



## Progression of Design and Technology Progression of Skills

### St Mary's CE (VA) Primary School

<b>EYFS : Reception Statements</b>	Progress towards a more fluent style of moving, with developing control and grace. (PD) Develop their small motor skills so that they can use a range of tools competently, safely and confidently. (PD) Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. (PD) Explore, use and refine a variety of artistic effects to express their ideas and feelings. . (EAD) Return to and build on their previous learning, refining ideas and developing their ability to represent them. (EAD) Create collaboratively, sharing ideas, resources and skills. (EAD)
<b>EYFS: ELG</b>	Use a range of small tools, including scissors, paintbrushes and cutlery (PD) Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (EAD) Share their creations, explaining the process they have used (EAD)
<b>Vocabulary:</b>	Cut, join, fix , fasten, thread press, fold, hinge, flap, press glue stick, sellotape, masking tape, staple, split pins, treasury tags, hole punch plan, draw, improve, like, dislike, model, label, collaborate, test use, build, materials, create fruit, vegetable, healthy, unhealthy, eat, foods Architect, Designer

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Developing, planning and communicating ideas</b>	Think of your own ideas for design.  Use pictures and words to plan.  Design a product for myself, following design criteria.  Work in a range of contexts (imaginary, home, school, wider	Think of your own ideas and plan what to do next.  Describe designs using pictures, diagrams, models, mock-ups, words and ICT.  Design a product for myself and others, following design criteria.	Create a design that meets a range of requirements.  Consider the equipment and tools needed when planning.  Describe a design using an accurately labelled diagram, and in words..	Generate more than one idea for how to create a product.  Gather information to help design a successful product (i.e. by asking others' views).  Produce a detailed plan with labelled diagrams, a written	Generate a range of ideas after collating relevant information (i.e. users' views). Produce a detailed plan, with step-by-step instructions, pattern pieces, cross sectional diagrams and prototypes. Suggest alternative plans, considering the	Use a range of information to inform a design (i.e. market research using surveys, interviews, questionnaires or web based resources). Produce a detailed plan, with cross-sectional diagrams and computer generated designs). Work within constraints, refining



	community, story based).	Work confidently in a range of contexts (imaginary, home, school, wider community, story-based etc).		explanation and step-by-step guide.  Suggest improvements to develop and refine a planned idea.	positive aspects and drawbacks of each.	and justifying plans as necessary.
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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Working with tools, equipment, materials and components to make quality products</b>	<p>Explain what is being made and why.</p> <p>Select appropriate tools and equipment for the purpose.</p> <p>(Cutting, shaping, joining and finishing)</p>	<p>Explain what is being made and why the audience will like it.</p> <p>Choose appropriate tools and equipment, describing and explaining why they are being used.</p> <p>(Cutting, shaping, joining and finishing)</p>	<p>Use a range of tools and equipment accurately.</p> <p>Measure, mark out, assemble and join materials and components with some accuracy.</p> <p>(Cutting, shaping, joining and finishing)</p>	<p>Use a range of tools and equipment with accuracy.</p> <p>Measure, mark out, join, assemble materials and components with accuracy.</p> <p>(Cutting, shaping, joining and finishing)</p>	<p>Use a range of tools and equipment expertly.</p> <p>Consider the aesthetic qualities and functionality of my work when making.</p> <p>(Cutting, shaping, joining and finishing)</p>	<p>Use a range of tools and equipment precisely.</p> <p>Consider the aesthetic qualities and functionality of my product as making it, refining details as necessary.</p> <p>(Cutting, shaping, joining and finishing)</p>



