

	Year 3	Year 4	Year 5	Year 6
<b>Developing, planning and communicating ideas</b>	<ul style="list-style-type: none"> <li>With growing confidence, generate ideas for an item, considering its purpose and user(s)</li> <li>Start to order the main stages of making a product; identify a purpose and establish criteria for a successful product</li> <li>Understand how well existing products have been designed and made, the materials used and construction technique(s)</li> <li>Learn about inventors, designers, chefs and manufacturers who have developed ground-breaking products</li> <li>Start to understand whether products can be recycled/reused</li> <li>Know to make drawings with labels when designing</li> <li>When planning, explain choice of materials and components, including function and aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>Start to generate ideas, considering the design purposes [Link: Sci/Maths]</li> <li>Confidently 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; suggest alternative methods if first attempts fail. Identify strengths and areas for development in their ideas and products</li> <li>When planning, consider the views of others, including intended users, to improve their work</li> <li>Learn about inventors, designers, chefs and manufacturers who have developed ground-breaking products</li> <li>When planning, explain choice of materials and components, including function and aesthetics</li> </ul>	<ul style="list-style-type: none"> <li>Start to generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces</li> <li>Begin to research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose</li> <li>With growing confidence, apply a range of finishing techniques, including those from art and design</li> <li>Draw up a specification for their design [Link: Sci/Maths]</li> <li>Use results of investigations and information sources including IT when developing design ideas</li> <li>With growing confidence, select appropriate materials, tools and techniques</li> <li>Start to understand how much products cost to make, how sustainable and innovative they are and their impact(s)</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces</li> <li>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose</li> <li>Accurately apply a range of finishing techniques, including those from art and design</li> <li>Draw up a specification for their design [Link: Sci/Maths]</li> <li>Plan the order of their work, choosing appropriate materials, tools and techniques</li> <li>Suggest alternative methods if initial attempts fail</li> <li>Identify strengths and areas for development in their ideas and products</li> <li>Know how much products cost to make, how sustainable and innovative they are and their impact(s) beyond their intended purpose</li> </ul>
<b>Working with tools, equipment, materials and components to make quality products</b>	<ul style="list-style-type: none"> <li>Select a wider range of tools and techniques for making a product (ie construction materials/kits, textiles, food ingredients, mechanical and electrical components)</li> <li>Explain choice of tools and equipment in relation to the skills and techniques that will be used</li> <li>Start to understand that mechanical systems have an input, process and output</li> <li>Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement</li> <li>Know how simple electrical circuits and components can be used to create functional products</li> <li>Measure, mark out, cut, score and assemble components with more accuracy</li> <li>Start to work safely and accurately with a range of simple tools</li> <li>Consider ideas at all times throughout a project; be prepared to make changes if this improves a product</li> <li>Start to measure, tape or pin, cut and join fabric with some accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Select a wider range of tools and techniques for making a product safely</li> <li>Know how to measure/mark out/cut/shape a range of materials using appropriate tools/equipment/techniques</li> <li>Start to combine materials and components accurately in temporary and permanent ways</li> <li>Know how mechanical systems such as cams/pulleys/gears create movement</li> <li>Understand how more complex electrical circuits and components can be used to create functional products</li> <li>Continue to learn how to program a computer to monitor changes in the environment and control their product</li> <li>Understand how to reinforce and strengthen a 3D framework; sew using a range of different stitches to weave and knit</li> <li>Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy</li> <li>Begin to use finishing techniques to strengthen/improve appearance of their product, using range of equipment including IT</li> </ul>	<ul style="list-style-type: none"> <li>Select appropriate materials, tools and techniques eg cutting, shaping, joining and finishing accurately</li> <li>Select from and use a wider range of materials/components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> <li>Understand how mechanical systems such as cams/pulleys/gears create movement</li> <li>Know how more complex electrical circuits and components can be used to create functional products, and