

## DT Learning Pathway

	Reception	Year 1	Year 2
Autumn	<b>This is Me!</b>	<b>All Creatures Great and Small</b> What makes us human?	<b>Once upon a time</b> What does a good story need?
<b>Learning Step 1</b>	To explore a variety of construction resources to make own models. <b>Know resources that can be used for construction: lego, duplo, wooden bricks, junk modelling</b>	To know which foods are healthy and unhealthy. <b>Know examples of foods that are healthy and unhealthy</b>	To design, make and use own template.
<b>Learning Step 2</b>	To explore a variety of construction resources to make own models.	To understand that all food comes from plants or animals <b>Know that all food comes from plants or animals.</b>	To explore ways of making and using more than one template at a time.
<b>Learning Step 3</b>	To have an idea of what they are going to make before constructing.	To cut ingredients safely and hygienically	To join fabrics by using running stitch with more precision (I.e. straight lines and recognising where to start so knot isn't visible). <b>Know to start running stitch from the reverse to hide the knot.</b>
<b>Learning Step 4</b>	To explore different techniques in joining materials e.g. stacking both vertically and horizontally, balancing. <b>Know that resources can be stacked or balanced.</b>	To demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). <b>Know there are different ways to shape paper/card: tearing, folding, cutting, curling</b>	To develop a product by sewing on decoration such as buttons, beads, sequins, braids, ribbons.
<b>Learning Step 5</b>	To develop a representation of objects based on imagination, observation and experience.	To cut materials safely using tools provided (scissors)	To talk confidently about their ideas, saying what they like and dislike.
<b>Learning Step 6</b>	To explore making construction resources to make enclosures and creating spaces.	To cut along lines, straight and curved	To identify strengths and possible changes they might make to improve their products.
<b>Learning Step 7</b>	To develop cutting skills, following lines. <b>Name different tools: scissors</b>	To identify and use materials to join e.g. split pins, masking tape, treasury tags <b>Know different resources to join: split pin, treasury tag, tape</b>	To evaluate their products and ideas against purpose (simple design criteria).
<b>Learning Step 8</b>	To explore the different use of glue (glue sticks, PVA).	To explore moving mechanisms and design (pop up, slider, spring) <b>Know different ways to make pictures move: slider, pop up, spring</b>	To know that food has to be farmed, grown, or caught <b>Know that food is farmed, grown or caught.</b>
<b>Learning Step 9</b>	To explore different types of paper e.g. tissue, crepe <b>Name different types of paper: card, tissue</b>	To DESIGN a moving picture with at least one moving mechanism (e.g. pop up/slider etc)	To understand the need for a variety of foods in a diet <b>Know that humans need a variety of foods/food groups</b>
<b>Learning Step 10</b>		To MAKE a moving picture with at least one moving mechanism (e.g. pop up/slider etc)	To cut, peel and grate a range of ingredients safely and hygienically <b>Know what happens to foods when peeled or grated.</b>

<b>Learning Step 11</b>			To prepare simple dishes safely and hygienically, without using a heat source
<b>Learning Step 12</b>			To measure and weigh food items according to a simple recipe, e.g. spoons, cups, electronic scales (with support) <b>Know units used for measuring foods when cooking: cups, spoons</b>



