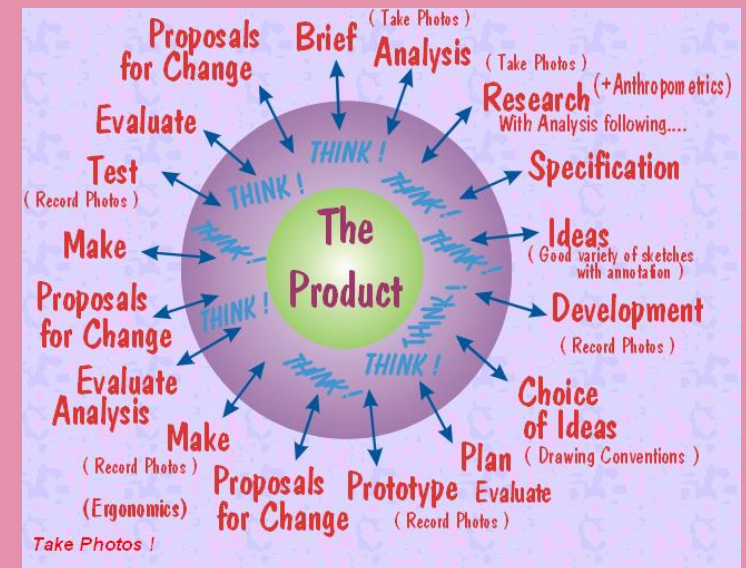


2019

# Curriculum Skills and Progression Map Design Technology



Nebula  
where stars are born

The Nebula Federation

Frettenham Primary School

DESIGN TECHNOLOGY: AGE RELATED STATUTORY COVERAGE	
KEY STAGE ONE LEARNING	KEY STAGE TWO LEARNING
<p><b>Design</b></p> <ul style="list-style-type: none"> <li>• Design purposeful, functional, appealing products based on design criteria</li> <li>• Generate, develop, model and communicate their ideas through talking,</li> <li>• drawing, templates, mock-ups and ICT</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to perform practical tasks</li> <li>• Select from and use a wide range of materials and components, including</li> <li>• construction materials, textiles, ingredients</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing products</li> <li>• Evaluate ideas / products against design criteria</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>• Build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>• Explore and use mechanisms in their products.</li> <li>• Use the basic principles of a healthy and varied diet to prepare dishes</li> </ul> <p>Understand where fod comes from.</p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>• Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose</li> <li>• Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks accurately</li> <li>• Select from and use a wider range of materials and components</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate ideas and products against own design criteria and consider the views of others</li> <li>• Understand how key events and individuals have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• Understand and use mechanical systems in their products</li> <li>• Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• Apply understanding of computing to program, monitor and control products.</li> <li>• Understand and apply the principles of a healthy and varied diet</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>

Progression of Skills- Design and Technology	
Class 1	
Reception (Expressive Arts and Design)	Year 1
<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas from their own experience</li> <li>• Talk about what they want to make</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Make simple models, not necessarily with a purpose</li> <li>• Use simple construction kits – e.g. Lego</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Be excited about what they have made</li> <li>• Use simple terms to talk about their own and others' work</li> </ul> <p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Understand that food comes from plants or animals</li> <li>• Select and use appropriate tools needed for a recipe</li> <li>• Complete basic hygiene tasks</li> </ul>	<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas from their own experience</li> <li>• Suggest ideas and explain what they are going to do</li> <li>• Identify a target group for what they intend to design and make</li> <li>• Model their ideas in card and paper</li> <li>• Develop their design ideas applying findings from their earlier research</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Make their design using appropriate techniques</li> <li>• With support, measure, mark out, cut and shape a range of materials</li> <li>• Use basic tools, such as scissors and a hole punch, safely</li> <li>• Join two materials together using a variety of temporary methods, e.g. glues or masking tape</li> <li>• Use simple finishing techniques to improve the appearance of their product</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Talk about how well a product works in relation to the purpose</li> <li>• Evaluate their products as they are developed, identifying strengths and possible changes they might make</li> <li>• Answer questions about what they have made and how they have made it</li> </ul> <p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Understand that food comes from plants or animals</li> <li>• Explain that some ingredients need to be prepared before they can be eaten</li> <li>• Select and use appropriate tools needed for a recipe</li> <li>• Use basic cooking skills to make a dish</li> <li>• Complete basic hygiene tasks</li> </ul>
Greater Depth	

