Design Technology subject progression grid

Year Group / Area of Study	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food and nutrition	**Healthy salad** Cut ingredients safely and hygienically Measure or weigh using measuring cups Assemble ingredients	**Healthy Pizza** Guided to cut, peel or grate ingredients safely and hygienically Guided to measure or weigh using measuring cups or electronic scales Guided to assemble and cook ingredients	**Healthy Sandwich** Cut, peel or grate ingredients safely and hygienically Measure or weigh using electronic scales Prepare ingredients hygienically using appropriate utensils	**Explorers soup** Prepare ingredients hygienically using appropriate utensils Measure ingredients to the nearest gram accurately Follow a recipe Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking)	**Winter Stew** Prepare ingredients hygienically using appropriate utensils Measure accurately and calculate ratios of ingredients to scale up or down from a recipe Demonstrate a range of baking and cooking techniques Create and refine recipes, including ingredients, methods, cooking times and temperatures	**Healthy pizza** Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms) Measure accurately and calculate ratios of ingredients to scale up or down from a recipe Demonstrate a range of baking and cooking techniques Create and refine recipes, including ingredients, methods, cooking times and temperatures
Mechanisms	**Moving pictures** Cut materials safely using tools provided with support Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen) Use materials to practise gluing, split pins and single hole punches and materials to make and strengthen products Create products using levers	**Carnival float** Cut materials safely using tools provided independently Measure and mark out to the nearest centimetre Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling) Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen) Create products wheels and winding mechanisms		**King Arthur Moving pictures** Cut materials accurately and safely by selecting appropriate tools Select appropriate joining techniques Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears)		**Pulleys and Gears - Squashed tomato challenge** Convert rotary motion to linear using cams Use innovative combinations of electronics (or computing) and mechanics in product designs
Electrical systems				**Explorers torch** Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage) Model designs using software Control and monitor models using software designed for this purpose. Write code to control and monitor models or products Select appropriate joining techniques	**Controllable battery operated vehicle** Create series and parallel circuits Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips) Control and monitor models using software designed for this purpose. Write code to control and monitor models or products Write code to control and monitor models or products	
Textiles		**Pirate Puppets** Cut materials safely using tools provided independently	**Roman Purse** Understand the need for a seam allowance			**Advent calendar** Show an understanding of the qualities of materials to choose appropriate tools to cut and shape

		Measure and mark out to the nearest centimetre

Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling)

Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen)

Shape textiles using templates. Join textiles using running stitch

Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing) | Join textiles with appropriate stitching (blanket, back, running)

Select the most appropriate techniques to decorate textiles

Choose suitable techniques to construct products or to repair items | | | (such as the nature of fabric may require sharper scissors than would be used to cut paper)

Create objects (such as a cushion) that employ a seam allowance

Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration)

Use the qualities of materials to create suitable visual and tactile effects in decoration of textiles. (Such as a soft decoration for comfort on a cushion) |
| Structures | Playgrounds

Cut materials safely using tools provided guided

Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen)

Use materials to practise gluing, split pins and single hole punches and materials to make and strengthen products | | Product packaging
Measure and mark out to the nearest millimetre

Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs)

Choose suitable techniques to construct products or to repair items. Strengthen materials using suitable techniques

Use software to design and represent product designs | | Bridge builders
Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape)

Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding) | |
| Design process | Explore objects and designs to identify likes and dislikes

Disassemble products to understand how they work

Design products that have a clear purpose and an intended user

Make products, refining the design as work progresses | Explore objects and designs to identify likes and dislikes of the designs

Disassemble products to understand how they work and explore how products have been created

Design products that have a clear purpose and an intended user

Make products, refining the design as work progresses

Suggest improvements to existing designs

Use software to design | Disassemble products to understand how they work

Improve upon existing designs, giving reasons for choices

Design with purpose by identifying opportunities to design –supported

Make products by working efficiently (such as by carefully selecting materials)

Refine work and techniques as work progresses, continually evaluating the product design

Self-evaluate own products | Disassemble products to understand how they work

Improve upon existing designs, giving reasons for choices

Design with purpose by identifying opportunities to design –supported

Make products by working efficiently (such as by carefully selecting materials)

Refine work and techniques as work progresses, continually evaluating the product design

Peer-evaluate a product

Control and monitor models using software designed for this purpose | Use prototypes, cross-sectional diagrams and computer aided designs to represent designs

Design with the user in mind, motivated by the service a product will offer (rather than simply for profit)

Ensure products have a high quality finish, using art skills where appropriate

Evaluate the design of products so as to suggest improvements to the user experience | Use prototypes, cross-sectional diagrams and computer aided designs to represent designs

Design with the user in mind, motivated by the service a product will offer (rather than simply for profit)

Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices

Make products through stages of prototypes, making continual refinements and create innovative designs that improve upon existing products

Evaluate the design of a range of products so as to suggest improvements to the user experience |