 i Select and name the tools needed to work the materials e.g. scissors for paper. PRE KS1 iii Begin to develop their ideas through talk and drawings. PRE KS1 i, PRE KS1 ii	Begin to create their design using basic techniques. PRE KS1 iii Start to build structures, joining components together including the use of adhesives. PRE KS1 iii, PRE KS1 vii Begin to use scissors to cut straight and curved edges and hole punches to create holes. PRE KS1 iii Explore using/ holding basic tools such as a saw or hammer. PRE KS1 iii	Say what they like and do not like about items they have made and attempt to say why. PRE KS1 vi Begin to talk about their designs as they develop and identify good and bad points. PRE KS1 vi Start to talk about changes made during the making process. PRE KS1 vi Discuss how closely their finished products meet their design criteria. PRE KS1 vi	Stir, spread, knead and shape a range of food and ingredients. PRE KS1 ix Begin to work safely and hygienically. PRE KS1 ix Measure and weigh food items, non-statutory measures e.g. spoons, cups. PRE KS1 ix, PRE KS1 iii
	Vocab	Design, Properties	Folding, Joining, Structures, Scissors, Cello tape, Glue, Products, Tools, Wheel	Changes, Improvements	Taste, Smell, Texture, Feel, Stir, Spread, Knead, Diet, Weigh, Shape, Ingredients, Measure

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Y1: Make a moving bus (Wheels & Axles) Moving picture (Levers and sliders)	Knowledge	<p>Begin to understand the development of existing products: What they are for, how they work, materials used. KS1 i, values</p> <p>Understand how to identify a target group for what they intend to design and make based on a design criteria KS1 i, values</p>	<p>To show a basic understanding of mechanisms [levers& sliders, wheels & axles]. (F1 Box model vehicles) KS1 viii</p> <p>To show an understanding of temporary joining methods e.g. glues or masking tape. KS1 iii</p>		<p>Begin to understand that all food comes from plants or animals. KS1 x</p> <p>Know that food has to be farmed, grown elsewhere (e.g. home) or caught. KS1 x</p> <p>Start to understand how to name and sort foods into the five groups in 'The Eat well plate' KS1 ix</p> <p>Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. KS1 ix</p> <p>Know how to prepare simple dishes safely and hygienically, without using a heat source. KS1 ix</p>
	Skills	<p>Draw on their own experience to help generate ideas KS1 i</p> <p>Start to suggest ideas and explain what they are going to do. KS1 i</p> <p>Begin to develop their ideas through talk and drawings. KS1 i, KS1 ii</p> <p>Make templates and mock ups of their ideas in card and paper or using ICT. KS1 i, KS1 ii</p> <p>Develop their design ideas applying findings from their earlier research. KS1 i</p>	<p>Begin to make their design using appropriate techniques. KS1 iii</p> <p>Begin to explore and use simple mechanisms [for example, levers, sliders, wheels and axles], in their products. KS1 viii</p> <p>With help measure, mark out, cut and shape a range of materials. KS1 iii</p> <p>Explore using tools e.g. scissors and a hole punch safely. KS1 iii</p> <p>Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. KS1 iii, KS1 viii</p> <p>Begin to use simple finishing techniques to improve the appearance of their product. KS1 iii</p>	<p>Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). KS1 vi</p> <p>When looking at existing products explain what they like and dislike about products and why. KS1 v</p> <p>Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make. KS1 vi</p>	<p>To use techniques such as cutting, peeling and grating. KS1 iii</p>
	Vocab	Criteria, Template, Research, Lever, Slider	Stronger, Stiff, Stable, Finishing, Mechanisms, Levers, Slot, Pivot, Slider, Wheel, Axles, Chassis	Evaluate	Plant, Animal, Farmed, Caught, Cutting, Peeling, Grating

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Y2: Tudor houses (Free standing structure) Animal puppet	Knowledge	Understand how to identify a target group for what they intend to design and make based on a design criteria. KS1 i, values	<p>To use correct vocabulary to name simple tools and materials and describe them. PRE KS1 iii</p> <p>To know how they can make a structure stronger, stiffer and more stable. (F2 3D Boat) KS1 vii</p> <p>Understand that sewing is a method used to join materials together. KS1 iii</p>		<p>Understand that all food comes from plants or animals. KS1 x</p> <p>Know that food has to be farmed, grown elsewhere (e.g. home) or caught. KS1 x</p> <p>Understand how to name and sort foods into the five groups in 'The Eat well plate' KS1 ix</p> <p>Know that everyone should eat at least five portions of fruit and vegetables every day. KS1 ix</p>
