



Aiming High, Achieving Together

### Progression of Skills & Knowledge: Design Technology

| Areas of Learning | YR                                                                                                                                                                                                                                                              | Y1                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Y2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Y3                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Design</b>     | <p>Uses talk to organise, sequence and clarify thinking, ideas, feelings and events</p> <p>Select appropriate resources</p> <p>Use language of designing and making (join, build, shape, longer, shorter, heavier etc.)</p>                                     | <p>Explore ideas by rearranging materials</p> <p>Model ideas with construction kits and/or reclaimed materials</p> <p>Select pictures to help develop ideas</p> <p>Use drawings and labels to record ideas as they are developed</p> <p>Discuss audience, function and purpose of design</p> <p>Design a product for myself following design criteria research similar existing products</p> <p>Select and name the tools needed to work the materials</p> | <p>Select appropriate technique explaining First.....Next.....Last</p> <p>Describe their models and drawings of ideas and intentions</p> <p>Explain purpose of product, how it will work and how it will be suitable for the user</p> <p>Describe design using pictures, words, models, diagrams and IT</p> <p>Design products for myself and others following design criteria</p> <p>Choose best tools and materials, and explain choices</p> <p>Use knowledge of existing products to produce ideas</p> | <p>Investigate similar products to the one to be made to give starting points for a design</p> <p>Draw/sketch products to help analyse and understand how products are made</p> <p>Plan a sequence of actions to make a product</p> <p>Record the plan by drawing (labelled sketches) or writing</p> <p>Discuss the purpose of their product and begin to consider the impact it may have</p> <p>Show design meets a range of requirements</p> |
| <b>Make</b>       | <p>Describe what they are making and begin to talk about why</p> <p>Use simple tools and techniques</p> <p>Build / construct with a wide range of objects</p> <p>Select tools &amp; techniques to shape, assemble and join</p> <p>Replicate structures with</p> | <p>Explain what they are making and why</p> <p>Describe what they need to do next</p> <p>Select tools/equipment to cut, shape, join, finish and explain choices</p> <p>Measure, mark out, cut and shape, with support</p>                                                                                                                                                                                                                                  | <p>Uses constructions kits/reclaimed materials to develop an idea</p> <p>Discuss their work as it progresses</p> <p>Add notes to drawings to help explanations for any changes made to original design</p> <p>Join materials/components together in different ways</p>                                                                                                                                                                                                                                    | <p>Makes accurate and strong joins when assembling the design</p> <p>Begin to measure, mark out, cut and shape materials/components with some accuracy</p> <p>Begin to assemble, join and combine materials and components with some accuracy</p> <p>Begin to apply a range of finishing techniques with some accuracy</p>                                                                                                                     |

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|                                                  | materials / components                                                                                                                                                                                                                                                                                                                                                                                                                           | Choose suitable materials and explain choices<br><br>Try to use finishing techniques to make product look good                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Evaluate</b>                                  | Enjoy achieving what they set out to achieve<br><br>Say what they like and do not like about items they have made<br><br>Being proud of how they accomplished something – not just the end results                                                                                                                                                                                                                                               | Say what they like and do not like about items they have made and attempt to say why<br><br>Talk about changes made during the making process<br><br>Discuss how closely their finished products meet their design criteria                                                                                                    | Explore what existing products are/what for/how they work/how they are used/materials used/likes and dislikes about a product<br><br>Talk about their designs as they develop and identify good and development points                                                                                                                                                                                                                                                                                                                                                                             | Identify the strengths and weaknesses of their design ideas according to the purpose<br><br>Consider and explain how the finished product could be improved<br><br>Begin to understand by whom, when and where products were designed<br><br>Learn about some inventors/ designers /engineers /chefs/ manufacturers of ground-breaking products                                                                                                                                                                                                                                                                                                                    |
| <b>Technical knowledge: Food &amp; Nutrition</b> | <b>Peel</b> with hand, e.g. satsuma, banana<br><br><b>Mix/stir</b> to loosely combine Ingredients<br><br><b>Spoon</b> ingredients between containers<br><br><b>Measure</b> using a spoon, e.g. dried herbs, dried fruit and count ingredients<br><br><b>Cut</b> soft foods with butter knife, e.g. banana, canned peach slices<br><br>Shows good control and co-ordination in large and small movements<br><br>Understand need for hygiene rules | <b>Peel</b> with a swivel peeler with adult support<br><br><b>Snip</b> fresh herbs, spring onions<br><br><b>Cut</b> low resistance foods with a table knife in to equal size pieces/slices, e.g. canned pineapple slices, sticks of pepper, mushrooms<br>- use a fork to secure foods<br><br>Begin to describe a balanced diet | <b>Peel</b> with a swivel peeler with adult support<br><br><b>Juice</b> using a juicer to extract juice, e.g. orange<br><br><b>Measure</b> using different size measuring spoons, e.g. liquids<br>- refer to ingredients in simple fractions, e.g. half, quarter<br><br><b>Thread</b> thread soft foods onto cocktail sticks, e.g. fruit kebab – strawberries, satsuma segments<br><br><b>Cut</b> low resistance foods with a table knife in to equal size pieces/slices, e.g. canned pineapple slices, sticks of pepper, mushrooms<br>- use a fork to secure foods<br><br>Explain a balanced diet | <b>Peel</b> with a swivel peeler with supervision<br><br><b>Spread</b> ingredients evenly over another food<br><br><b>Grate</b> firmer foods, e.g. carrots, apples<br><br><b>Snip</b> with greater dexterity and control, e.g. to shred lettuce or cabbage leaves for salad<br><br><b>Cut out</b> placing the cutter in positions to make good of the material available and avoid waste<br><br><b>Cut</b> medium resistance foods with a vegetable knife, e.g. cucumber.<br>- use a fork or the claw grip to secure foods<br>- medium resistant or partly prepared foods using a <b>bridge</b> hold e.g. cut half a tomato into a quarter, halve canned potatoes, |

