



## Broad - Balanced-Enriching

# Design Technology Curriculum Map—Skills Progression

Design, make, evaluate and improve

Key Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>EYFS</b>	<p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>Create collaboratively sharing ideas, resources and skills.</p> <p>Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.</p>	<p>Explain what they are making and which materials they are using.</p> <p>Design products that have a clear purpose.</p> <p>Use pictures and words to convey what they want to make.</p> <p>Make products, using a range of tools to cut, shape, join and finish.</p> <p>Say what they like and don't like about their product.</p> <p>Talk about how closely their finished product meets their design criteria.</p> <p>Begin to use software to represent 2D designs.</p>	<p>Explain what they are making and which materials they are using and why they have chosen them.</p> <p>Design products that have a clear purpose and an intended user.</p> <p>Use pictures and words to convey what they want to make.</p> <p>Make products, using a range of tools to cut, shape, join and finish.</p> <p>Say what they like and don't like about their product and explain why.</p> <p>Talk about how closely their finished product meets their design criteria.</p> <p>Confidently use software to represent 2D designs.</p>	<p>Investigate existing products, including drawing them to analyse and understand how they are made.</p> <p>Plan a sequence of actions to make a product.</p> <p>Develop more than one design.</p> <p>Generate designs with annotated sketches.</p> <p>Refine work and techniques as work progresses, continually evaluating the product design.</p> <p>Identify strengths and weaknesses of their design ideas.</p> <p>Talk about how closely their finished product meets their design criteria and meets the need of the user.</p>	<p>Investigate existing products, including drawing them to analyse and understand how they are made.</p> <p>Plan a sequence of actions to make a product.</p> <p>Develop more than one design.</p> <p>Develop prototypes.</p> <p>Generate designs with annotated sketches and computer-aided design (CAD) where appropriate.</p> <p>Refine work and techniques as work progresses, continually evaluating the product design.</p> <p>Identify strengths and weaknesses of their design ideas.</p> <p>Talk about how closely their finished product meets their design criteria and meets the need of the user.</p>	<p>Undertake research to inform design process. This may include surveys and interviews.</p> <p>Use prototypes, cross sectional diagrams, exploded diagrams and CAD software to represent diagrams.</p> <p>Consider the views of others when evaluating their own work.</p> <p>Ensure products have a high quality finish, using art skills where appropriate.</p> <p>Justify their decisions about materials and methods of construction.</p> <p>Make suggestions on how their design/ products can be improved.</p>	<p>Undertake research to inform design process. This may include surveys and interviews.</p> <p>Use prototypes, cross sectional diagrams, exploded diagrams and CAD software to represent diagrams.</p> <p>Consider the views of others when evaluating their own work.</p> <p>Ensure products have a high quality finish, using art skills where appropriate.</p> <p>Justify their decisions about materials and methods of construction.</p> <p>Make suggestions on how their design/ products can be improved.</p>



## Broad - Balanced-Enriching

# Design Technology Curriculum Map—Skills Progression

### Take inspiration from design throughout history

Explore objects and designs to identify likes and dislikes.	Explore objects and designs to identify likes and dislikes.	Disassemble products to understand how they work.	Disassemble products to understand how they work.	Use knowledge of inventors, designers, engineers, chefs and manufactures who have developed ground breaking products to create their own innovative designs.	Use knowledge of inventors, designers, engineers, chefs and manufactures who have developed ground breaking products to create their own innovative designs.
Explore how products have been created.	Explore how products have been created.	Improve on existing designs, giving reasons for choices.	Improve on existing designs, giving reasons for choices.		
		Identify some of the great designers in different areas of study to generate ideas from their designs.	Identify some of the great designers in different areas of study to generate ideas from their designs.		