	Skills	<p>Start to generate ideas by drawing on their own and other people's experiences. KS1 i</p> <p>Begin to develop their design ideas through discussion, observation, drawing and modelling. KS1 i, KS1 ii</p> <p>Identify a purpose for what they intend to design and make. KS1 i</p> <p>Identify simple design criteria. KS1 i</p> <p>Develop their ideas through talk and drawings and label parts. KS1 i, KS1 ii</p> <p>Make templates and mock ups of their ideas in card, paper or using ICT. KS1 i, KS1 ii</p>	<p>Begin to select tools and materials. KS1 iii</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable. KS1 iii, KS1 vii</p> <p>With help measure, cut and score with some accuracy. KS1 iii</p> <p>Learn to use hand tools safely and appropriately. KS1 iii</p> <p>Start to assemble, join and combine materials in order to make a product. KS1 iii, KS1 viii</p> <p>Demonstrate how to cut, shape and join fabric to make a simple product. KS1 iii</p> <p>Use basic sewing techniques. (Running stitch) KS1 iii</p> <p>Start to choose and use appropriate finishing techniques. KS1 iv</p>	<p>Evaluate their work against their design criteria. KS1 vi</p> <p>Look at a range of existing products explain what they like and dislike about products and why. KS1 v</p> <p>Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. KS1 vi</p> <p>With confidence talk about their ideas, saying what they like and dislike about them. KS1 vi</p>	<p>Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. KS1 ix</p> <p>Demonstrate how to use techniques such as cutting, peeling and grating. KS1 iii</p>
	Vocab	Modelling, Target group, Mock up, Observation	Score, Assemble, Combine, Free-standing, Structure, Strong, Stable, Rigid, Layering, Base, Support, Sewing, Stitch, Join, Needle, Thread, Running stitch, Template	Strengths, Weakness	

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Y3: Stone age tunic 3d Moving figure model (linkages)	Knowledge	<p>Understand how well products have been designed, made, what materials have been used and the construction technique. KS2 i, KS2 v, values</p> <p>Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. KS2 i, values</p> <p>Start to understand whether products can be recycled or reused. KS2 i</p>	<p>Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. KS2 ix</p> <p>Understand how to join fabrics using different sewing technique, e.g. running stitch, over stitch, back stitch, and what these are used for. (Y2 Animal puppets) KS2 iii</p> <p>To know how a linkage mechanism is used to create movement. (Year 1 Moving picture) KS2 ix</p>		<p>Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. KS2 xiv</p> <p>Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. KS2 xii</p> <p>Begin to know that to be active and healthy, food and drink are needed to provide energy for the body. KS2 xii</p>
	Skills	<p>With growing confidence generate ideas for an item, considering its purpose and the user/s. KS2 i, KS2 ii</p> <p>Identify a purpose and establish criteria for a successful product. KS2 i</p> <p>Explore, develop and communicate design proposals by modelling ideas. KS2 i, KS2 ii</p> <p>Start to order the main stages of making a product. KS2 ii</p> <p>Know to make drawings with labels when designing. KS2 ii</p> <p>When planning, explain their choice of materials and components including function and aesthetics. KS2 ii</p>	<p>Select a wider range of tools and techniques for making their product. KS2 iii</p> <p>Measure, mark out, cut, score and assemble components with more accuracy. KS2 iii</p> <p>Start to work safely and accurately with a range of simple tools. KS2 iii</p> <p>Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work. KS2 vi</p> <p>Start to measure, tape or pin, cut and join fabric with some accuracy. (Y2 Animal puppets) KS2 iii</p>	<p>Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose. KS2 vi</p> <p>Begin to disassemble and evaluate familiar products. KS2 i, KS2 v</p> <p>Consider the views of others to help improve their product. KS2 vi</p> <p>Evaluate the key designs of individuals in design and technology who have helped shape the world. KS2 vii</p>	<p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. KS2 xii</p> <p>Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. KS2 xiii</p>