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|                                        |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                  | <p>halve large grapes</p> <p><b>Shape and mould</b> to create visually appealing products e.g. mini cottage loaf or plait, wrap</p> <p>Explain where different foods originate</p>                                                                                                                                    |
| <b>Textiles</b>                        | <p>Know about similarities and differences in relation to objects, fabrics and materials</p> <p>Begin to explain different textures e.g. smooth, rough, crinkly, bumpy, bobbly</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> | <p>Join fabrics by using glue</p> <p>Decorate fabrics with buttons, beads, sequins, braids, ribbons</p>                                                                                                                                                                    | <p>Join fabrics by using glue, staples or tape</p> <p>Give reasons for choice of decorations</p> <p>Colour fabrics using a range of techniques e.g. fabric paints, printing, painting</p> <p>Cut out shapes which have been created by drawing round a template onto the fabric</p>                                                                              | <p>Join fabrics using running stitch, over sewing, back stitch</p> <p>Explore fastenings and recreate some e.g. sew on buttons and make loops</p> <p>Use appropriate decoration techniques e.g. appliqué (glued or simple stitches)</p> <p>Create a simple pattern</p> <p>Understand the need to follow a pattern</p> |
| <b>Technical knowledge: Mechanisms</b> | <p>Uses simple tools to effect changes to materials</p> <p>Handles tools, construction and malleable materials safely and with increasing control</p> <p>Shows increasing control over an object including pushing and pulling it</p> <p>Manipulates materials to achieve a planned effect.</p>                               | <p>Make vehicles with construction kits which contain free running wheels</p> <p>Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels</p> <p>Attach wheels to a chassis using an axle</p> <p>Make simple levers and sliders</p> | <p>Join appropriately for different materials and situations e.g. glue, tape</p> <p>Mark out materials to be cut using a template</p> <p>See glue gun used by an adult</p> <p>Make levers and sliders with increasing accuracy</p> <p>Insert paper fasteners for card linkages</p> <p>Use lolly sticks/card to make levers and linkages</p> <p>Create hinges</p> | <p>Make structures more stable by giving them a wide base</p> <p>Prototype frame structures</p> <p>Measure and mark square selection, strip and dowel accordingly to 1cm</p> <p>Use glue gun with close supervision (one to one)</p>                                                                                  |
| <b>Technical knowledge:</b>            | Uses simple tools to effect changes to materials                                                                                                                                                                                                                                                                              | <p>Fold, tear and cut paper and card</p> <p>Roll paper to create tubes</p>                                                                                                                                                                                                 | Investigate strengthening sheet materials                                                                                                                                                                                                                                                                                                                        | Use appropriate materials                                                                                                                                                                                                                                                                                             |

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| <b>Materials/<br/>structures</b> | Handles tools, construction and malleable materials safely and with increasing control | Cut along lines, straight and curved<br><br>Curl, fold paper/card to strengthen structures<br><br>Use a hole punch<br><br>Cut slots | Investigate joining temporary, fixed and moving | Work accurately to make cuts and holes<br><br>Join materials accurately to make strong structures |
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