

## DT Progression at King's Oak Primary

|  | Year 1  | Year 2  | Years 3 and 4  |   | Year 5 and 6   |  | Year 6 AGT  |
|--|---|---|--|---|--|--|---|
| <p><b>Children to understand and use technical language, as per NC.</b></p> <p><b>Prepare and handle all utensils and equipment safely and with regard to the safety of themselves and others.</b></p> <p><i>(? Does anyone do textiles/sewing. Do we need to think about this? Is it becoming outdated? Is it covered in science – Yr 1/Yr 2 collage/making simple finger puppets/running stitch? Yr 3 Link to Mary Poppins umbrella/levers and how tense the stitch is/durability of material/waterproof. Yr 4 William Morris/design and create a patchwork to attach to an item for Mother's or Father's Day, eg for a cushion? Yr 5 Tudor costumes/create headdress for banquet? Yr 6 production (as homework making costumes/something specific for the show/Make or Mend – darn socks, re-sew buttons onto garments)</i></p> |   |   |  |   |  |  |   |
| Design, make, evaluate and improve   | <ul style="list-style-type: none"> <li>- Explain what they are making and which materials they are using</li> <li>- Design products that have a clear purpose and an intended user</li> <li>- Use pictures and words to convey what they want to make.</li> <li>- Make products using a range of tools to cut, shape, join and finish</li> <li>- Say what they like and don't like about their product and explain why</li> <li>- Talk about how closely their finished product meets their design criteria</li> <li>- Begin to use software to represent 2D designs</li> </ul> |   | <ul style="list-style-type: none"> <li>- Investigate existing products, including drawing them to analyse and understand how they are made.</li> <li>- Plan a sequence of actions to make a product.</li> <li>- Develop more than one design.</li> <li>- Develop prototypes</li> <li>- Generate designs with annotated sketches and computer aided design (CAD) where appropriate</li> <li>- Refine work and techniques as work progresses, continually evaluating the product design.</li> <li>- Identify strengths and weaknesses of their design ideas.</li> <li>- Talk about how closely their finished product meets their design criteria and meets the need of the user.</li> </ul> |   | <ul style="list-style-type: none"> <li>- Undertake research to inform design process. This may include surveys and interviews.</li> <li>- Use prototypes, cross-sectional diagrams, exploded diagrams and CAD software to represent designs.</li> <li>- Consider the views of others when evaluating their own work.</li> <li>- Ensure products have a high quality finish, using art skills where appropriate.</li> <li>- Justify their decisions about materials and methods of construction.</li> <li>- Make suggestions on how their design/product could be improved</li> </ul> |  | <ul style="list-style-type: none"> <li>- Communicate ideas and designs skilfully and accurately in 2D and 3D, using a variety of techniques, including computing.</li> <li>- Work to a 'brief' satisfying the 'client's' requirements with a high standard of finish and evaluate with precision</li> </ul> |
| Cooking and nutrition  | <p>Year 1</p> <p>Understand where food comes from</p> <p>Group familiar food products, eg fruit and vegetables</p> <p>Cut ingredients safely.</p> <p>Prepare simple dishes – safely and</p>   | <p>Year 2</p> <p>Group foods into the five groups in The Eatwell Plate.</p> <p>Cut, grate or peel ingredients safely.</p> <p>Prepare simple dishes, safely and hygienically, without using a heat source.</p> | <p>Year 3</p> <p>Cut materials accurately and safely by selecting appropriate tools</p> <p>Know that a healthy diet is made up from a variety of different food and drink, as depicted in The Eatwell Plate.</p> <p>Measure and weigh</p>  | <p>Year 4</p> <p>Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). Eg bread,</p> | <p>Year 5</p> <p>Assemble or cook ingredients, controlling the temperature of the oven or hob if cooking.</p> <p>Measure accurately using different</p>  | <p>Year 6</p> <p>Measure ingredients to the nearest gram and millilitre and calculate ratios of ingredients to scale up or down from a recipe.</p> <p>Understand seasonality and know where and how a variety of ingredients</p> | <p><i>Children to plan, prepare and cook for an intended audience, eg local community, given a budget to work to.(Harvest time)</i></p>   |