	Vocab	<p>Purpose, Proposal, Construction, Inventors, Engineers, Manufacturers, Ground-breaking, Recycled, Reused, Labels</p>	<p>Components, Function, Pin, Seam, Seam allowance, Hem, Pattern pieces, Over stitch, Linkages, Disassemble, Linkage, Bridge, Guide, Input, Output</p>	<p>Intended purpose</p>	<p>Chopping, Slicing, Mixing, Kneading, Baking, Healthy, Variety, Balanced, Active, Energy</p>

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Knowledge		<p>Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. KS2 i, KS2 v, values</p> <p>Show understanding of materials and components according to function and aesthetic. KS2 i</p>	<p>Understand and use electrical systems in their products. (Motor to create a moving car) (Year 1 Moving vehicles) KS2 x</p> <p>Know how a catapult mechanism works. (Year 3 Moving figures) KS2 ix</p>	<p>Evaluate the key designs of individuals in design and technology has helped shape the world. KS2 vii</p>	<p>Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. KS2 xiv</p> <p>Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. KS2 xii</p> <p>Know that to be active and healthy, food and drink are needed to provide energy for the body. KS2 xii</p>
	Skills	<p>Generate ideas, considering the purposes for which they are designing- link with Mathematics and Science. KS2 i, KS2 ii, values</p> <p>Confidently make labelled drawings from different views showing specific features. KS2 ii</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. KS2 ii</p> <p>Identify the strengths and areas for development in their ideas and products. KS2 ii, KS2 vi</p> <p>When planning, consider the views of others, including intended users, to improve their work. KS2 i, KS2 ii</p> <p>When planning, explain their choice of materials and components. KS2 ii</p>	<p>Select a wider range of tools and techniques for making their product safely. KS2 iii</p> <p>Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. KS2 iii</p> <p>Start to join and combine materials and components accurately in temporary and permanent ways. KS2 iii</p> <p>Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. KS2 iii</p>	<p>Evaluate their products carrying out appropriate tests. KS2 vi</p> <p>Start to evaluate their work both during and at the end of the assignment. KS2 vi</p> <p>Be able to disassemble and evaluate familiar products and consider the views of others to improve them. KS2 v, KS2 vi</p>	<p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. KS2 xii</p> <p>Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. KS2 xiii</p>
	Vocab	<p>Features, Equipment, Processes, Methods, Techniques, Temporary, Permanent, Mechanical</p>	<p>Gears, Reinforce, Electrical, Series circuit, Toggle switch, Push-to-make switch, Push-to-break switch, Payload, Bucket, Arm, Lever, Frame, Fulcrum</p>	<p>Disassemble</p>	

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Y5 Anglo Saxon houses (Structures) Moving toy (Cam mechanism)	Knowledge	<p>Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose. KS2 i, KS2 v, values</p> <p>To know what a cross-sectional diagram is. KS2 ii</p>	<p>Understand how mechanical systems such as cams have an input, process and an output. (Year 4 Roman catapult) KS2 ix</p> <p>To know a wide range of materials according to their functional properties and aesthetic qualities. KS2 iv</p> <p>To know how to reinforce and strengthen a 3D framework. (Year 2 Tudor Houses) KS2 viii</p>	<p>Evaluate the key designs of individuals in design and technology has helped shape the world. KS2 vii</p>	<p>Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. KS2 xiv</p> <p>Begin to understand that seasons may affect the food available. KS2 xiv</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking. KS2 xiv</p> <p>Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. KS2 xii</p>
