

### Design Technology Essential Skills Progression

|                               | EYFS Skills | Key Stage 1 Skills  |   | Lower Key Stage 2 Skills   |  | Upper Key Stage 2 Skills  |  |
|-------------------------------|-------------|---|---|--|--|---|--|
| <b>Tools</b>                  |             | Select and explain why they have chosen a particular tool for a task. | Use tools safety for cutting and joining materials and components.                              | Select the appropriate tools and explain choices.                                    | Analyse the potential of a range of tools and use them with accuracy.                          | Name and select appropriate tools for a task and use them with precision.                   | Use more complex tools with increasing accuracy.   |
| <b>Materials</b>              |             | Select and explain their choice of materials, sometimes with help.    | Choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. | Plan which materials will be needed for a task and explain why.                      | Choose from a range of materials. Showing an understanding of their different characteristics. | Select and combine materials with precision.  | Choose the best materials for a task. Showing an understanding of their working characteristics. |
| <b>Health and safety</b>      |             | Explain how to keep safe during a practical task.                     | Work safely and hygienically in construction and cooking activities.                            | Follow health and safety rules for cooking and baking activities.                    | Follow health and safety rules when working with materials and substances.                     | Select and name appropriate tools for specific jobs and demonstrate how to use them safely. | Demonstrate how their products take into account the safety of the user.                         |
| <b>Repair and maintenance</b> |             | Explain how they would fix simple products.                           | Cut, measure, form and shape materials to fix or repair something, explaining objectives.       | Try an alternative way of fixing something, if their first attempt isn't successful. | Describe how a product could be made better, stronger or more sustainable.                     | Recycle, repair and mend old clothes/tools and explain why this is a good idea.             | Paint, glue, nail and send to rejuvenate a damaged, faulty or old object.                        |
| <b>Textiles</b>               |             | Cut out shapes from a range of fabrics and papers.                    | Join fabrics using running stitch, glue, staples, over  | Create a simple pattern for a design. Cut slots in card and create nets.             | Use a simple pattern to create a life-sized item of clothing.                                  | Create a 3-D product using a range of materials and   | Combine fabrics to create more useful properties and make a product of high                      |

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|             |  |  | sewing and tape.  |  |   | sewing techniques.   | quality, checking for snags and glitches.  |
| Card making |  | Fold, tear, roll and cut paper and card. | Create simple hinges and pop-ups using card   | Measure and mark wood/dowel.   | List more complex pup-ups   | Combine materials with temporary or fixed joints.  | Combine materials with moving joints.  |
| Cutting     |  | Cut accurately and safely with scissors. | Cut wood/dowel using a bench hook and hacksaw.  | Join fabrics using a running stitch.                                   | Cut internal shapes.  | Cut safely and accurately to a marked line.  | Use a craft knife, cutting mat and safety ruler with one to one supervision if needed.         |
| Joining     |  | Join appropriately, using glue or tape.  | Attach features to a vehicle (e.g. an axle and wheels or a sail and rudder).<br>Join appropriately, with glue and /or tape, for different materials and situations. | Create a shell or frame structure using diagonal struts to strengthen. | Use a glue gun with close supervision (one to one).                                     | Use a glue gun with close supervision.   | Join materials, using the most appropriate method for the material or purpose.                 |
| Structures  |  | Build simple structures.                 | Improve structures by making them stronger, stiffer and more stable.  | Create a shell or frame structure using diagonal struts to strengthen. | Prototype and build frame and shell structures, showing awareness of how to strengthen, | Build a framework using a range of materials (e.g. wood, card and corrugated plastic) to | Select the most appropriate materials and frameworks for different structures, explaining what |

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|                            |  |  |   |   | stiffen and reinforce.   | support mechanisms.  | makes them strong.   |
| Mechanisms                 |  | Use wheels, axles, levers and sliders.   | Create and use wheels and axles, levers and sliders.                                  | Create and use simple gears, pulleys, cams, levers and linkages.      | Use pulleys, levers and linkages in their products.  | Use cams or gears in their products.   | Select the most appropriate mechanical system for a particular purpose.                                  |
| Electricity                |  | Identify and talk about products that use electricity to make them work.                               | Create working circuits to light a bulb or work a buzzer.                             | Build models, incorporating circuits, with buzzers and bulbs.         | Build models incorporating motors.   | Build models, incorporating switches to turn on and off.                       | Design products incorporating the most appropriate electrical systems.                                   |
| ICT                        |  | Input random control instructions to simple devices for an unplanned outcome(e.g. making Roamer move). | Input a sequence of instructions to a device for a planned outcome.                   | Evaluate their own programme, refine and improve it.                  | Create a solution to a problem using a control output device that has a sequence of events that activate it. | Monitor and control more than one output, in response to charges.              | Develop, try out a reefing sequences of instructions to effectively monitor, measure and control events. |
| Preparing and cooking food |  | Measure and weigh food items using non-standard measure (e.g. spoons and cups).                        | Cut, peel, grate and chop a range of ingredients to make dishes from other countries. | Combine a variety of ingredients using a range of cooking techniques. | Measure and weigh ingredients appropriately to prepare and cook a range of savoury dishes.                   | Combine food ingredients appropriately (e.g. kneading, rubbing in and mixing). | Use appropriate tools and equipment, weighing and measuring with scales.                                 |
| Nutrition                  |  | Identify the main food groups,   | Recognise the need for a  | Describe what a balanced diet is.                                     | Make healthy eating choices and explain why.   | Evaluate meals and consider if they contribute                                 | Plan how they can have a   |

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|                 |  | including fruit and vegetables.       | variety of foods in a diet.  |   |   | towards a balanced diet.                                   | healthy/affordable diet.  |
| Origins of food |  | Identify the source for common foods. | Explain where the food they eat comes from (e.g. by referring to countries, counties, animals and plants). | Identify food which comes from the UK and other countries in the world. | Explain some of the processes that foods go through to preserve/make them more appealing. | Explain what times of year particular foods are in season. | Explain how ingredients were grown, reared, caught and processed. |