


## Progression in DT

Where possible across all areas: Identify great designers and their work and use research of designers to influence work

	Y1	Y2	Y3	Y4	Y5	Y6
<b>National Curriculum (Designing)</b>	Pupils should be taught to: <ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>		Pupils should be taught to: <ul style="list-style-type: none"> <li>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>			
<b>Designing Understanding contexts, users and purposes</b>	Begin to think about the purpose of the design and the intended user  Begin to explore materials, make templates and mock ups e.g. moving picture / lighthouse	State the purpose of the design and the intended user  Explore materials, make templates and mock ups e.g. moving picture / lighthouse	Begin to gather information about the needs and wants of particular individuals and groups  Begin to develop their own design criteria and use these to inform their ideas  Begin to research designs	Gather information about the needs and wants of particular individuals and groups  Develop their own design criteria and use these to inform their ideas  Research designs	Carry out research, using surveys, interviews, questionnaires and web-based resources Identify the needs, wants, preferences and values of particular individuals and groups  Develop a simple design specification to guide their thinking  Recognise when their products have to fulfil conflicting requirements	Carry out research, using surveys, interviews, questionnaires and web-based resources Identify the needs, wants, preferences and values of particular individuals and groups  Develop a simple design specification to guide their thinking  Recognise when their products have to fulfil conflicting requirements
<b>Generating, developing, modelling and communicating ideas</b>	Begin to generate own ideas for design by drawing on own experiences or from reading	Generate own ideas for design by drawing on own experiences or from reading	Share and clarify ideas through discussion  Model their ideas using prototypes and pattern pieces  Use annotated sketches,	Share and clarify ideas through discussion  Model their ideas using prototypes and pattern pieces  Use annotated sketches,	Generate innovative ideas, drawing on research  Make design decisions, taking account of constraints such as time, resources and cost	Generate innovative ideas, drawing on research  Make design decisions, taking account of constraints such as time, resources and cost

			cross-sectional drawings and diagrams	cross-sectional drawings and diagrams	Develop prototypes Use computer-aided design	Develop prototypes Use computer-aided design
<b>National Curriculum (Making)</b>	Pupils should be taught to: <ul style="list-style-type: none"> <li>select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristic</li> </ul>		Pupils should be taught to: <ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing], accurately</li> <li>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> Follow procedures for safety Use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components			
<b>Making Practical skills and techniques</b>	Follow procedures for safety  Begin to use and make own templates  Begin to measure, mark out, cut out and shape materials and components (supported if needed)  Begin to assemble, join and combine materials and components (supported if needed)  Use simple fixing materials e.g. temporary – paper clips tape and permanent – glue, staples  Use finishing techniques (including those from art and design)	Follow procedures for safety  Use and make own templates  Measure, mark out, cut out and shape materials and components  Assemble, join and combine materials and components  Explain reasons for choice of fixing materials  Think carefully about finishing techniques (including those from art and design)	Follow procedures for safety  Begin to measure, mark out, cut and shape materials and components with some accuracy  Assemble, join and combine materials and components with some accuracy  Apply a range of finishing techniques, include those from art and design, with some accuracy	Follow procedures for safety  Measure, mark out, cut and shape materials and components with some accuracy  Assemble, join and combine materials and components with some accuracy  Apply a range of finishing techniques, include those from art and design, with some accuracy	Follow procedures for safety  Accurately measure to nearest cm/ mm mark out, cut and shape materials and components  Accurately assemble, join and combine materials/components  Accurately apply a range of finishing techniques, including those from art and design Demonstrate resourcefulness, e.g. make refinements	Follow procedures for safety  Accurately measure to nearest mm, mark out, cut and shape materials and components  Use techniques that involve a number of steps  Accurately apply a range of finishing techniques, including those from art and design Refine design and explain reasons for refinement
<b>Planning and Making</b>	Make a plan of their product  Use a range of tools and equipment safely and correctly	Plan by suggesting what to do next  Select from a range of tools and equipment (explaining their choices)	Select tools and equipment suitable for the task  Select materials and components suitable for the task	Explain their choice of tools and equipment in relation to the skills and techniques they will be using  Explain their choice of materials and	Explain their choice of tools and equipment in relation to the skills and techniques they will be using  Explain their choice of materials and	Explain their choice of tools and equipment in relation to the skills and techniques they will be using  Explain their choice of materials and

	Choose appropriate materials and components for their product	Select from a range of materials and components according to their characteristics	Order the main stages of making  Produce detailed lists of tools, equipment and materials that they need	components according to functional properties and aesthetic qualities  Produce detailed lists of tools, equipment and materials that they need	components according to functional properties and aesthetic qualities  Produce detailed lists of tools, equipment and materials that they need  Formulate step-by-step plans as a guide to making	components according to functional properties and aesthetic qualities  Produce detailed lists of tools, equipment and materials that they need
<b>National Curriculum (Evaluating)</b>	Pupils should be taught to: <ul style="list-style-type: none"> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> </ul>		Pupils should be taught to: <ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> <li>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> </ul> Investigate - how well products have been designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes and how well products meet user needs and wants			
<b>Evaluating Existing products</b>	Begin to investigate and understand - what products are, who they are for, how they are made and what materials are used	Investigate - what products are, who they are for, how they are made and what materials are used	Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused	Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused	Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are	Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are
<b>Own ideas and products</b>	Talk about their design ideas and what they are making  Suggest how their products could be improved	Make simple judgements about their products and ideas against design criteria  Evaluating products and components used	Identify the strengths and weaknesses of their ideas and products  Consider the views of others, including intended users, to improve their work	Identify the strengths and weaknesses of their ideas and products  Consider the views of others, including intended users, to improve their work	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make  Compare their ideas and products to their original design specification	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make  Compare their ideas and products to their original design specification