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Evaluating processes and products</b>	<p>Use a range of tools and equipment precisely.</p> <p>Consider the aesthetic qualities and functionality of my product as making it, refining details as necessary.</p>	<p>Describe how their own and pre-existing products work, evaluating what went well and what could be done differently.</p> <p>Suggest what went well and what would be done differently when evaluating their own product.</p>	<p>Evaluate own and pre-existing products.</p> <p>Suggest what could be changed to improve a design, beginning to link this to the design brief.</p>	<p>Evaluate the appearance and usability of own and pre-existing products.</p> <p>Explain how the original design could be improved, considering the appearance and usability and linking this to the design brief.</p>	<p>Evaluate the appearance and function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose.</p> <p>Suggest improvements that could be made, considering materials and methods that have been used.</p>	<p>Evaluate the appearance and test the function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose.</p> <p>Suggest improvements that could be made, considering materials, methods, sustainability of the product and how much a product costs to make.</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Food and Nutrition</b>	<p>Begin to understand that all food comes from plants or animals.</p> <p>Begin to understand how to name and sort foods into the five groups in 'The Eat well plate'</p>	<p>Understand that all food comes from plants or animals. Know that food has to be farmed, grown elsewhere (e.g. home) or caught.</p> <p>Understand how to name and sort foods into the five groups in 'The Eat well plate'</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.</p> <p>Understand how to prepare and cook a</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.</p> <p>Understand how to prepare and cook a</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.</p> <p>Begin to understand that seasons may</p>	



	<p>Begin to understand that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Know how to use techniques such as cutting.</p> <p>Identify which fruits are peeled. Peel fruits such as orange, banana</p> <p><b>Fruit Salad</b></p>	<p>Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Demonstrate how to use techniques such as cutting, peeling.</p> <p><b>Origins of Food</b></p>	<p>variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Begin to understand how to use a range of techniques such as chopping, slicing, spreading,</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'</p> <p>Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.</p> <p><b>Healthy Sandwiches</b></p>	<p>variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Know how to use a range of techniques such as, mixing, kneading, rolling and baking.</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'</p> <p>Know that to be active and healthy, food and drink are needed to provide energy for the body.</p> <p><b>George Washington Carver Agricultural and food scientist</b></p> <p><b>Biscuits</b></p>	<p>affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</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.</p> <p>Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</p> <p><b>Savoury or Sweet Dish</b></p>	
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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Textiles</b>		Shape textiles using templates.  Join textiles using running stitch on wide binca and plastic needles.  Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).  <b>Puppets</b>		Understand the need for a seam allowance.  Join textiles with appropriate stitching, running stitch with narrow binca and metal needles.  Introduce cross stitch as appropriate  Select the most appropriate techniques to complete the design.  <b>Purses</b>	Create objects (such as a cushion) that employ a seam allowance.  Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).  Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).  <b>Cushions</b> <b>William Morris</b>	
<b>Structures</b>	Cut materials safely using tools provided.  Measure and mark out to the nearest centimetre.  Demonstrate a range of cutting and shaping techniques (such as		Cut materials accurately and safely by selecting appropriate tools.  Measure and mark out to the nearest millimetre.  Apply appropriate cutting and shaping		Cut materials from a pattern pieces including computer aided design  Apply their knowledge how to strengthen, stiffen and support more complex structures	Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).



	<p>tearing, cutting, folding and curling).</p> <p>Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen, make stiffer and more stable).</p> <p><b>Houses</b></p>		<p>techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Select appropriate joining techniques/ resources.</p> <p><b>Pyramids</b> <b>Gaudi _ Sagrada</b> <b>Familia – Link with MFL</b></p>		<p><i>(Purple Mash 5.6.3D)</i></p> <p><b>Douglas Ross</b> <b>Charles Hull</b></p>	<p>Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p><b>Parthenon/Shelters</b> <b>Fazlur Rahman Khan</b> <b>tubular designs for skyscrapers</b></p>
<b>Electronics</b>				<p>Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). Create series circuits.</p> <p><i>Cross-curricular links with science</i></p> <p><b>Light up Card</b></p>		<p>Create circuits using electronics that employ a number of components (such as LEDs, resistors, transistors.)</p> <p><i>Cross-curricular links with science</i></p> <p><b>Design a buggy</b></p>
<b>Computing</b>					<p>Generate , develop, model and communicate their ideas through prototypes, pattern pieces and computer aided design.</p> <p><i>(Purple Mash 5.6.3D)</i></p>	<p>Write code to control and monitor models or products (EG lego wedo)</p> <p><i>Cross-curricular links with computing</i></p>