	Skills	<p>Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams and prototypes. KS2 ii</p> <p>Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. KS2 i, KS2 v, values</p> <p>With growing confidence apply a range of finishing techniques, including those from art and design. KS2 ii, KS2 iii</p> <p>Draw up a specification for their design- link with Mathematics and Science. KS2 i, values</p> <p>With growing confidence select appropriate materials, tools and techniques. KS2 ii, KS2 iii</p>	<p>Select appropriate materials, tools and techniques with accuracy. KS2 iii</p> <p>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients. KS2 iv</p> <p>Begin to measure and mark out more accurately. KS2 iii</p> <p>Demonstrate how to use skills in using different tools and equipment safely and accurately. KS2 iii</p> <p>With growing confidence cut and join with accuracy to ensure a good-quality finish to the product. KS2 iii</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. KS2 viii, values</p>	<p>Start to evaluate a product against the original design specification and by carrying out tests. KS2 vi</p> <p>Evaluate their work both during and at the end of the assignment. KS2 vi</p> <p>Begin to evaluate it personally and seek evaluation from others. KS2 vi</p>	<p>Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. KS2 xii</p> <p>Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. KS2 xiii</p>
	Vocab	<p>Annotated sketches, cross-sectional diagrams, Prototypes, Innovative, Appealing, Functional, Sustainable, Properties, Specification</p>	<p>Construction, Cam, Follower, Crank handle, Linear, Rotary, Frame, rafter, apex, wattle, daub, Tension, Strut, Compression, tension, tie</p>	<p>Specification</p>	<p>Season, Processed, Substances, Nutrients, Fibre, Carbohydrate, Fat, Sugar, Protein, Dairy</p>

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Y6 Buzzer toy (Circuits) Moving rides (gears and pulleys)	Knowledge	<p>Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose. KS2 i, KS2 v, values</p> <p>To know and be able to draw an exploded diagram. KS2 ii</p>	<p>Understand how finishing techniques can strengthen and improve the appearance of their product. KS2 viii</p> <p>Understand how mechanical systems such as pulleys or gears create movement. (Year 5 Moving toys) KS2 ix</p> <p>To be familiar with a variety of permanent joining techniques. KS2 iii</p> <p>Understand and use complex electrical systems in their products including a lightbulb and buzzer. (Year 4 Moving cars) KS2 x</p>	<p>Evaluate the key designs of individuals in design and technology has helped shape the world. KS2 vii</p>	<p>Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. KS2 xiv</p> <p>Understand that seasons may affect the food available. KS2 xiv</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking. KS2 xiv</p> <p>Know different food and drink contain different substances – nutrients, water and fibre – that are needed for health. KS2 xii</p>
	Skills	<p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, and CAD. KS2 ii</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. KS2 i, KS2 v</p> <p>Accurately apply a range of finishing techniques, including those from art and design. KS2 iii</p> <p>Draw up a specification for their design- link with Mathematics and Science. KS2 i, values</p> <p>Plan the order of their work, choosing appropriate materials, tools and techniques. KS2 ii, KS2 iii</p> <p>Suggest alternative methods of making if the first attempts fail. KS2 ii, KS2 viii KS2 vi,</p> <p>Identify the strengths and areas for development in their ideas and products. KS2 vi</p>	<p>Confidently select appropriate tools, materials, components and techniques and use them. KS2 iii</p> <p>Use tools safely and accurately. KS2 iii</p> <p>Assemble components to make working models. KS2 iii</p> <p>Aim to make and to achieve a quality product. KS2 i</p> <p>Demonstrate and make modifications as they go along. KS2 vi</p> <p>Construct products using permanent joining techniques. KS2 iii</p> <p>Know how to reinforce and strengthen a 3D framework. KS2 viii</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. KS2 iii, KS2 viii, KS2 iv, values</p>	<p>Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. KS2 vi</p> <p>Evaluate their work both during and at the end of the assignment. KS2 vi</p> <p>Record their evaluations using drawings with labels. KS2 vi</p> <p>Evaluate against their original criteria and suggest ways that their product could be improved. KS2 vi</p>	<p>Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. KS2 xii</p> <p>Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. KS2 xiii</p>
	Vocab	<p>Modifications. Exploded diagram</p>	<p>Modifications, Pulley, Drive belt, Gear, Rotation, Spindle, Driver, Ratio, Transmit, Series circuit, Parallel circuit, Switches, Input device, output device, System, Monitor, Control</p>	<p>Developments</p>	