

DT Progression of Skills - Mastering Techniques				
	<u>Developing and modelling ideas</u>	<u>Practical skills and techniques</u>	<u>Technical knowledge</u>	<u>Food preparation and cooking</u>
Y 1	Model ideas by exploring materials, components and construction kits.	<p>Across KS1 pupils should:</p> <ul style="list-style-type: none"> • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • that food ingredients should be combined according to their sensory characteristics 	How to prepare simple dishes safely and hygienically, without using a heat source
Y 2	Model ideas by making templates and mock ups.	<ul style="list-style-type: none"> • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components • use finishing techniques, including those from art and design 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how freestanding structures can be made stronger, stiffer and more stable • the correct technical vocabulary for the projects they are undertaking 	How to use techniques such as cutting, peeling and grating
Y 3	<p>Pupils should:</p> <ul style="list-style-type: none"> • share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas 	<p>Pupils should:</p> <p>Follow procedures for safety and hygiene.</p> <p>Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</p> <p>Measure, mark out, cut and shape materials and components with some accuracy</p>	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking

Y 4	<p>Generate realistic ideas, focusing on the needs of the user.</p> <p>Make design decisions that take account of the availability of resources.</p>	<p>Assemble, join and combine materials and components with some accuracy.</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy.</p>	<p>Pupils should know:</p> <p>how mechanical systems such as levers and linkages or pneumatic systems create movement</p> <ul style="list-style-type: none"> • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate • that to be active and healthy, food and drink are needed to provide energy for the body
Y 5	<p>Pupils should:</p> <ul style="list-style-type: none"> • share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas <p>use computer-aided design to develop and communicate their ideas</p>	<p>Pupils should:</p> <ul style="list-style-type: none"> • follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that mechanical and electrical systems have an input, process and output • <i>the correct technical vocabulary for the projects they are undertaking</i> 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
Y 6	<p>Pupils should:</p> <ul style="list-style-type: none"> • generate innovative ideas, drawing on research • make design decisions, taking account of constraints such as time, resources and cost 	<p>Pupils should:</p> <ul style="list-style-type: none"> • accurately measure, mark out, cut and shape materials and components • accurately assemble, join and combine materials and components • accurately apply a range of finishing techniques, including those from art and design • use techniques that involve a number of steps <p>demonstrate resourcefulness when tackling practical problems</p>	<p>Pupils should know:</p> <ul style="list-style-type: none"> • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients 	<p>Pupils should know:</p> <ul style="list-style-type: none"> • that recipes can be adapted to change the appearance, taste, texture and aroma • that different food and drink contain different substances – nutrients, water and fibre – that are needed for health