



## Design and Technology

### Progression of Skills

Subject area: DT

Curriculum leader: Sarah Davey

(DT objectives will be incorporated within the learning in other subject areas)

|   | Year 1<br>(KS1 skills)  | Year 2<br>(KS1 skills)  | Year 3<br>(Lower KS2 skills)  | Year 4<br>(Lower KS2 skills)  | Year 5<br>(Upper KS2 skills)   | Year 6<br>(Upper KS2 skills)   |
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| <b>Developing planning and communicating ideas.</b> | <p>Using their own experience to generate ideas pupils should be talking about their plans.</p> <p>Pupils should be exploring the development of existing products, considering what they are for, how they work and what materials are used.</p> <p>During discussions pupils should share their ideas and talk through what they are going to do.</p> | <p>Pupils can start to generate their ideas using their own and other people's experiences.</p> <p>Pupils can begin to develop their design ideas through discussion, observation, drawing and modelling.</p> <p>Pupils should understand how to identify a target group and think about how to make their design</p> | <p>By considering its purpose and the user, pupils can generate detailed ideas for an item.</p> <p>Pupils can start to order the main stages for making their product and establish a successful criterion.</p> <p>Through the investigation of existing products, pupils can understand how well products have been made, materials used and</p> | <p>Linking with other subjects, e.g. Mathematics and Science, pupils can start to generate ideas further, considering the purpose for which they are designing.</p> <p>Pupils should be confidently making labelled drawings, showing different views and specific features.</p> <p>When planning pupils can now have a clear idea of their method, materials needed,</p> | <p>Pupils will continue to generate their ideas. They will be involved in discussions to communicate their thoughts, as well as creating annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces.</p> <p>Through research pupils will begin to develop design criteria that shows innovation and appealing products that are fit for purpose.</p> | <p>Pupils will generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams.</p> <p>Pupils can research and ask questions to develop their design criteria. Creating designs that are innovative, functional and fit for purpose.</p> <p>Pupils should be able to accurately</p> |

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|  | <p>Working in a range of relevant contexts pupils can begin to think about a target group of who they intend to design for and a design criterion.</p> <p>Through the creation of drawings and discussion pupils can experience making templates and mock-ups of their ideas.</p> | <p>following a design criterion.<br/>Questioning the purpose of what they intend to create.</p> <p>Pupils should develop their ideas through talk and their drawings which can now include labels.<br/>Making templates and mock-ups.</p> | <p>construction techniques.</p> <p>Pupils should learn about inventors, designers, engineers, chefs and manufacturers.</p> <p>Pupils should learn the importance of making drawings that are detailed when designing.</p> <p>When planning their choice of materials and components, pupils should now begin to consider function and the look of their design. Also start to understand whether products and the materials used can be recycled and reused.</p> | <p>equipment and techniques. If the first attempts fail by identifying strengths and weaknesses, pupils will learn how to improve their ideas and products.</p> <p>When planning pupils should now consider the views and advice of others, including intended users to improve their work.</p> <p>Further knowledge of other inventors, designers, engineers, chefs and manufacturers can be explored.</p> <p>Pupils will expand their planning details and discuss their choices of materials and components and further their</p> | <p>Pupils will now apply a range of finishing techniques, transferring skills from art and design.</p> <p>Pupils will experience drawing up a specification for their design, linking it to Mathematics and Science.</p> <p>Pupils can now apply their knowledge of other inventors and their designs and products to inform their choices when designing.</p> <p>With increased confidence pupils can select appropriate materials, tools and techniques.</p> | <p>apply a range of finishing techniques, transferring skills from Art and Design.</p> <p>Pupils can continue to link with Mathematics and Science when drawing up a specification for their design.</p> <p>Pupils should plan the order of their work and choose appropriate tools and techniques.</p> <p>Pupils can evaluate their products, looking at the strengths and areas for development and be able to adapt their design if their first attempt fails.</p> |
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|  |   |  |  | knowledge of recycling and reusing products and materials.   | Pupils will now explore how much products cost to make, how sustainable they are, and the impacts products have beyond their intended purpose.  | Pupils should be able to estimate how much their product will cost to make and consider its sustainability. Pupils should consider how innovative their product is and the impact it will have beyond its intended purpose.  |
|  | <b>Year 1<br/>(KS1 skills)</b>  | <b>Year 2<br/>(KS1 skills)</b>   | <b>Year 3<br/>(Lower KS2 skills)</b>   | <b>Year 4<br/>(Lower KS2 skills)</b>   | <b>Year 5<br/>(Upper KS2 skills)</b>  | <b>Year 6<br/>(Upper KS2 skills)</b>   |
| <b>Working with tools equipment, materials and components to make quality products</b> | <p>Pupils should experience using a range tools and techniques and select from a range of materials to make their designs.</p> <p>Through building structures pupils can explore and apply their knowledge, thinking about how to make their models</p> | <p>Pupils should begin to select tools and materials, using the correct vocabulary to name and describe them.</p> <p>Further explorations of building structures will allow pupils to apply their technical knowledge to make models stronger,</p> | <p>Pupils can select from a wider range of tools and techniques when making their product. They can consider construction materials, textiles, food ingredients mechanical components and electrical components.</p> | <p>Pupils can select a wider range of tools and techniques for making their products safely.</p> <p>Pupils can use their knowledge and skills to measure, mark out cut and shape a range of materials using appropriate tools, equipment and techniques.</p> | <p>Pupils will now use their knowledge and experience to select appropriate materials, tools and techniques.</p> <p>Pupils can select from and use a wider range of materials and components including construction materials, textiles and ingredients</p> | <p>Pupils will confidently select appropriate tools, materials, components and techniques and use them.</p> <p>Pupils can use tools safely and accurately.</p> <p>Pupils can assemble components to make working models.</p> |

