D & T SKILLS PROGRESSION	Year 1/ 2	Year 3/4	Year 5/ 6
DEVELOPING, PLANNING AND COMMUNICATING IDEAS			
Generate ideas **Developing ideas** **Explaining ideas** **Planning** **Communicating design ideas**	• Generate and talk about ideas by handling materials and components- handle/investigate/disassemble and discuss familiar products e.g. toys. • Draw on their own and others ideas. • Plan by suggesting what to do next, and how to progress as their ideas develop. • Communicate their ideas verbally and draw finished articles.	• Generate, develop and explain ideas for products to meet a range of needs (recognise specific purposes or users). • Disassemble and investigate everyday products to see how they fit their purpose. • Plan what they are going to do. • Communicate design ideas in different ways (e.g. verbally, written, in a labelled diagram). • Identify how finished product will look and the 'underneath' works	• Generate ideas by collecting and using information, from a number of sources, including ICT based sources. • Look at some mechanical products to see how they function and meet the user's needs. • Take user's views into account. • Clarify ideas generated, considering intended purpose. • Consider safety and reliability. • Plan what they have to do, suggesting a sequence of actions and alternatives if needed. • Work from detailed plans. • Communicate design ideas in different ways (e.g. verbally, written, in a scaled labelled diagram) as these develop, considering use and purpose.
WORKING WITH TOOLS, EQUIPMENT, MATERIALS AND COMPONENTS TO MAKE QUALITY PRODUCTS			
Selecting tools and techniques	• Use/select tools and materials with help, e.g. sandpaper, hole punch or drill. • Select from a limited range e.g. wheel axles and wood strip.	• Select appropriate tools and techniques. • Suggest alternative ways to make their product (with help if needed).	• Select appropriate tools and techniques. • Suggest alternative ways to make their product, by reviewing their plan if the first attempt is not successful. • Use prototypes to test ideas
Qualities of materials	• Explore the sensory qualities of materials.	• Explain how to use simple materials (what they are suitable for).	• Explore the qualities of materials and how to use them. • Select the correct tools to use with different materials.
Cutting, shaping and finishing	• Measure, mark and cut soft materials with help. • Shape paper and card by cutting with scissors. • Join materials with adhesives and tape. • Saw wood with a gents saw/backsaw. • Glue wood. • Use hand drill or hole punch. • Make an object with simple moving parts.	• Measure, mark, cut out and shape a range of materials, e.g. using saws and sand paper. • Use tools independently with greater accuracy, control and awareness of conservation e.g. bench hooks and mitre blocks, electric components (such as bulbs and buzzers), wire strippers, staplers, bearings and axle holders, cardboard triangles etc. • Assemble, join and combine components with some accuracy.	• Measure, mark, cut out and shape a range of materials independently. • Assemble, join and combine components/materials accurately. • Use skills in using different equipment safely and accurately. • Use modelling wire, pliers, wire cutters etc. • Use appropriate finishing techniques to strengthen and improve the appearance of their product, using a range of equipment including ICT. • Use a greater variety of finishing techniques, e.g. collage, paint, embroidery, embellishments
Food and hygiene	• Mix and prepare simple cooked and uncooked foods involving very limited choices. • Use simple equipment, e.g. spoons, cutters, bowls.	• Use simple recipe choices with widening choices relating to the consumer. • Use simple tools, e.g. hand whisk, rolling pins etc. • Measure ingredients. • Be aware of different dietary requirements	• Weigh and measure accurately (time, dry ingredients and liquids). • Apply the rules for basic food hygiene and other safe practises, e.g. hazards relating to the use of ovens. • Research products, e.g. which bird feed is best? Which biscuits are the healthiest? Etc. •
EVALUATING PROCESS AND PRODUCTS			
Reflect on progress **Identify improvements** **Meeting purpose**	• Talk about their ideas, saying what they like and dislike. • Identify what they could have done differently to improve their work in the future.	• Reflect on their progress identifying ways they could improve their products. • Identify where evaluation has led to improvements.	• Reflect on their progress identifying ways they could improve their products. • Check their work as it develops and modify their plans. • Carry out appropriate tests before making any improvements, including testing and evaluating products and information sources.

KNOWLEDGE AND UNDERSTANDING OF MATERIALS AND COMPONENTS			
Mechanisms and control	• Use wheels and axles (pushed through). • Use construction kits. • Identify how toys can be made to move (push/pull). • Make moving joints using paper fasteners, wood etc. • Use programmable toys (e.g. Roamer). • Pop-ups and sliders	• Use syringes for pneumatics. • Use simple mechanisms, e.g. pneumatics, levers • Give a series of commands (Roamer). • Use of egg boxes to create repeating sequence to control lights/motors • Levers in pop up books using split pins	• Use simple mechanisms, e.g. pulleys, cams, cogs. Attach to motors for electrical control • Begin to use hydraulics. • Design ICT controlled mechanisms- use computer to control programs and equipment. FLOWOL. • Use computer to operate switch and devise simple programs to control own models.
Structures	• Make box models, puppets, cards, masks etc. • Strengthen box models, and card/wood constructions. • Make joints that allow movement, e.g. axles • Use of construction kits	• Use construction kits to test for strength. • Investigate how structures can fail when loaded, and stabilise structures to withstand greater loads. • Understand different structures types, shell/frame	• Construct regular free standing 3D frames - bridges • Use techniques for reinforcing and strengthening structures. • Use construction kits and building instructions to identify how structures are stabilised and strengthened.
Textiles	• Simple stitching and weaving. • Use large needles and binca felt and materials. • Join materials using stitching and gluing	• Create seams and applique by working with a widening, but limited, choice of materials and techniques e.g. running stitch, back stitch, blanket, over stitch. • Use patterns, either elf-generated or templates. • Use stitches, embellishments and fabric to enhance design.	• Use different but appropriate ways to join materials, e.g. glue, pins, press studs, Velcro, various stitches, buttons etc.
Electrical circuits	• Explore batteries and bulbs in simple circuits	• Explore batteries and bulbs. • Use simple switches to achieve a functional result.	• Switch motors on/off and reverse the motor. • Control electrical circuits with ICT (e.g. use computer to operate switch – see above).