

DT Knowledge, Skills, Sequencing and Progression

	EYFS	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design	Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; (C+L)	Design purposeful, functional and appealing products based on design criteria. Generate, model and communicate ideas using talking, drawing, templates, mock-ups and IT (as appropriate). Describe what they are making, how it works and what they need to do next.	Use research and criteria to develop appealing products which are fit for purpose. Use annotated sketches and prototypes to develop and explain ideas and be able to discuss them.	Use research and criteria to develop products which are appealing, innovative, fit for purpose and aimed at a specific audience. Generate, develop and communicate ideas in a range of ways such as annotated sketches, detailed plans and presentations.
Make	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Use a range of tools and equipment to complete practical tasks. Select from and use a range of materials and components including construction materials, textiles and ingredients.	Use a range of tools and equipment with accuracy. Select from and use a range of materials and components including construction materials, textiles and ingredients. Join and combine a range of materials.	Select and use a range of tools and equipment for a range of uses. Select from and use a wider range of materials and components. Join and combine a range of materials using appropriate methods.
Evaluate	Share their creations, explaining the process they have used;	Explore and evaluate existing products. Talk about their developing designs and what they like and don't like about products they have made. Consider and explain how the finished product could be improved using their design criteria.	Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.	Analyse existing products and use this to inform decisions and refine ideas. Justify decisions during the design process. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.
Technical Knowledge	Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. (EAD-DM)	Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Understand how to strengthen and reinforce structures. Use mechanical and electrical systems in own work.	Use mechanical and electrical systems in own work, including programming.
Food and Nutrition	Explore the natural world around them. (UW-DM) Manage their own needs. (PSED-DM)	Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes.	Understand the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes.	Use a range of cooking techniques to cook dishes for a healthy and varied diet. Understand seasonality and where ingredients originate.

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Key Stage 1						
Design			Make	Evaluate	Technical Knowledge	Food and Nutrition
Design purposeful, functional and appealing products based on design criteria. Generate, model and communicate ideas using talking, drawing, templates, mock-ups and IT (as appropriate). Describe what they are making, how it works and what they need to do next.			Use a range of tools and equipment to complete practical tasks. Select from and use a range of materials and components including construction materials, textiles and ingredients.	Explore and evaluate existing products. Talk about their developing designs and what they like and don't like about products they have made. Consider and explain how the finished product could be improved using their design criteria.	Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes.
Year A						
	Prior Learning	Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn A	EYFS: Safely use and explore a variety of materials, tools and techniques. Explore the natural world around them. Share their creations, explaining the process they have used.	Use a range of tools and textiles to create a puppet	Kapow: Y1 Textiles	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at puppet toys 3. Learn new skills needed: joining fabric using glue, staples and paper clips, cutting identical pieces of fabric 4. Design product 5. Make product 6. Evaluate product 	Decorate Design Fabric Glue Model Hand puppet Safety pin Stencil Technique Template	Children will design, make and evaluate a puppet.
Spring A	Children will have an understanding and tried a range of fruits and vegetables. Some will have used utensils to cut or peel.	Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.	Kapow Y1 Food Fruit and vegetables	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at vegetables and fruit that are in season, taste them. 3. Learn new skills needed: chopping, peeling, blending. 4. Design product 5. Make product 6. Evaluate product 	Blender Carton Fruit Healthy Ingredients Peel Peeler Recipe Slice Smoothie Slice Template Vegetabl	Children will design, make and evaluate a smoothie or soup based on vegetables and fruit that are in season and that they have tried.

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Summer A	EYFS: Safely use and explore a variety of materials, tools and techniques. Kapow Y1/2: Wheels and axles; Kapow Y2: Structures	To use sliders and levers to make a moving story book for a given audience.	Kapow Y2 – Mechanisms: Make a Moving Story Book	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at adventure story books, which stories do we like? How could we make it move? 3. Learn new skills needed: cutting, sticking paper to lolly pop sticks (glue stick or PVA?) 4. Design product 5. Make product 6. Evaluate product 	Assemble Design Design criteria Evaluation Mechanism Model Sliders Stencil Target audience Template Test	Children design, create and evaluate a moving story book of an explorer.
Year B						
	Prior Learning	Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn B	EYFS: Safely use and explore tools and techniques; Y1: Safely use and explore tools and techniques; share and explain creations. Kapow Y1 Fruit Smoothie unit	Design, make and evaluate a healthy snack.	Kapow Y2 Cooking and Nutrition: A Balanced Diet	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: Look at food eaten sold in pudding lane, is it healthy? 3. Learn new skills needed: chopping, peeling, grating. 4. Design product: healthy wrap 5. Make product 6. Evaluate product 	Balance Balanced diet Carbohydrate Design criteria Fruit Ingredients Oils Protein Sugar Vegetable	Children will design, make and evaluate a healthy wrap.

