

Design and Technology Progress Map

Year	Autumn	Spring	Summer
1	Food Fruit kebabs	Construction Free standing structure – bridge	Mechanics Moving Picture
Designer	Mary Berry	Isambard Kingdom Brunel	George Stephenson
<p>Food: Cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales. Assemble or cook ingredients</p> <p>Materials: Cut materials safely using tools provided. 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).</p> <p>Mechanics: Create products using levers, wheels and winding mechanisms Design products that have a clear purpose and an intended user Explore objects and designs to identify likes and dislikes of the designs.</p> <p>Food Explore the basic principles of a healthy and varied diet to prepare dishes Explore where food comes from</p>			
2	Food Rainbow Couscous	Textiles Make a bookmark – Different stitches and joining fabric	Construction – Make a chair
Designer	Jamie Oliver	Jan Constantine	Charles Mackintosh
<p>Food Cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales. Assemble or cook ingredients. To alter and refine the recipe as they make the couscous</p> <p>Textiles: 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).</p>			

Computing:
 Model designs using software.

Construction:
 Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products
 Design products that have a clear purpose and an intended user.
 Make products, refining the design as work progresses.
 Use software to design

Explore objects and designs to identify likes and dislikes of the designs.
 Suggest improvements to existing designs.
 Explore how products have been created.

Food
 Use the basic principles of a healthy and varied diet to prepare dishes
 Understand where food comes from

3	Food Healthy Sandwich	Mechanics – Moving vehicle	Construction – Photo Frame
Designer	John Montagu	Beatrice Schilling	Jasper Conran

Food
 Prepare ingredients hygienically using appropriate utensils.
 Measure ingredients to the nearest gram accurately.
 Assemble ingredients

Materials:
 Cut materials accurately and safely by selecting appropriate tools.
 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).
 Select appropriate joining techniques.

Textiles
 Understand the need for a seam allowance.
 Join textiles with appropriate stitching.
 Select the most appropriate techniques to decorate textiles.

Mechanics:
 Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys Design with purpose by identifying opportunities to design.
 Make products by working efficiently (such as by carefully selecting materials).
 Identify some of the great designers in all of the areas of study (including pioneers in

<p>horticultural techniques) to generate ideas for designs Explore and use some of the healthy principles of a healthy a diet. Explore seasonality available food.</p>			
4	Food Apple Crumble	Textiles – Cushion	Electronics – Make a torch
Designer	Pierre Herme	Claudia Owen	Ingo Maurer
<p>Food 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) Electricals and electronics Create series and parallel circuits Construction Choose suitable techniques to construct products or to repair items. Strengthen materials using suitable techniques. Computing: Control and monitor models using software designed for this purpose Design with purpose by identifying opportunities to design Make products by working efficiently (such as by carefully selecting materials). Refine work and techniques as work progresses, continually evaluating the product design. Use software to design and represent product designs Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. Improve upon existing designs, giving reasons for choices. Disassemble products to understand how they work. Explore and use some of the healthy principles of a healthy and varied diet. Explore seasonality and know how food is grown.</p>			
5	Food Healthy Pizza	Mechanics Moving Monsters	Electronics Buzzer games
Designer	Raffaele Esposito	James Dyson	Caroline Haslett
<p>Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms)</p>			

Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.

Materials:

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).

Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).

Electricals and electronics:

Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).

Construction:

Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).

Mechanics:

Convert rotary motion to linear using cams.

Use innovative combinations of electronics (or computing) and mechanics in product designs
Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).

Make products through stages of prototypes, making continual refinements.

Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.

Improve upon existing designs, giving reasons for choices.

Understand and use some of the healthy principles of a healthy and varied diet.

Explore seasonality and know how food is grown, reared, caught and processed.

6	Food Healthy Pasta	Textiles phone pouch	Mechanics and Electronics – Fun at the fair
Designer	Nigella Lawson	Althea McNish	Nikola Tesla

Food:

Demonstrate a range of baking and cooking techniques.

Create and refine recipes, including ingredients, methods, cooking times and temperatures.

Textiles:

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 the decoration of textiles (such as a soft decoration for comfort on a cushion)

Computing:

Write code to control and monitor models or product.

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

Make products through stages of prototypes, making continual refinements.

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

Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.

Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.

Improve upon existing designs, giving reasons for choices.

Disassemble products to understand how they work Understand and use some of the healthy principles of a healthy and varied diet.

Understand seasonality and know how food is grown, reared, caught and processed.