					<i>Cross-curricular links with computing.</i>	
<b>Mechanical</b>	<p>Create products using levers and sliding mechanisms</p> <p><i>Moving Story Book</i></p>	<p>Create products using levers, wheels and axels</p> <p><i>Cross-curricular links with science.</i></p> <p><b>Vehicles</b></p>	<p>Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, and linkages)</p> <p><i>Cross-curricular links with science</i></p> <p><b>Christmas Card</b></p>			<p>Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as gears, and pulleys).</p> <p>Use innovative combinations of electronics (or computing) and mechanics in product designs.</p> <p><i>Cross-curricular links with science.-</i></p>
<b>Design, make, investigate</b>	<p>design sketch model purpose product decorate improve function</p>	<p>design sketch model purpose product equipment decorate improve criteria function evaluate audience user</p>	<p>design sketch model Label prototype design brief purpose product equipment decorate improve criteria function evaluate audience user</p>	<p>design sketch model Label prototype design brief purpose product equipment decorate improve criteria function evaluate audience user annotated design, design specification,,</p>	<p>design sketch model Label prototype design brief purpose product equipment decorate improve criteria function evaluate audience user annotated design, design specification,,</p>	<p>design sketch model Label prototype design brief purpose product equipment decorate improve criteria function evaluate audience user annotated design, design specification,,</p>



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<b>Food and Nutrition Vocabulary</b>	Hygiene Cut Prepare Slice Mix Stir Peel Portion Fruit Healthy Ingredients Recipe	Scoop Stir Grate Portion grown plant animal diet healthy balanced Eat Well plate protein carbohydrates fats design evaluate	(Un)healthy Food Groups Dairy Protein Fibre Vitamins Minerals Fat Carbohydrate Chop Spread Nutrients Food Groups Grown Reared Caught Product Claw grip Fork secure flat surface down Prepare portions (pre) packaged	crops Soyabean Agricultural Food Scientist Mixing Kneading baking Energy sprinkle Roll Energy taste texture savoury dough cutter flavour method quantity recipe measure bake	RDA - Recommended Daily Allowance healthy unhealthy sugar natural processed seasonal bake seasons naan bread flat bread units of measure eg tablespoon, teaspoon, dessert spoon, grams English, Scottish, Welsh Traditional cuisine packaging Storage	





<b>Textiles</b>		<p>puppet          Marionettes          Glove puppet          Finger puppet          shadow puppet          rod puppet          Seam          Sew          Template          felt          needle          running stitch</p>		<p>Cross stitch          Thread          Needle          Safety pins          Connect          Seam          pouch          ribbon          leather          raffia</p>	<p>running stitch          back stitch          over stitch or blanket          stitch          Applique          Texture          Seam          Design brief          Functional          Aesthetic          embroidery          buttons, beads,          ribbons,          bows, tassels and frills          envelope fold, snap          fasteners and buttons          with button holes.</p>	
<b>Structures</b>	<p>Structure          Sturdy          Measure          Support          hinge          tear          fold          purpose          mechanism</p>		<p>Structure          Stiffen          Strengthen          Stable          label          Measure          Join          Fasten          Roll          Frame          Cladding          corrugated          rigid          tearing          cutting          folding          curling</p>			<p>Structure          Stiffen          Strengthen          corrugated          apex          column          cylinder          circular          support          strut          cross-brace          frame          box frame          diagonal          structure          material          base          foundation          cutting mat</p>



						cross sectional diagram
<b>Mechanical</b>	Book Slider Lever Rotate Spin Slide Split pin Cut Measure Stick Glue Support Material	vehicle, wheel, axle, axle holder, chassis, body, cab, lever, mechanism, mechanical system	Mechanism Mechanical system Linkage Lever Pivot Fixed pivot Loose pivot Pop-up Input Output Movement			pulley axle spindle hack-saw gear drive belt sandpaper dowel chassis lever gear mechanism
<b>Electronics</b>				Simple circuit, LED, wire, battery, solder, wire strippers, fault connection conductor battery holder		Circuit component prototype connection crocodile clips switch wire stripper copper wire
<b>Control/ computing</b>					Computer Aided Design Models Prototype Net Points 3D view 3D printer screen print snipping tool	Timer Controller variable i/else statements coding tabs Variable Properties turtle edit debug input command



						interactive game database flowchart algorithm simulation functions
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