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<p>Spring B</p>	<p>EYFS: Safely use and explore a variety of materials, tools and techniques.</p> <p>Y1/2: Moving vehicles: Wheels and axles</p>	<p>Use clear design criteria to turn 2D nets into 3D structures.</p>	<p>Kapow Y2 - Structure s: construc ting a windmill</p>	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: Look at windmills, which colours do they use, why? Shape? 3. Learn new skills needed: Cutting, hole punching, making a hole with a pencil 4. Design product 5. Make product 6. Evaluate product 	<p>Axle Bridge Design Design criteria Model Net structure Packaging Stable Strong Template Unstable Weak</p>	<p>Children design, create and evaluate a windmill structure to go in Mousehole Harbour.</p>
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Summer B	Kapow Y1 Use a range of tools and textiles to create a puppet Y2 Kapow structures Y1/Y2 Science – Everyday Materials	To make a vehicle with wheels and axles	Kapow Y2 Mechanisms - wheels and axles	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: Look at junk model cars, what materials do they use, why? 3. Learn new skills needed: materials to make moving axels and wheels 4. Design product 5. Make product 6. Evaluate product 	Axle Axle holder Design Design criteria Frame Mechanism Pods Wheel	Children design, create and evaluate a junk model car suitable for Jurassic Park.
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Lower Key Stage 2						
<p style="text-align: center;">Design</p> <p>Use research and criteria to develop appealing products which are fit for purpose. Use annotated sketches and prototypes to develop and explain ideas and be able to discuss them.</p>	<p style="text-align: center;">Make</p> <p>Use a range of tools and equipment with accuracy. Select from and use a range of materials and components including construction materials, textiles and ingredients. Join and combine a range of materials.</p>	<p style="text-align: center;">Evaluate</p> <p>Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.</p>	<p style="text-align: center;">Technical Knowledge</p> <p>Understand how to strengthen and reinforce structures. Use mechanical and electrical systems in own work.</p>	<p style="text-align: center;">Food and Nutrition</p> <p>Understand the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes.</p>		
Year A						
	Prior Learning	Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn A	<p>Kapow Y2 Structures: Constructing a windmill</p> <p>Kapow Y2 Mechanisms: Wheels and Axles</p>	<p>Pupils will design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts whilst also building on their own design knowledge. They will then be introduced to thumbnail sketches and exploded diagrams.</p>	<p>Kapow Y3 Mechanical systems and pneumatic toys.</p>	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at pneumatic toys, play with toys, find out how they work. 3. Learn new skills needed: making a pneumatic using a syringe or by using a balloon (see Kapow lesson 1) 4. Design product 5. Make product 6. Evaluate product 	<p>Function Input Linkage Mechanism Motion Net Output Pivot Pneumatic system</p>	<p>Children will produce a working pneumatic toy.</p>
Spring A	<p>Kapow Y2 Structures: constructing a windmill</p> <p>Kapow Y2 – Mechanisms: Make a Moving Story Book</p>	<p>The children will explore 2D and 3D shape and think about how these can be combined to form a strong and stable structure. They will look at 3D nets and design a pyramid.</p>	<p>Kapow Y3: Structures: Constructing a Castle</p>	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at a range of Egyptian pyramids. 3. Learn new skills needed: practice drawing a net of a shape, practice precise cutting and precise sticking (what would work better, glue stick or PVA?) 4. Design product 5. Make product 6. Evaluate product 	<p>2D; 3D Castle Design; Net Scoring Shape Stiff; Stable Strong Structure Tab</p>	<p>To design and create a 3D structure inspired by the Egyptian pyramids.</p>
Summer A	<p>Kapow Y1 Food Fruit and Vegetables</p> <p>Kapow Y3 Food Eating Seasonably</p>	<p>Children will explore healthy eating, looking at foods from all food groups, in order to understand a</p>	<p>Kapow Y4 Food – Super Salads</p>	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at and try combinations of foods and dressings. 3. Learn new skills needed: chopping, peeling, pouring, mixing. 	<p>Bacteria Design Evaluation Flavour Healthy Hygiene</p>	<p>Children will design and make salad demonstrating their understanding of balance and good</p>