Progression of Skills- Design and Technology	
Class 2	
Year 2	Year 3
<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas by drawing on their own and other people’s experiences</li> <li>• Develop design ideas through discussion, observation, drawing and modelling</li> <li>• Identify a purpose for what they intend to design and make</li> <li>• Identify simple design criteria</li> <li>• Make simple drawings and label parts</li> <li>• Share plans and designs with others</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Begin to select tools and materials, using specific vocabulary to name and describe them</li> <li>• Measure, cut and score with some accuracy</li> <li>• Use hand tools safely and appropriately</li> <li>• Assemble, join and combine materials in order to make a product</li> <li>• Use a simple template for cutting out</li> <li>• Cut, shape and join fabric to make a simple garment</li> <li>• Use basic sewing techniques</li> <li>• Choose and use simple finishing techniques</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluate products against design criteria</li> <li>• Evaluate their products as they are developed, identifying strengths and possible changes they might make</li> <li>• Talk about their ideas, saying what they like and dislike about them</li> <li>• Compare with existing products</li> </ul> <p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Explain that some equipment has a special job and know what that special job is, e.g. colander, peeler</li> <li>• Use basic cooking skills to make a dish</li> <li>• Explain the hygiene and safety rules, which need to be followed before, during and after cooking</li> </ul>	<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas for an item, considering its purpose and the user/s</li> <li>• Identify a purpose and establish criteria for a successful product</li> <li>• Plan the order of their work before starting</li> <li>• Explore, develop and communicate design proposals by modelling ideas</li> <li>• Make drawings with labels when designing</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Measure and cut out using centimetres and weigh in grams</li> <li>• Choose appropriate tools and techniques for making their product</li> <li>• Measure, mark out, cut, score and assemble components with more accuracy</li> <li>• Work safely and accurately with a range of simple tools</li> <li>• Think about their ideas as they make progress and be willing to change things if this helps them to improve their work</li> <li>• Measure, tape or pin, cut and join fabric with some accuracy</li> <li>• Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluate their product against original design criteria e.g. how well it meets its intended purpose</li> <li>• Disassemble and evaluate familiar products</li> </ul> <p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Name the sources of common ingredients found in meals</li> <li>• Explain the climate and conditions affect when and where food is produced</li> <li>• Demonstrate hygienic food preparation and storage</li> <li>• Plan and prepare food appropriate for a range of different occasions</li> </ul>
Greater Depth	

Progression of Skills- Design and Technology		
Class 3		
Year 4	Year 5	Year 6
<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas, considering the purposes for which they are designing</li> <li>• Make labelled drawings from different views showing specific features</li> <li>• 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</li> <li>• Evaluate products and identify criteria that can be used for their own designs</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Select appropriate tools and techniques for making their product</li> <li>• Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques</li> <li>• Join and combine materials and components accurately in temporary and permanent ways</li> <li>• Sew using a range of different stitches, to weave and knit</li> <li>• Measure, tape or pin, cut and join fabric with some accuracy</li> <li>• Use simple graphical communication techniques</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluate their work both during and at the end of the assignment</li> <li>• Evaluate their products carrying out appropriate tests</li> </ul>	<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Generate ideas through brainstorming and identify a purpose for their product</li> <li>• Draw up a specification for their design</li> <li>• 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</li> <li>• Use the results of investigations, information sources, including ICT, when developing design ideas</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Select appropriate materials, tools and techniques</li> <li>• Measure and mark out accurately</li> <li>• Use skills in using different tools and equipment safely and accurately</li> <li>• Cut and join with accuracy to ensure a good quality finish to the product</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluate a product against the original design specification</li> <li>• Evaluate it personally and seek evaluation from others</li> </ul>	<p><b>DESIGN AND DEVELOP</b></p> <ul style="list-style-type: none"> <li>• Communicate their ideas through detailed labelled drawings</li> <li>• Develop a design specification</li> <li>• Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways to others</li> <li>• Plan the order of their work, choosing appropriate materials, tools and techniques</li> </ul> <p><b>MAKING</b></p> <ul style="list-style-type: none"> <li>• Select appropriate materials, tools, components and techniques</li> <li>• Assemble components to make working models</li> <li>• Use tools safely and accurately</li> <li>• Construct products using permanent joining techniques</li> <li>• Make modifications as they go along</li> <li>• Pin, sew and stitch materials together to create a product</li> <li>• Achieve a quality product, that looks good and works well</li> </ul> <p><b>PRODUCT AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>• Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests</li> <li>• Record their evaluations using drawings with labels</li> <li>• Evaluate against their original criteria and suggest ways their product could be improved</li> <li>• Use technical subject-specific vocabulary</li> </ul>

<p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Name the sources of common ingredients found in meals</li> <li>• Read and interpret basic nutrition information on food packaging when making choices</li> <li>• Suggest and demonstrate healthier ways to prepare and cook foods</li> <li>• Explain that climate and conditions affect when and where food is produced</li> <li>• Demonstrate hygienic food preparation and storage</li> </ul>	<p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Follow recipes</li> <li>• Weigh and measure accurately</li> <li>• Select and use the most appropriate ingredients and equipment to plan and cook a range of dishes</li> <li>• Explain how to use date marks and food storage instructions on food packaging</li> <li>• Demonstrate a range of food skills and techniques</li> <li>• Demonstrate good personal hygiene when cooking</li> </ul>	<p><b>GROWING, COOKING AND NUTRITION</b></p> <ul style="list-style-type: none"> <li>• Write and follow recipes</li> <li>• Weigh and measure accurately</li> <li>• Select and use the most appropriate ingredients and equipment to plan and cook a range of dishes</li> <li>• Demonstrate an extended range of food skills and techniques</li> <li>• Explain how to use date marks and food storage instructions on food packaging</li> <li>• Demonstrate good personal hygiene when cooking</li> <li>• Demonstrate good food safety and hygiene when cooking</li> </ul>
<b>Greater Depth</b>		