# DT Progression

| EYFS | | | |
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| **Stage** | **Area of Learning** | | **Outcome** |
| Reception | Physical development | | |
| | | | 1. Progress towards a more fluent style of moving, with developing control and grace.<br>2. Develop their small motor skills so that they can use a range of tools competently, safely and confidently.<br>3. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. |
| | Expressive Arts and Design | | 1. Explore, use and refine a variety of artistic effects to express their ideas and feelings.<br>2. Return to and build on their previous learning, refining ideas and developing their ability to represent them.<br>Create collaboratively, sharing ideas, resources and skills. |
| ELG | Physical development | Fine motor skills | Use a range of small tools, including scissors, paintbrushes and cutlery. |
| | Expressive arts and design | Creating with materials | 1. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.<br>Share their creations, explaining the process they have used. |
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| DESIGNING | | | | | | |
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| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| National Curriculum: | Pupils should be taught to:<br>• design purposeful, functional, appealing products for themselves and other users based on design criteria<br>• generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, | | Pupils should be taught to:<br>• 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<br>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design | | | |
| Understanding contexts, users and purposes | Begin to think about the purpose of the design and the intended user<br><br>Begin to explore materials, make templates and mock ups e.g. moving picture / lighthouse | State the purpose of the design and the intended user<br><br>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<br><br>Begin to develop their own design criteria and use these to inform their ideas<br><br>Begin to research designs | Gather information about the needs and wants of particular individuals and groups<br><br>Develop their own design criteria and use these to inform their ideas<br><br>Research designs | Carry out research, using surveys, interviews, questionnaires and web-based resources<br><br>Identify the needs, wants, preferences and values of particular individuals and groups<br><br>Develop a simple design specification to guide their thinking<br><br>Recognise when their products have to fulfil conflicting requirements | Carry out research, using surveys, interviews, questionnaires and web-based resources<br><br>Identify the needs, wants, preferences and values of particular individuals and groups<br><br>Develop a simple design specification to guide their thinking<br><br>Recognise when their products have to fulfil conflicting requirements |

| Making | | | | | | |
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| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| National Curriculum | Pupils should be taught to:<br>• select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing]<br>• select from and use a wide range of materials and components, including construction materials, textiles | | Pupils should be taught to:<br>• select from and use a wider range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing], accurately<br>• 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<br><br>*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* | | | |
| Practical skills and techniques | Follow procedures for safety<br><br>Begin to use and make own templates<br><br>Begin to measure, mark out, cut out and shape materials and components (supported if needed)<br><br>Begin to assemble, join and combine materials and components (supported if needed)<br><br>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<br><br>Use and make own templates<br><br>Measure, mark out, cut out and shape materials and components<br><br>Assemble, join and combine materials and components<br><br>Explain reasons for choice of fixing materials<br><br>Think carefully about finishing techniques (including those | Begin to measure, mark out, cut and shape materials and components with some accuracy<br><br>Assemble, join and combine materials and components with some accuracy<br><br>Apply a range of finishing techniques, include those from art and design, | Measure, mark out, cut and shape materials and components with some accuracy<br><br>Assemble, join and combine materials and components with some accuracy<br><br>Apply a range of finishing techniques, include those from art and design, with some accuracy | Accurately measure to nearest cm/ mm mark out, cut and shape materials and components<br><br>Accurately assemble, join and combine materials/components<br><br>Accurately apply a range of finishing techniques, including those from art and design<br><br>Demonstrate resourcefulness, e.g. make refinements | Accurately measure to nearest mm, mark out, cut and shape materials and components<br><br>Use techniques that involve a number of steps<br><br>Accurately apply a range of finishing techniques, including those from art and design<br><br>Refine design and explain reasons for refinement |
| Planning and Making | Make a plan of their product<br><br>Use a range of tools and equipment safely and correctly | Plan by suggesting what to do next<br><br>Select from a range of tools and equipment (explaining their choices) | Select tools and equipment 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 tools and equipment in relation to the skills and techniques they will be using | Explain their choice of tools and equipment in relation to the skills and techniques they will be using |

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| | Choose appropriate materials and components for their product | Select from a range of materials and components according to their characteristics | Select materials and components suitable for the task<br><br>Order the main stages of making<br><br>Produce detailed lists of tools, equipment and materials that they need | Explain their choice of materials and components according to functional properties and aesthetic qualities<br><br>Produce detailed lists of tools, equipment and materials that they need | Explain their choice of materials and components according to functional properties and aesthetic qualities<br><br>Explain their choice of materials and components according to functional properties and aesthetic qualities<br><br>Produce detailed lists of tools, equipment and materials that they need | Explain their choice of materials and components according to functional properties and aesthetic qualities<br><br>Explain their choice of materials and components according to functional properties and aesthetic qualities<br><br>Produce detailed lists of tools, equipment and materials that they need |