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Spring	<b>Term 3: Abracadabra!</b> <b>Term 4: Roar! (Dinosaurs)</b>	<b>Heroes and Villains</b> <b>What makes a hero?</b>	<b>Kings, Queens &amp; Castles</b> <b>What makes a leader?</b>
<b>Learning Step 1</b>	To explore a variety of resources available to create objects.	To develop sewing techniques using a range of different materials such as card and hole punching and binca <b>Name resources used for sewing: needles, thread, fabric (felt)</b>	To explore products to see how they have been made and how this can be used to make own design.
<b>Learning Step 2</b>	To explore different materials.	To use a prepared template. <b>Know what a template is and why they are used.</b>	To demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen) independently
<b>Learning Step 3</b>	To explore ways to attach materials.	To use materials for simple weaving through a stiff card loom or simple frame. <b>Know what weaving is and simple technique (over, under)</b>	To investigate ways to make structures more stable (legs, flanges etc)
<b>Learning Step 4</b>	To return and build on previous learning.	EVALUATE: To explore existing objects and designs to identify own likes and dislikes.	To investigate and use joining techniques: temporary, fixed and moving – slits, folds, flaps. <b>Know joins can be temporary, fixed and moving.</b>
<b>Learning Step 5</b>	To explore a range of different fabrics.	DESIGN: To begin to develop ideas for a set product.	To investigate strengthening sheet materials <b>Know how to strengthen sheet materials</b>
<b>Learning Step 6</b>	To explore different textured fabric. <b>Know texture as how fabric feels.</b>	DESIGN: To design by drawing a picture and begin to label with materials that you will use.	To recognise the purpose of a product.
<b>Learning Step 7</b>	To consider what could be made using textiles.	To make a template following instructions and cut out fabric to make design. <b>Know that instructions must be followed in order.</b>	To use knowledge of existing products to influence own design.
<b>Learning Step 8</b>	To explore weaving to join fabric.	MAKE: To cut materials with some accuracy (paper, card, felt)	To create a more detailed design by drawing a picture and labelling materials and tools to be used.
<b>Learning Step 9</b>	To explore a variety of tools to manipulate materials by cutting, fringing, hole punching (scissors, hole punches)	To join 2 pieces of fabric glue and staples.	To begin to recognise main stages required to make product.
<b>Learning Step 10</b>	To develop knowledge and understanding of different materials.	MAKE: To follow instructions to assemble, join and combine materials, components or ingredients	To explore the purpose of templates and mock ups of ideas in card or paper. <b>Know what a mock-up is: a test version of a product so that improvements can be made.</b>
<b>Learning Step 11</b>	To explore a range of different fabrics.	To begin to join 2 pieces of fabric using running stitch, with support. <b>Know what running stitch looks like and how to create it</b>	To explain why materials are chosen by annotating.
<b>Learning Step 12</b>	To explore different texture. <b>Know texture as how fabric feels.</b>	To develop a product by adding decoration with buttons, beads, ribbons and sequins, by joining with glue.	To explain verbally in greater depth what they are making.

<b>Learning Step 13</b>	To express discoveries.	MAKE: To attach simple decorations to improve the appearance of their product	To build structures, exploring how they can be made stronger, stiffer and more stable including rolling paper.
<b>Learning Step 14</b>	To explore the use of materials for joining.	EVALUATE: To share own product with others and to say what went well and what could be done better/ differently next time	
<b>Learning Step 15</b>	To explore making improvements to models.		
<b>Learning Step 16</b>	To develop a representation of objects based on imagination, observation and experience.		
<b>Learning Step 17</b>	To explore the different use of glue (glue sticks, PVA). Know there are different types of glue to stick: PVA, glue stick		
<b>Learning Step 18</b>	To explore food products.		
<b>Learning Step 19</b>	To explore how to use a variety of tools safely.		
<b>Learning Step 20</b>	To explore weaving. Know what weaving is: joining pieces of material/fabric without sewing.		
<b>Learning Step 21</b>	To begin to explore which foods are healthy and unhealthy. Know that foods can be healthy or unhealthy.		
<b>Learning Step 22</b>	To explore the use of tools when preparing food. Name tools used when preparing food: knife, fork, spoon.		