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|  | <p>stronger, stiffer and more stable.</p> <p>Projects involving the use of levers, sliders, wheels and axles, will allow pupils to explore and use mechanisms in their work.</p> <p>When making products, pupils can measure, cut out and shape a range of materials, using scissors and hole punchers safely.</p> <p>Pupils should begin to assemble, join and combine materials and components together using a variety of temporary methods, e.g. glues and masking tape.</p> | <p>stiffer and more stable.</p> <p>Pupils should measure, cut and score with some accuracy and be aware of how to use safely and appropriately.</p> <p>Pupils will start to assemble, join and combine materials in order to make their designed product.</p> <p>Pupils can experience how to cut, shape and join fabric using basic sewing techniques. to make a simple product.</p> <p>When finishing products pupils should start to choose and use appropriate finishing</p> | <p>During discussions, pupils can explain their choices of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Pupils can start to explore and learn about mechanical and electrical systems.</p> <p>Through these explorations pupils can start to understand that mechanical systems such as levers or pneumatic systems create movement.</p> <p>When exploring electrical systems pupils can learn that electrical circuits and components can be used to create</p> | <p>Pupils can now join and combine materials accurately in temporary and permanent ways.</p> <p>Pupils can apply their technical knowledge and use mechanical systems to create movement in their products.</p> <p>Pupils will begin to understand how more complex electrical circuits and components can be used to create functional products.</p> <p>Pupils will learn how to program a computer to monitor changes in the environment and control their products.</p> | <p>according to their functional properties and aesthetic qualities.</p> <p>Pupils will now explore and begin to understand how mechanical systems such as cams, pulleys or gears create movement.</p> <p>Pupils can apply their knowledge to use more complex electrical circuits and components to create functional products. As well as furthering their experience of using computer programmes to monitor changes in the environment and control their products.</p> <p>Pupils will use their understanding of</p> | <p>Pupils can be confident in making a quality product.</p> <p>Pupils will work confidently with textiles being able to pin, sew and stitch materials to create a product.</p> <p>Pupils will now be able to make modifications as they progress.</p> <p>Pupils can construct products using permanent joining techniques.</p> <p>Pupils can understand how mechanical systems such as cams, pulleys or gears create movement.</p> <p>Pupils can continue to apply their knowledge to use more complex</p> |
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|  | <p>Pupils can consider improving the appearance of their products using simple finishing techniques.</p> | <p>techniques based on their own ideas.</p> | <p>functional products.</p> <p>With increased accuracy, pupils can measure, mark out, cut score and assemble components.</p> <p>When working with fabric, pupils can start to measure, tape, pin, cut and join with some accuracy.</p> <p>As pupils make progress with their products, they can begin to make changes and adapt their ideas to improve their work.</p> | <p>Pupils will explore how to reinforce and strengthen a 3D framework.</p> <p>Pupils can work with fabric and demonstrate how to measure, tape or pin, cut and join with greater accuracy. They can now sew using a range of different stitches, exploring weaving and knitting.</p> <p>Pupils will now begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p> | <p>mechanical and electrical systems when creating products.</p> <p>Pupils will demonstrate their range of skills in using different tools safely and accurately and with growing confidence. This will ensure a good quality finish to their product.</p> <p>When working with ingredients pupils will weigh and measure accurately time, dry ingredients and liquids.</p> <p>Pupils will use finishing techniques to strengthen and improve the appearance of their product using</p> | <p>electrical circuits and components to create functional products. As well as furthering their experience of using computer programmes to monitor changes in the environment and control their products.</p> <p>Pupils know how to reinforce and strengthen a 3D framework.</p> <p>Pupils now understand that mechanical and electrical systems have an input, process and output.</p> <p>Pupils will confidently use finishing techniques to strengthen and improve the appearance of</p> |
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|  |   |   |   |  | a range of equipment including ICT.  | their product using a range of equipment including ICT.  |
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|  | <b>Year 1<br/>(KS1 skills)</b>  | <b>Year 2<br/>(KS1 skills)</b>  | <b>Year 3<br/>(Lower KS2 skills)</b>  | <b>Year 4<br/>(Lower KS2 skills)</b>   | <b>Year 5<br/>(Upper KS2 skills)</b>   | <b>Year 6<br/>(Upper KS2 skills)</b>   |
| <b>Evaluating processes and products</b> | <p>Through discussion and the sharing of work, pupils can start to evaluate their products, thinking about how well they work in relation to the design criteria.</p> <p>When looking at existing products pupils can talk about what they like and dislike about those products.</p> <p>Pupils can begin to evaluate their own products as they progress. With teacher input, strengths can be identified, and any</p> | <p>Pupils can evaluate their work against their design criteria.</p> <p>Pupils can experience looking at a range of existing products and explain their likes and dislikes.</p> <p>Pupils will develop their evaluation skills as they develop their own products, identifying the strengths and possible changes they might like to make.</p> <p>With confidence pupils can talk</p> | <p>Pupils can now start to evaluate their product against their original design criteria, talking about how well their finished product meets its intended purpose.</p> <p>Pupils should start to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Pupils should consider how the key designs of individuals in design and technology have</p> | <p>Pupils can now evaluate their products carrying out appropriate tests to see how well they function.</p> <p>Pupils should now evaluate their work both during and at the end of the process.</p> <p>Pupils should be able to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Pupils should consider how the key designs of individuals in</p> | <p>Pupils should start to evaluate their product against the original design specification. Carrying out tests to see the results.</p> <p>Pupils can evaluate their work both during and at the end of the process.</p> <p>Pupils can now seek the evaluation of others when evaluating their own work.</p> <p>Pupils should be able to explain how the key designs of individuals in design and technology have</p> | <p>Pupils can evaluate their products, identifying strengths and areas for development carrying out appropriate tests.</p> <p>Pupils can evaluate their work both during and at the end of the process.</p> <p>Pupils can now record their evaluations using drawings with detailed labels.</p> <p>Pupils should evaluate against their original design criteria and suggest ways that</p> |