# EVALUATING

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| National Curriculum | Pupils should be taught to:<br>• explore and evaluate a range of existing products<br>• evaluate their ideas and products against design criteria | | Pupils should be taught to:<br>• investigate and analyse a range of existing products<br>• evaluate their ideas and products against their own design criteria and consider the views of others to improve their work<br>• understand how key events and individuals in design and technology have helped shape the world<br>*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* | | | |
| Existing products | 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 |
| Own ideas and products | Talk about their design ideas and what they are making<br>Suggest how their products could be improved | Make simple judgements about their products and ideas against design criteria<br>Evaluating products and components used | Identify the strengths and weaknesses of their ideas and products<br>Consider the views of others, including intended users, to improve their work | Identify the strengths and weaknesses of their ideas and products<br>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<br>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<br>Compare their ideas and products to their original design specification |

# TECHNICAL KNOWLEDGE

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| National Curriculum | Pupils should be taught to:<br>• build structures, exploring how they can be made stronger, stiffer and more stable<br>• explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products | | Pupils should be taught to:<br>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures<br>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]<br>• understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors]<br>• apply their understanding of computing to program, monitor and control their products<br><br>*Understand how to use learning from science and maths to help design and make products that work*<br>*Know that materials have both functional properties and aesthetic qualities*<br>*Know that materials can be combined and mixed to create more useful characteristics*<br>*Know that mechanical and electrical systems have an input, process and output*<br>*Use the correct technical vocabulary for the projects they are undertaking* | | | |
| Technical knowledge | Understand about the simple working characteristics of materials and components<br><br>Understand about the movement of simple mechanisms: levers, sliders (Year 1) | Understand about the simple working characteristics of materials and components<br><br>Understand about the movement of simple mechanisms: wheels and axles (Year 2)<br><br>Understand how freestanding structures can be made stronger, stiffer and more stable | Understand how levers and linkages create movement<br><br>Know that a single fabric shape can be used to make a 3D textiles product | Understand how cams create movement<br><br>Understand how simple electrical circuits and components can be used to create functional products | Know how to reinforce/strengthen a 3D framework<br><br>Know that a 3D textiles product can be made from a combination of fabric shapes<br><br>Know how to make strong, stiff shell structures | Understand how more complex electrical circuits and components can be used to create functional products<br><br>Understand how to program a computer to control their products<br><br>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 | | | | | | |

# FOOD

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| National Curriculum | Pupils should be taught to:<br>• use the basic principles of a healthy and varied diet to prepare dishes<br>• understand where food comes from | | Pupils should be taught to:<br>• understand and apply the principles of a healthy and varied diet<br>• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques<br>• understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed<br><br>*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* | | | |
| Where food comes from | Know where food comes from:<br><br>– all food comes from plants or animals | Know where food comes from:<br><br>-food has to be farmed, grown elsewhere (e.g. home) or caught | Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world | Know that seasons may affect the food available<br>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 |
| Food preparation | Prepare simple dishes safely and hygienically, without using a heat sources<br><br>Use techniques such as cutting<br><br>Name and sort foods into the five groups of the 'eat well' plate | Use appropriate equipment to weigh and measure ingredients<br>Know that everyone should eat at least five portions of fruit and vegetables every day<br>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<br><br>Measure using grams | Know that to be active and healthy, food is needed to provide energy for the body | Know that different foods contain different substances - nutrients, water and fibre - that are needed for health<br>Understand the need for correct storage<br><br>Measure accurately | Know that recipes can be adapted to change the appearance, taste, texture and aroma<br><br>Work out ratios in recipes |
| Recipe instructions | Follow a simple recipe, supported by an adult<br>Carry out instructions with a little support | | Follow a simple recipe with guidance from an adult<br><br>Carry out instructions with a little support/independently. | | Follow a simple recipe independently<br><br>Carry out modifications to recipes | |

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| Equipment | Crushing and squeezing – potato masher, fork, juicer<br>Peeling – by hand, swivel peeler (adult support)<br>Shaping – rolling pin<br>Mixing - mixing spoon, whisk<br>Measuring – spoons, cups<br>Cutting – butter knife, cutters, table knife<br>Snipping – kitchen scissors (adult supervision)<br>Grating – grater (adult support)<br>Heating – microwave (adult support | Crushing and squeezing – garlic press<br>Peeling – swivel peeler (adult supervision)<br>Shaping<br>Mixing – blender (adult supervision)<br>Measuring – measuring jug, digital scales<br>Cutting – vegetable knife (adult supervision)<br>Snipping<br>Grating – grater (adult support)<br>Heating – toaster, hob (adult support and supervision | Crushing and squeezing<br>Peeling<br>Shaping<br>Mixing<br>Measuring – analogue scales<br>Cutting<br>Snipping<br>Grating – grater (light adult supervision)<br>Heating – kettle, grill (adult supervision) |