Summer	Term 5: Old Macdonald had a farm Term 6: Land Ahoy! (Pirates)	Journey to Africa Where do swifts go in winter?	What a wonderful world – Amazon Rainforest
<b>Learning Step 1</b>	To explore a variety of tools to manipulate materials by cutting, fringing, hole punching. <b>Name tools used to shape materials: hole punch</b>	To explore how to join appropriately for different materials and situations e.g. glue, tape <b>Know different resources that can be used to join: glue, masking tape, Sellotape, glue gun</b> <b>Know different ways to join card: fold, slot, flange, tab</b>	To make vehicles from construction kits which contain free running wheels
<b>Learning Step 2</b>	To share creations explaining the process as they work (Plan, do review)	To build structures using a range of different construction materials (duplo, lego, bricks) <b>Know ways to strengthen models: overlapping (bricks), folding, rolling.</b>	To design a rainforest buggy with free moving wheels
<b>Learning Step 3</b>	To explore ways to attach materials.	To build structures using a range of different construction materials (smaller materials – lollysticks, stones, corks)	To use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. <b>Know what an axle is and how to create using dowel and cotton reels.</b>
<b>Learning Step 4</b>	To explore making construction resources to make enclosures and creating spaces	To use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	To attach wheels to a chassis using an axle <b>Know what a chassis is: the frame of a vehicle</b>
<b>Learning Step 5</b>		To explore pictures/objects focusing on how they have been made.	
<b>Learning Step 6</b>		To suggest improvements to existing designs.	
<b>Learning Step 7</b>		To explain why materials are chosen.	
<b>Learning Step 8</b>		To identify how parts will be joined.	
<b>Learning Step 9</b>		To understand the need to measure and mark out <b>Know why it is important to measure components for models.</b>	
<b>Learning Step 10</b>		To use a glue gun with adult support.	



DT	Year 3	Year 4	Year 5	Year 6
	Textiles (hunter gatherer bag) Autumn	Design Technology Skills (Roman chariots) Autumn	Food and nutrition Spring	Food and nutrition (link to WW2) Autumn
<b>Learning Step 1</b>	<i>What makes a good bag?</i> To start to generate own ideas for an item, considering its purpose and the user/s.	To explore how software can be used to design and represent product design	<i>What makes a healthy diet?</i> To plan a menu which gives a healthy balance of foods from across the food groups. Understand the needs of a healthy varied diet	<i>What is the global food industry and how has this developed since WW2?</i> To know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;
<b>Learning Step 2</b>	<i>What makes a good bag?</i> To establish criteria for a successful product.	To disassemble products to understand how they work. Toy cars, lego models etc	<i>Where does our food come from?</i> To know how global foods are harvested and processed for transport Food Sustainability-food miles and carbon footprints	<i>What is the global food industry and how has this developed since WW2?</i> To know how the global food industry has developed since "Grow your Own" during WW2
<b>Learning Step 3</b>	<i>How can you join fabric together?</i> To independently pin two pieces of fabric together and then join Sample piece	To explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;	<i>How do we store different foods and why?</i> To know how different foods need to be stored (knowledge of microorganisms) Safe Food Storage	<i>What did people eat during WW2 and why?</i> To investigate different storage techniques
<b>Learning Step 4</b>	<i>How can you join fabric together?</i> To use sewing techniques to join fabrics by using running and over stitch. Sample piece	To identify some of the great designers in all of the areas of study to generate ideas for designs	<i>How do you make an energy bar?</i> To create own design criteria to improve upon existing products	<i>What did people eat during WW2 and why?</i> Plan a healthy menu identifying and using seasonal, local produce (link to History and rationing)
<b>Learning Step 5</b>	<i>How can you join fabric together?</i> To sew using a range of different stitches (e.g. blanket stitch, back stitch). Sample piece - Evaluate which are the most appropriate stitches and why e.g. neatest, strongest etc and make choices for own bag	To evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	<i>How do you make an energy bar?</i> To learn to use a range of equipment safely and follow hygiene procedures	<i>Can you follow a wartime recipe?</i> To prepare ingredients hygienically, choosing the most appropriate method and utensils for the purpose, and using these safely Rock cakes/carrot cookies
<b>Learning Step 6</b>	<i>How can you join fabric together?</i> To understand the need for and include a seam allowance when designing and measuring fabrics. Sample piece	To develop a clear idea of what has to be done, planning how to use equipment, materials and processes	<i>How do you make an energy bar?</i> To use a range of cooking techniques to assemble or cook ingredients	<i>Can you follow a wartime recipe?</i> To measure accurately and calculate ratios of ingredients to scale up or down from recipe. Rock cakes/carrot cookies
<b>Learning Step 7</b>	<i>How do you make a bag?</i> To identify the main stages of making a product	To explore how to make labelled drawings from different viewpoints showing specific features.	<i>How do you make an energy bar?</i> To accurately measure ingredients to the nearest gram, millilitres etc.	<i>Can you follow a wartime recipe?</i> To adapt and refine recipes focusing on ingredients e.g. adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; Rock cakes/carrot cookies

