



Cookridge Holy Trinity C of E (A) Primary School

The Best for Every Child – A Unique Child of God

DT Skills and Progression

	Key Stage 1	Year 3 and 4	Year 5 and 6
Mastering Practical skills			
Materials and Construction	<ul style="list-style-type: none"> -Know what materials can be used for my structure - How freestanding structures can be made stronger, stiffer and more stable - Know what a join is and can use one - Practise joining materials by gluing, screwing or nailing to make and strengthen products -Find out how to make materials for structure stronger (folding, rolling and joining, columns and triangles) -Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). -Measure and mark out materials with care and increasing accuracy (y2-to the nearest cm) -Cut materials safely -Be careful to make work look as neat as possible 	<ul style="list-style-type: none"> -Select appropriate materials and appropriate joins - Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs) -Use scoring and folding to shape materials accurately -Make cuts accurately (scissors and saws) -Make holes accurately (drill, punch) -Join materials to make products using both permanent and temporary fastenings -Choose suitable techniques to construct products or to repair items -How to make strong, stiff shell structures -Methods of working are increasingly precise aiming for a high-quality finish -Measure and mark out materials with care and increasing accuracy (to the nearest mm) - I can incorporate art skills to apply texture and design to my products 	<ul style="list-style-type: none"> -Select from a variety of materials best suited to my design, showing an understanding of the qualities of materials needed How to reinforce and strengthen 3D framework structure -Use scoring, and folding to shape materials accurately. -Make cuts accurately and reject pieces that are not accurate and improve my technique. -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) -Develop a range of practical skills to create products; cutting, drilling, screwing, nailing, gluing, filing and sanding -Select joins that are strong and stable, giving extra strength to products. -Some joins are flexible to allow for dismantling or folding. -Methods of working are precise so that products have a high-quality finish. -Use computer programming when creating a product -Compare and contrast the work of different designers (e.g. historical and modern) -Give reasons for the decisions made by the designer
Mechanics	<ul style="list-style-type: none"> -Explore how moving objects work -Look at sliders and levers (year 1) and wheels and axels (year 2) and create a product using these mechanisms 	<ul style="list-style-type: none"> -Know the application of mechanisms to create movement -Create a product using levers and linkages to create a moving product -Products have a good finish so that a user will find it both useful and attractive. 	<ul style="list-style-type: none"> -Create a product that convert rotary motion to linear using cams. -Products are well finished in a way that would appeal to users -Use innovative combinations of electronics (or computing) and mechanics in product designs, for example the use of Crumble software (year 6)