<b>National Curriculum (Technical Knowledge)</b>	Pupils should be taught to: <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 [e.g. levers, sliders, wheels and axles], in their products</li> </ul>		Pupils should be taught to: <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 [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products</li> </ul> <p>Understand how to use learning from science and maths to help design and make products that work</p> <p>Know that materials have both functional properties and aesthetic qualities</p> <p>Know that materials can be combined and mixed to create more useful characteristics</p> <p>Know that mechanical and electrical systems have an input, process and output</p> <p>Use the correct technical vocabulary for the projects they are undertaking</p>			
<b>Technical knowledge</b>	Understand about the simple working characteristics of materials and components Understand about the movement of simple mechanisms: levers, sliders (Year 1)  Understand how freestanding structures can be made stronger, stiffer and more stable	Understand about the simple working characteristics of materials and components Understand about the movement of simple mechanisms: wheels and axles (Year 2)	Understand how levers and linkages create movement  Know how to make strong, stiff shell structures  Know that a single fabric shape can be used to make a 3D textiles product	Understand how pneumatic systems create movement  Understand how simple electrical circuits and components can be used to create functional products	Understand how cams, pulleys and gears create movement  Know how to reinforce/strengthen a 3D framework Know that a 3D textiles product can be made from a combination of fabric shapes	Understand how more complex electrical circuits and components can be used to create functional products  Understand how to program a computer to control their products  Understand how to program a computer to monitor changes in the environment / control their products
 Know the correct technical vocabulary for the projects they are undertaking						
<b>National Curriculum (Cooking and Nutrition)</b>	Pupils should be taught to: <ul style="list-style-type: none"> <li>• use the basic principles of a healthy and varied diet to prepare dishes</li> <li>• understand where food comes from</li> </ul>		Pupils should be taught to: <ul style="list-style-type: none"> <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> <p>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>How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>			

<b>Cooking and Nutrition</b> Where food comes from	<b>Know where food comes from</b> – all food comes from plants or animals	<b>Know where food comes from</b> -food has to be farmed, grown elsewhere (e.g. home) or caught	<b>Know that food is grown</b> (such as tomatoes, wheat and potatoes), <b>reared</b> (such as pigs, chickens and cattle) <b>and caught</b> (such as fish) in the UK, Europe and the wider world	Know that seasons may affect the food available Know that food ingredients can be fresh, pre-cooked and processed	Understand how food is processed into ingredients that can be eaten or used in cooking	Know that a recipe can be adapted a by adding or substituting one or more ingredients
<b>Cooking and nutrition</b> Food preparation	Prepare simple dishes safely and hygienically, without using a heat sources  Use techniques such as cutting  Name and sort foods into the five groups of the 'eat well' plate	Use appropriate equipment to weigh and measure ingredients  Know that everyone should eat at least five portions of fruit and vegetables every day Understand that food ingredients should be combined according to their sensory characteristics	Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate  Measure using grams	Know that to be active and healthy, food is needed to provide energy for the body  Follow a recipe	Know that different foods contain different substances - nutrients, water and fibre - that are needed for health  Understand the need for correct storage  Measure accurately	Know that recipes can be adapted to change the appearance, taste, texture and aroma  Work out ratios in recipes

Recipe instructions	Age 3-5	Age 5-7	Age 7-9	Age 9-11
	<b>Follow</b> - instructions given one at a time by an adult  <b>Carryout</b> - instructions with support	<b>Follow</b> - a simple recipe supported by an adult  <b>Carryout</b> - instructions with a little support	<b>Follow</b> - a simple recipe with guidance from an adult  <b>Carryout</b> - instructions independently	<b>Follow</b> - a simple recipe independently  <b>Carryout</b> - modifications to recipes

Equipment	Age 3-5	Age 5-7	Age 7-9	Age 9-11
Crushing/squeezing	Potato masher Fork	Juicer	Garlic press	
Peeling	Peel by hand	Swivel peeler (adult support)	Swivel peeler (adult supervision)	
Shaping	Rolling pin			
Mixing	Mixing spoons	Whisk	Blender (adult supervision)	
Measuring	Spoons Cups	Measuring spoons of different sizes	Measuring jug Digital scales	Analogue scales
Cutting	Butter knife Cutters	Table knife	Vegetable knife (adult supervision)	
Snipping		Kitchen scissors (adult supervision)		
Grating		Grater (adult support)	Grater (adult support)	Grater (light adult supervision)
Heating			With adult support and under adult supervision use: Toaster Hob	Under adult supervision use: Kettle Grill Oven