how to program a computer to monitor changes in the environment and control their products</li> <li>Understand that mechanical and electrical systems have an input, process and output</li> <li>Measure and mark out accurately</li> <li>Demonstrate how to use skills in using different tools/equipment safely and accurately</li> <li>Cut and join with accuracy to ensure good quality finish</li> <li>Weigh and measure accurately (time, ingredients, liquids)</li> <li>Use finishing techniques to strengthen/improve appearance of their product, using range of equipment including IT</li> </ul>	<ul style="list-style-type: none"> <li>Confidently select and use appropriate tools, materials, components and techniques</li> <li>Use tools safely and accurately</li> <li>Assemble components to make working models</li> <li>Confidently pin, sew and stitch materials together</li> <li>Demonstrate when to make modifications during a project</li> <li>Construct products using permanent joining techniques</li> <li>Understand how mechanical systems such as cams/pulleys/gears create movement</li> <li>Know how more complex electrical circuits and components can be used to create functional products, and how to program a computer to monitor changes in the environment and control their products</li> <li>Know how to reinforce and strengthen a 3D framework</li> <li>Understand that mechanical and electrical systems have an input, process and output</li> <li>Use finishing techniques to strengthen/improve appearance of their product, using range of equipment including IT</li> </ul>
<b>Evaluating processes and products</b>	<ul style="list-style-type: none"> <li>Start to evaluate products against original design criteria</li> <li>Begin to disassemble and evaluate familiar and existing products and consider the views of others to improve them</li> <li>Evaluate key designs of individuals in design and technology</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate products by carrying out appropriate tests</li> <li>Start to evaluate work during and at the end of a project</li> <li>Disassemble and evaluate familiar and existing products and consider the views of others to improve them</li> <li>Evaluate key designs of individuals in design and technology</li> </ul>	<ul style="list-style-type: none"> <li>Start to evaluate product against design specification and by carrying out tests</li> <li>Evaluate work during and at the end of a project; evaluate personally and seek opinions of others</li> <li>Evaluate key designs of individuals in design and technology</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate products against original criteria, identifying strengths and possible developments</li> <li>Evaluate work during and at the end of a project; record evaluations using labelled drawings</li> <li>Evaluate key designs of individuals in design and technology</li> </ul>
<b>Food and nutrition</b>	<ul style="list-style-type: none"> <li>Start to know that food is grown, reared and caught in the UK, Europe and the wider world</li> <li>Understand how to prepare and cook a variety of predominantly savoury safely and hygienically including use of heat source</li> <li>Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and baking</li> <li>Start to understand that a healthy diet is made up from a variety and balance of different food and drink [The 'Eat Well' plate]</li> <li>Begin to know that food and drink provide energy for activity and health</li> </ul>	<ul style="list-style-type: none"> <li>Understand that food is grown, reared and caught in the UK, Europe and the wider world</li> <li>Understand how to prepare and cook a variety of predominantly savoury safely and hygienically including use of heat source</li> <li>Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and baking</li> <li>Know that a healthy diet is made up from a variety and balance of different food and drink [The 'Eat Well' plate]</li> <li>Know that food and drink provide energy for activity and health</li> </ul>	<ul style="list-style-type: none"> <li>Understand that food is grown, reared and caught in the UK, Europe and the wider world; begin to understand that seasons may affect food available</li> <li>Understand how food is processed into ingredients that can be eaten or used in cooking</li> <li>Know how to prepare and cook a variety of predominantly savoury safely and hygienically including use of heat source</li> <li>Use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and baking</li> <li>Begin to understand that foods and drinks contain different substances – nutrients, fibre etc – that are needed for health</li> </ul>	<ul style="list-style-type: none"> <li>Know that food is grown, reared and caught in the UK, Europe and the wider world; understand that seasons may affect food available</li> <li>Understand how food is processed into ingredients that can be eaten or used in cooking</li> <li>Know how to prepare and cook a variety of predominantly savoury safely and hygienically including use of heat source</li> <li>Use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and baking</li> <li>Know that foods and drinks contain different substances – nutrients, fibre etc – that are needed for health</li> </ul>