Electricals and Electronics	<ul style="list-style-type: none"> -Look at various electrical products and how they work -Diagnose faults in battery operated devices – eg, low battery, terminal damage, water damage Look at the use of electronics in the local environment- timers, sensors eg (gates/ traffic lights) 	<ul style="list-style-type: none"> - Create a functional product using simple electrical circuit; using both a series and parallel circuit (e.g. to illuminate or create motion) -Combine a number of components well in my product -Explore the use of electronics in the local environment- timers, sensors eg (gates/ traffic lights) 	<ul style="list-style-type: none"> -Investigate more deeply the use of electronics in the local environment- timers, sensors e.g. (gates/ traffic lights) -Create a functional product using more complex circuits and components; using switches and variable resistance to alter the way electrical products behave (dim lights, alter speed) Create circuits using electronic kits that employ a number of components e.g. LEDs, resistors, transistors and chips -Product is improved after testing. -Use innovative combinations of electronics (or computing) and mechanics in product designs, for example the use of Crumble software (year 6)
Textiles	<ul style="list-style-type: none"> -Know that textiles have different properties: touch, insulation, texture and waterproof -Select the appropriate textile so that it does the job I want it to -Describe textiles by the way they feel -Shape textiles using templates -Measure, mark out and cut fabric to create a product -Join fabrics using glue and <i>running stitch</i> -Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing) -Make sure my work is neat and tidy 	<ul style="list-style-type: none"> -Select the appropriate textile(s) for my product. -Use sharp scissors accurately to cut textiles -Know that the texture and other properties of materials affect choice -Make a textile product considering the intended users' and for the purpose -Join textiles with <i>appropriate stitching</i> to help create a product that is sturdy and fit for purpose -Understand the need for a seam allowance -Combine materials to add strength or visual appeal - Select the most appropriate techniques to decorate textiles 	<ul style="list-style-type: none"> - Create a textile product with an awareness of commercial appeal -Experiment with a range of materials until I find the right mix of affordability, appeal and appropriateness for the job -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) -Mark out using patterns and templates and create objects that employ a seam allowance (such as a cushion) -Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration), using art skills of stitching, embroidering and plaiting to make durable and desirable products.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Food/Cooking in the Curriculum</p>	<ul style="list-style-type: none"> -Cut, peel or grate ingredients safely and hygienically -Measure or weigh using measuring cups or electronic scales -Be aware of hygiene for cooking -Assemble or cook ingredients, following a recipe with support -Use the basic principles of a healthy diet -Be aware there are different ways to cook -Recognise that all foods come from plants or animals -Understand where food comes from e.g. a farm, the sea -Recognise that food can be purchased or grown at home/school -Be able to talk about foods they like or dislike -Talk about people's food choices based on preferences, seasons, time of day, intolerance, religion, setting -Be aware that some foods have labels that contain information to help making a choice 	<ul style="list-style-type: none"> -Cut, peel or grate ingredients safely and hygienically -Measure ingredients to the nearest gram accurately - Following a recipe, assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking) - Prepare and cook mainly savoury dishes -Prepare ingredients hygienically using appropriate utensils. -Select ingredients for my product with reasons -Apply the principles of a healthy, varied diet -Use knowledge of the food groups to plan a meal -Understand how a variety of ingredients are grown, reared, caught and processed - Know the basic steps in producing food -Talk about food choices including allergies and religions -Be aware that some foods have labels that contain information to help making a choice 	<ul style="list-style-type: none"> -Cut, peel or grate ingredients safely and hygienically -Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. - Following a recipe, assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking) - Prepare and cook mainly savoury dishes, using a range of techniques, grill, boil, fry and bake -Create and refine recipes, including ingredients, methods, cooking times and temperatures Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms) -Understand how a variety of ingredients are grown, reared, caught and processed -Talk about people's food choices including allergies, religion etc -Read and make use of the main information on food and drink labels -Consider cost when shopping for food -Explore the factors involved in food choice and how it may be affected by availability, seasonality, need, cost, packaging, origin, culture, religion, allergy, intolerance, peer pressure -Be aware that advertising can influence what they choose to eat -Be aware of the importance of portion sizes -Know where different crops can be found around the world -understand the concept of carbon footprints -Know different cultures have different diets
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Design, Make, Evaluate and Improve	<ul style="list-style-type: none"> -Describe a product (who is it for, what is made from, how is it made, how it works) - Design products that have a clear purpose and an intended user. -Talk about their own and others' product (features, design, opinion) and describe how their product works -Explain why they chose certain materials, techniques and tools -Make products, refining the design as work progresses. - Begin to use CAD software to design e.g. SketchUp (Year 2) 	<ul style="list-style-type: none"> -Begin to research and evaluate existing products to inform planning, understanding that products are designed for a purpose (e.g. a problem, an audience, an event) -Design with purpose by identifying opportunities to design -Talk about own and others' work (features, design, opinion) – -Explain why they chose certain materials, techniques and tools - Identify what is working well and what can be improved and then refine work and techniques accordingly as work progresses, continually evaluating the product design -Use CAD software to design and represent product designs e.g. Sketch Up, Ikea website 	<ul style="list-style-type: none"> -Research and evaluate existing products giving reasons for the decisions of the designers (materials, design, tools, techniques) -Use the ideas from current designers to help with plans -Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). -Make products through stages of prototypes, making continual refinements -Ensure products have a high-quality finish, using art skills where appropriate -Reflect on their own designs and develop them bearing in mind the way they will be used (during the process) -Use prototypes, cross-sectional diagrams and CAD software to represent designs.
Take inspiration from design throughout history	<ul style="list-style-type: none"> -Know what a designer does and know the names of some British designers -Explore objects and designs of some British designers, saying what they like and dislike and thinking carefully about how they have been created 	<ul style="list-style-type: none"> - Identify designers from all areas of study; including local designers, British designers and designers from history - Explore their work, discussing the tools, techniques and design used by the designer to help them generate ideas for their own designs -Improve upon the work of existing designers, giving reasons for their thinking -Disassemble products to understand how they work. 	<ul style="list-style-type: none"> - Identify designers from all areas of study; including local designers, British designers and designers from history - Explore their work, discussing the tools, techniques and design used by the designer to help them generate ideas for their own designs -Give reasons for the decisions made by the designer -Know how key events and individuals have influenced the world (in terms of products) -Compare and contrast the work of different designers (e.g. historical and modern) - In their own designs, they combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. -Evaluate the design of products, suggesting improvements on the work of existing designers' products and use this to create innovative designs, improving the user experience

- Extra requirements to meet the Healthy Schools Award – taken from Core Competencies for Young People at Key Stages 1 & 2 (May also be taught through our Science/PSHE curriculum)