|  |   |  |  |   |   |  |   |
|--|---|--|--|---|---|--|---|
|  | <p>Ohygienically, without using a heat source.<br/>Eg healthy sandwiches, CCLs<br/>Sam's Sandwich</p>   | <p>Measure or weigh using cups or electronic scales.</p> <p>Follow a healthy salad recipe methodically, eg coleslaw.</p>   | <p>ingredients appropriately.</p> <p>Follow a recipe methodically, creating their own version by adapting a know one, eg fruit/vegetable kebabs.</p> <p><i>Know where and how a variety of ingredients are grown, reared, caught and processed.<br/>CCLs – science, geography, Mediterranean – most healthy diet in the world?</i></p> | <p>pastry</p> <p>Measure ingredients using scales.</p> <p>Prepare ingredients hygienically and using the appropriate utensils by following a recipe.</p> <p><i>Healthy bread making research and creation</i></p> | <p>equipment.<br/>Create recipes, including ingredients, methods, cooking times and temperatures,</p> <p>Understand the importance of correct storage and handling of ingredients.</p> <p><i>Combine ingredients appropriately, eg beating or rubbing, eg pancakes containing a seasonal vegetable filling (Pancake Day)</i></p> <p><i>Relate to Tudor banquet.</i></p> | <p>are grown, reared, caught and processed, eg soup a variety of seasonal vegetables. (Link to WW2 and rationing).</p> <p>Create and refine recipes, including ingredients, methods, cooking times and temperatures. <i>(Refine current recipes to use ingredients available during WW2)</i><br/><i>Investigate sugar consumption now and then and the effects on health. CCL English (investigative journalism)</i></p> |   |
| <p><i>Prepare and handle food and utensils hygienically.</i></p> <p><i>Understand the importance of nutrition, a balanced diet and about the characteristics of a broad range of ingredients in choosing and preparing food.</i></p> |   |  |  |   |   |  |   |
| <p>Construction, mechanics and electronics</p>   | <p><b>Mark out materials to be cut using a template.</b></p> <p><i>With support cut strip wood/dowel using a hacksaw. (eg make hand held windmills, linked to the windmill in Rosie's Walk – same principle)</i></p> <p><b>Make vehicles with</b></p> | <p>Use a range of materials to create models with wheels and axles, eg tubes dowel and cotton reels. <i>(Horse and cart)</i></p> <p>Use materials to practise drilling, screwing, nailing and gluing to strengthen products. <i>(Transport, eg hot air</i></p> | <p>Strengthen frames using diagonal struts <i>(Link to creation of homes – Celts/Romans)</i></p> <p>Begin to use mechanical systems in their product, eg, pulleys and levers. <i>Look at the function of these in transport rescue – lifeboats. (Link to Mousehole Cat – effects of the storm – lowering the boats back</i></p>        | <p>Create circuits, <i>CCL science/Christm as lights</i></p> <p>Investigate how to make structures more stable, eg by widening the base. <i>CCL Protection against natural disasters.</i></p>                     | <p>Control a model using an ICT control model. <i>(Lego?)</i></p> <p>Use a glue gun with close supervision</p> <p>Join material using appropriate method. Use a hand drill to drill</p>   | <p>Create circuits that employ a number of components (such as LEDs, resistors and transistors). <i>(Morse code machines)</i></p> <p>Cut wood accurately to 1mm. Build frameworks using a range of materials, eg wood, card and corrugated plastic. <i>(WW2 presentation)</i></p>  | <p>Develop sophisticated practical skills and carry out diagnostic, repair and maintenance tasks in a range of contexts.</p> <p>Develop well-conceived and well-executed practical solutions.</p> |

|  |  |  |  |   |  |  |  |
|--|--|--|--|---|--|--|--|
|  | <p>construction kits which contain free running wheels. Attach wheels to chassis using an axle. (Lego)</p>   | <p>balloons - Philleas Fogg)</p>   | <p>into the sea (look at skips))</p>   | <p>Understand and use mechanical structures in their product, eg gears, pulley, levers and gears (eg cogs on a bike, ?Bikeability)</p> <p>(3 mini-projects)</p>                     | <p>tight and loose fit holes.<br/>Design and create a sarcophagus using papier mache with a hinged join)</p>   | <p>Use a cam to make an up and down mechanism.</p>   | <p>Increase skills, knowledge and competence in using materials, technique and processes</p> |
| <p>Materials: <b>Integral to all of the above.</b></p> | <p>Fold, tear and cut paper or card.</p> <p>Investigate strengthening sheet materials. CCL Science Rabbit Foo Foo's umbrella)</p> <p>Roll paper to create tubes (Funny Bones skeletons. Roll paper for fine motor skills)</p> <p>Demonstrate a range of joining techniques such as gluing or taping. (Transition)</p> <p>Measure and mark out lines. (CCL Maths)</p> | <p>Demonstrate a range of joining techniques such as gluing, taping or creating hinges</p> <p>Cut materials safely using tools provided</p> <p>Demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling.</p> <p>Use simple pop-ups. (Easter/Christmas cards. CCL: RE)</p> | <p>Measure and mark out accurately.</p> <p>Cut material accurately and safely by selecting appropriate tools.</p> <p>Cut slots</p> | <p>Measure and mark out to the nearest mm.</p> <p>Use and explore complex pop-ups.</p> <p>Cut slots and internal shapes</p> <p>Create nets. (Make own die) (Link to structures)</p> | <p>Cut materials with precision.</p> <p>Cut accurately and safely to a marked line.</p> <p>Join/ combine materials with temporary, fixed or moving joints.</p> | <p>Cut materials with precision and refine the finish with appropriate tools (such as sanding wood). (Contribute to stage scenery for the Yr 6 production)</p> <p>Show an understanding of the qualities of materials to choose appropriate tools to cut a shape</p> |  |

|  |  |  |  |  |
|--|--|--|--|--|
| <p>Take inspiration from design throughout history</p> | <p>Explore objects and designs to identify likes and dislikes.</p> <p>Explore how products have been created.</p> <p><i>Link to topic – changes over time.</i></p> | <p>Disassemble products to understand how they work.</p> <p>Improve on existing designs, giving reasons for choices.</p> <p>Identify some of the great designers in different areas of study to generate ideas from their designs.</p> <p><i>Yr 3 - Link to boats – changes in design – life boats and materials used.</i></p> <p><i>Yr 4 – How buildings have evolved to withstand earthquakes.</i></p> | <p>Use knowledge of inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products to create their own innovative designs.</p> <p><i>Yr 5 – Link to Tudor kitchens/Tudor food then compared with royal food now. Manufacture of food then and now. Domestic production compared with mass production of today. How it reflects on how we live.</i></p> <p><i>Yr 6 – invention and engineering. Design changes that have happened as a result of WW2.</i></p> | <p>Analyse the work of others, including iconic designs to informal work.</p> <p>Understand developments in DT and the responsibilities of designers, including environmental responsibilities</p> |
|--|--|--|--|--|