<b>Learning Step 8</b>	<i>How do you make a bag?</i> To make products by working efficiently (such as by cutting all pieces or attaching in a particular order).	To carefully select from a range of tools and equipment, explaining their choices	<i>How do you make an energy bar?</i> To evaluate the quality of design, manufacture and fitness for purpose of products as they design and make	<i>Can you follow a wartime recipe?</i> To understand how to use a range of cooking techniques, such as griddling, grilling, frying and boiling; Follow existing recipe for spam hash and vegetables, bubble and squeak <u>or</u> trench stew
<b>Learning Step 9</b>	<i>How do you make a bag?</i> To demonstrate how to measure, tape or pin, cut and join fabric with some accuracy to make a simple product	To select from a given range of materials and components according to their functional properties or aesthetic qualities		<i>Can you follow a wartime recipe?</i> To alter methods, cooking times and temperatures Follow existing recipe for spam hash and vegetables, bubble and squeak <u>or</u> trench stew
<b>Learning Step 10</b>	<i>How do you make a bag?</i> To develop a product by adding fastenings	To learn to use a limited range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures		<i>Can you create your own wartime menu?</i> To create, adapt and refine recipes focusing on ingredients e.g. adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;
<b>Learning Step 11</b>	<i>How do you make a bag?</i> To select the most appropriate techniques to decorate textiles	To cut, shape and score materials with increasing accuracy		<i>Can you create your own wartime menu?</i> To consider the availability and costings of resources when planning out designs.
<b>Learning Step 12</b>	<i>How successful is my bag?</i> To evaluate their final product based on their own design criteria.	To apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs)		<i>Can you create your own wartime menu?</i> Cook a healthy menu identifying and using seasonal, local produce (link to History and rationing) Use knowledge from all recipes followed to plan and cook own menu (working in teams)
<b>Learning Step 13</b>		To make simple mock ups of ideas adjusting original design as needed.		
<b>Learning Step 14</b>		To measure and mark out to the nearest millimetre		
<b>Learning Step 15</b>		To assemble, join and combine material and components with some degree of accuracy		
<b>Learning Step 16</b>		To strengthen materials using suitable techniques		
<b>Learning Step 17</b>		To evaluate their product against their original design criteria suggesting changes they would make if repeating		

DT	Year 3	Year 4	Year 5	Year 6
	Food and nutrition Spring	Electronics and computing Fan boats Spring	Textiles Design a drawstring bag Spring	Designing Night Lights Spring
<b>Learning Step 1</b>	To name the five food groups and how they benefit our health (Link to PHSE)	<i>How does an electronic toy work?</i> To create series circuits.	To design a product using multiple pattern pieces and cut this from fabric considering wastage.	To work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment
<b>Learning Step 2</b>	To know the term “balanced diet” and give examples of a balanced healthy meal (link to PHSE)	<i>How does an electronic toy work?</i> To create parallel circuits.	To combine elements of design from a range of inspirational designers throughout history	To complete detailed competitor analysis of other products on the market
<b>Learning Step 3</b>	To use a range of techniques such as mashing, whisking, crushing to prepare ingredients safely and hygienically <i>Greek Salad, dressings, potato salad...</i>	<i>How does an electronic toy work?</i> To recognise how bulbs, switches, buzzers and motors can be used in a product.	To create and sew products employing a seam allowance.	To create own design criteria based on analysis of existing products and purpose of product.
<b>Learning Step 4</b>	To follow a simple recipe with support.	To generate ideas, considering current products and evaluations.	To join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;	To combine elements of design from a range of inspirational designers throughout history, giving reasons for choices
<b>Learning Step 5</b>	To understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;	To identify and consider detailed success criteria when designing a product.	To decide which stitches are most suitable for design and complete these proficiently.	To select from a range of materials and components according to their functional properties and aesthetic qualities, giving clear reasons for their choices
<b>Learning Step 6</b>		To make a product containing switches, bulbs, buzzers or motors.	To use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles <i>Embellishing bag</i>	To design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user
<b>Learning Step 7</b>		Gather feedback from others.	To respond to the feedback of others to make improvements.	To generate, develop, model and communicate their ideas through discussion and annotated sketches
<b>Learning Step 8</b>		To consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product		To generate, develop, model and communicate their ideas through cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
<b>Learning Step 9</b>		To control and monitor models using software designed for this purpose (e.g. Lego sets)		To independently plan by suggesting what to do next.
<b>Learning Step 10</b>				To create step-by-step plans as a guide to making.