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|                           | possible changes needed.  | about their ideas and say what they like and dislike about them.  | helped shape the world.  | design and technology have helped shape the world.   | helped shape the world.  | their product can be improved.<br><br>Pupils should be able to explain how the key designs of individuals in design and technology have helped shape the world.   |
|                           | <b>Year 1<br/>(KS1 skills)</b>  | <b>Year 2<br/>(KS1 skills)</b>  | <b>Year 3<br/>(Lower KS2 skills)</b>   | <b>Year 4<br/>(Lower KS2 skills)</b>   | <b>Year 5<br/>(Upper KS2 skills)</b>   | <b>Year 6<br/>(Upper KS2 skills)</b>  |
| <b>Food and Nutrition</b> | <p>Pupils should learn about and understand that our food comes from plants or animals.</p> <p>Pupils should learn that food must be farmed and can be grown or caught both locally and elsewhere.</p> <p>Pupils can explore how food is sorted into groups and start to name them.</p> | <p>Pupils should understand that all food comes from plants and animals. That food is farmed, grown and caught and that some of our food comes from many countries throughout the world.</p> <p>Pupils will be able to name and sort foods into the main food groups.</p> | <p>Pupils should start to understand which food is grown, which is reared, and which is caught, knowing that this can be locally, in Europe and the wider world.</p> <p>Pupils should understand how to prepare and cook a variety of predominately savoury dishes safely and hygienically</p> | <p>Pupils understand which food is grown, which is reared, and which is caught, knowing that this can be locally, in Europe and the wider world.</p> <p>Pupils should understand how to prepare and cook a variety of predominately savoury dishes safely and hygienically</p> | <p>Pupils understand which food is grown, which is reared, and which is caught, knowing that this can be locally, in Europe and the wider world.</p> <p>Pupils should begin to understand that seasons may affect the food that is available.</p> <p>Pupils should learn how food is</p> | <p>Pupils know and can talk about which food is grown, which is reared, and which is caught, knowing that this can be locally, in Europe and the wider world.</p> <p>Pupils should understand that seasons may affect the food that is available.</p> <p>Pupils should understand how</p> |