### Cooking and nutrition

Understand where food comes from.	Group foods into the five groups in The Eatwell Plate.	Cut materials accurately and safely by selecting appropriate tools.	Measure ingredients using scales.	Assemble or cook ingredients, controlling the temperature of the oven or hob if cooking.	Combine ingredients appropriately e.g. beating or rubbing.
Group familiar food products e.g. fruit and vegetables.	Cut, grate or peel ingredients safely.	Know that a healthy diet is made up from a variety of different food and drink, as depicted in The Eatwell Plate.	Prepare ingredients hygienically and using the appropriate utensils by following a recipe.	Measure accurately using different equipment.	Measure ingredients to the nearest gram and millimetre and calculate ratios of ingredients to scale up or down from a recipe.
Cut ingredients safely.	Prepare simple dishes-safely and hygienically-without using a heat source.	Measure and weigh ingredients appropriately.		Creating recipes, including, methods, cooking times and temperature.	Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.
Prepare simple dishes-safely and hygienically-without using a heat source.	Measure or weigh using cups or electronic scales.	Follow a recipe.		Understand the importance of correct storage and handling of ingredients.	Create and refine recipes, including ingredients, methods, cooking times and temperatures.

### Textiles

With help measure, mark out, cut and shape a range of materials.	Colour fabric using a range of techniques e.g. fabric paints, printing, painting.	Use appropriate decoration techniques (glued/ simple stitches)	Use appropriate decoration techniques e.g. applique (glued or simple stitches)	Understand seam allowance.
Use tools e.g. scissors and a hole punch safely.	Cut out shapes which have been created by drawing round a template onto the fabric.	Join fabrics using running stitch, over sewing, back stitch.	Join fabrics using running stitch, over sewing, back stitch.	Create 3D products using pattern pieces and seam allowance.
Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape	Join fabrics by using running stitch, glue, staples	Explore fastenings and recreate some e.g. sew on buttons and make loops.	Explore fastenings and recreate some e.g. sew on buttons and make loops.	Understand pattern layout.
		Pin template to fabric	Pin template to fabric.	Decorate textiles appropriately often before joining components.
		Prototype a product using J cloths.	Prototype a product using J cloths.	Pin and tack fabric pieces together.
				Join fabrics using running stitch, over sewing, back stitch or machine stitching.



## Broad - Balanced-Enriching

# Design Technology Curriculum Map—Skills Progression

Decorate textiles appropriately often before joining components.

### Mechanical Systems and Structures

Explore and include slider and lever mechanisms in their product.

Understand about the movement of simple mechanisms ( levers, sliders)

Explore how to make structures stronger.

Test different methods of enabling structures to remain stable.

Attach wheels to chassis using an axle.

With support cut strip wood/dowel using a hacksaw.

Make vehicles with construction kits which contain free running wheels.

Use a range of materials to create models with wheels and axles e.g. tubes, dowel and cotton reels.

Cut materials safely using tools provided

Strengthen frames using diagonal structures.

Investigate how to make structures more stable e.g. widening the base.

Begin to use mechanical systems in their products e.g. pulleys and levers.

Cut materials accurately and safely by selecting appropriate tools.

Incorporate a circuit into a model.

Use electrical systems such as switches, bulbs and buzzers.

To use skills and knowledge of moving mechanisms in a product

Build frameworks to support mechanisms

Stiffen and reinforce complex structures

Use a glue gun with supervision.

Join materials using appropriate methods.

Understand and use mechanical systems such as cams, pulleys and gears.

Create circuits that employ a number of components e.g. LED's, motors and buzzers.

Create series and parallel circuits

Program, monitor and control using ICT

Cut wood accurately to 1mm.

Use a hand drill to drill tight and loose fit holes.

Cut materials with precision and refine the finish with appropriate tools (such as sanding wood).

Build frameworks using a range of materials e.g. wood and card.

Show an understanding of the qualities of materials to choose appropriate tools to cut and shape.



**Broad - Balanced-Enriching**



**Design Technology Curriculum Map—Skills Progression**