DT	Year 3	Year 4	Year 5	Year 6
	<b>Mechanics</b> <i>Link to Forces of Nature – Bridges and river boats (with cranes).</i> Summer	<b>Food and nutrition</b> Summer	<b>Mechanics - cams</b> Summer	<b>Making Night Lights</b> Summer
<b>Learning Step 1</b>	To understand mechanical systems in existing products e.g. gears, pulleys and levers.	<i>Where does our food come from?</i> To identify that foods can be grown, reared, caught or processed.	To generate own designs to solve a problem or suit a purpose, building on knowledge of existing products and consumer needs.	To show an understanding of the qualities of materials to choose appropriate tools to cut and shape.
<b>Learning Step 2</b>	To consider their design criteria as they make their product	<i>Where does our food come from?</i> To start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;	To design with the user in mind, motivated by the service a product will offer.	To cut, shape and score a range of materials with precision and accuracy.
<b>Learning Step 3</b>	To consider how a mechanical system could be used in product of own design (link to science – forces).	<i>Where does our food come from?</i> To begin understand seasonality.	To convert rotary motion to linear using cams and cranks. <i>Know how cams and cranks work in order to incorporate these into own designs</i>	To independently assemble, join and combine materials and components with accuracy
<b>Learning Step 4</b>	To make simple mock ups of ideas to test key features and skills.	To begin to use techniques such as mixing, kneading and baking to assemble or cook ingredients. ( <i>bread</i> )	To use innovative combinations of mechanics in own product designs	To create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
<b>Learning Step 5</b>	To create a product that uses appropriate mechanisms (such as levers, winding mechanisms, pulleys and gears)	To use a heat source, with support, to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven	To present detailed designs showing sketches and cross-sectional imagery as well as multiple viewpoints of a product.	To use a full range of materials and components, including construction materials and kits, textiles, and mechanical components
<b>Learning Step 6</b>	To evaluate their final product based on their own design criteria.	To begin to measure and weigh ingredients in grams and millilitres	To make products through stages of prototypes, making continual refinements. <i>cardboard shoe box prototype</i>	To independently take exact measurements and mark out, to within 1 millimetre
<b>Learning Step 7</b>		To follow a simple recipe independently	To learn to use a range of tools and equipment safely and appropriately	To independently use a range of tools and equipment safely and appropriately
<b>Learning Step 8</b>		To plan a meal which gives a healthy balance of foods from across the food groups (link to PHSE)	To select from a range of materials and components according to their functional properties or aesthetic qualities	To write code to control and monitor models or products.
<b>Learning Step 9</b>			To cut, shape and score materials with precision and accuracy (paper, card, fabric)	To continually evaluate the quality of design, manufacture and fitness for purpose of products as they design and make and make ongoing adjustments and refinements
<b>Learning Step 10</b>			To assemble, join and combine materials and components with increasing accuracy	

<b>Learning Step 11</b>			<p>To refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).          Know how to finish products to a high standard</p>	
<b>Learning Step 12</b>			<p>To design products ensuring products have a high-quality finish, using art skills where appropriate.          Apply these skills to own design</p>	
<b>Learning Step 13</b>			<p>To gather feedback on an original design and use this to further refine ideas.</p>	