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|  | <p>Pupils should begin to understand that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Pupils should experience preparing simple dishes safely and hygienically, learning techniques such as cutting, peeling and grating.</p> | <p>Pupils should know the importance of everyone eating a variety of foods and at least five portions of fruit and vegetables every day.</p> <p>Pupils should be able to prepare simple dishes safely and hygienically and demonstrate techniques such as cutting, peeling and grating.</p> | <p>including some dishes using a heat source.</p> <p>Pupils should now begin to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Pupils should start to be aware that a healthy diet is made up from a variety and balance of different food and drink.</p> <p>Pupils should start to learn about the importance of being active and healthy and learn that food and drink are needed to provide the body with energy.</p> | <p>including some dishes using a heat source.</p> <p>Pupils should now be confident to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Pupils should know that a healthy diet is made up from a variety and balance of different food and drink.</p> <p>Pupils should know about the importance of being active and healthy and learn that food and drink are needed to provide the body with energy.</p> | <p>processed into ingredients that can be eaten or used in cooking.</p> <p>Pupils should be able to prepare and cook a variety of predominately savoury dishes safely and hygienically including some dishes using a heat source.</p> <p>Pupils should know which techniques are needed when preparing dishes and use them confidently. Pupils should be able to use appropriate kitchen equipment safely.</p> <p>Pupils should begin to understand that different types of</p> | <p>food is processed into ingredients that can be eaten or used in cooking.</p> <p>Pupils should be able to prepare and cook a variety of predominately savoury dishes safely and hygienically including some dishes using a heat source.</p> <p>Pupils should know which techniques are needed when preparing dishes and use them confidently. Pupils should be able to use appropriate kitchen equipment safely.</p> <p>Pupils should know that different types of food and</p> |
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|  |  |  |  |  | food and drink contain different substances, nutrients, water and fibre, that are required to help our bodies grow and stay healthy. | drink contain different substances, nutrients, water and fibre, that are required to help our bodies grow and stay healthy. |
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