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		balance of good health.		4. Design product 5. Make product 6. Evaluate product		health, food hygiene and food safety.
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Year B						
	Prior Learning	Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn B	Kapow Y2 Mechanisms Y4 Science Electricity	Combine their understanding of electrical circuits with the use of construction materials to make a torch.	Kapow Y4 Electrical Systems - Torches	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at different types of torches eg. dynamo, solar torches, battery powered. 3. Learn new skills needed: make a circuit, joining materials to plastic 4. Design product 5. Make product 6. Evaluate product 	Battery Bulb Cell Conductor Insulator Circuit Switch Test	Children will design and make a torch using recycled materials.
Spring B	EYFS: Safely use and explore a variety of materials, tools and techniques Y1/2 Science Everyday Materials Kapow Y1 Textiles	Children will explore 2d pattern making, a range of stitches to join materials, before designing and making a Roman Vexillum.	Kapow Y3 Textile 2D to 3D	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at Roman Vexillum designs, which designs do we like and why? 3. Learn new skills needed: Running stitch, cross stitch. 4. Design product 5. Make product 6. Evaluate product 	Criteria Cross-stitch Design Fastening Fix Running stitch Seam Stitch Template Texture	Children will design and make a Roman Vexillum.
Summer B	Kapow Y1 Food Fruit and Vegetables	Children will learn about how climate change effects food growth and how we can make use of seasonal vegetables to work towards sustaining a healthy future.	Kapow Y3 Food: eating seasonally.	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: Look at breads from around the world, try seasonal products to flavour bread. 3. Learn new skills needed: kneading, reading scales, chopping. 4. Design product 5. Make product 6. Evaluate product 	Climate Evaluate Export Import Natural Recipe Seasons Sugar Vegetable Weather	To plan and make a seasonal bread roll.

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Upper Key Stage 2							
<p style="text-align: center;">Design</p> <p>Use research and criteria to develop products which are appealing, innovative, fit for purpose and aimed at a specific audience. Generate, develop and communicate ideas in a range of ways such as annotated sketches, detailed plans and presentations.</p>	<p style="text-align: center;">Make</p> <p>Select and use a range of tools and equipment for a range of uses. Select from and use a wider range of materials and components. Join and combine a range of materials using appropriate methods.</p>	<p style="text-align: center;">Evaluate</p> <p>Analyse existing products and use this to inform decisions and refine ideas. Justify decisions during the design process. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in DT have helped shape the world.</p>	<p style="text-align: center;">Technical Knowledge</p> <p>Use mechanical and electrical systems in own work, including programming.</p>	<p style="text-align: center;">Food and Nutrition</p> <p>Use a range of cooking techniques to cook dishes for a healthy and varied diet. Understand seasonality and where ingredients originate.</p>			
Year A							
	Prior Learning		Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn A	Kapow Y1 Food – Fruit and Vegetables Kapow Y3/4 Food – Super Salads Kapow Y5 – What could be healthier?	Children will look at how food is used to celebrate key festivals and events.	Food - Celebrating culture and seasonality	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: taste a variety of biscuits. 3. Learn new skills needed: melting, combining, mixing, rolling, shaping, moulding, finishing 4. Design product 5. Make product 6. Evaluate product 	Combining Melting Moulding Natural Processed Seasonal	Design and make an edible advent calendar.	
Spring A	Kapow Y3 Mechanical systems and pneumatic toys. Kapow Y4 Electrical Systems - Nightlights	To explore how circuits can be used for different purposes. To explore series circuits and apply this knowledge to inform	Kapow Y5- Electronic greeting cards	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at easter card designs 3. Learn new skills needed: explore circuits using graphite as a conductor. 4. Design product 5. Make product 6. Evaluate product 	Battery Circuit Conductor Design Graphite Negative	To design and make an electronic Easter card.	

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<p>Summer A</p>	<p>Kapow Y2 Structures: Constructing a Windmill</p> <p>Kapow Y2 Mechanisms: Wheels and Axles</p> <p>Kapow Y3 Mechanical systems and pneumatic toys</p>	<p>Design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it</p>	<p>Kapow Y5: Mechanical systems</p>	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at story of how Mayans came to be, how can we have a picture to represent each part? 3. Learn new skills needed: gears, pulleys, cams, levers and linkages 4. Design product 5. Make product 6. Evaluate product 	<p>Criteria Design Input Mechanism Model Motion</p>	<p>Understand and use mechanical systems in their products (or example, gears, pulleys, cams, levers and linkages) in the making of a pop up book on story of how Mayan's came to be.</p>
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Year B							
	Prior Learning	Intent (children will learn)		Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite
Autumn B	Kapow: Y1 Textiles Kapow Y3 Textiles 2D to 3D	Textiles - Combining different fabric shapes.		Kapow Y5 Textiles – Stuffed Toys	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at different hobby horses 3. Learn new skills needed: blanket stitch, adding appendages, applique 4. Design product 5. Make product 6. Evaluate product 	Appendage Applique Blanket Stitch Design criteria Detail Pattern Reinforce	Design, make and evaluate a hobby horse.
Spring B	Kapow Y2 Structures - Homes / Playgrounds for everyone Kapow Y2 Structures: Constructing a Windmill Kapow Y4 Structures – Constructing a Castle	Children will investigate bridge structures, design and make their own bridge and test the prototype before making a bridge.		Kapow Y5 Structures - Frame Structures - Bridges	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: look at London Bridge. 3. Learn new skills needed: cutting wood, joining wood. 4. Design product 5. Make product 6. Evaluate product 	Accurate Arch bridge Beam bridge Compression File Mark out Reinforce Set square Structure Suspension bridge Tension Truss bridge	Make a bridge using wood, inspired by London Bridge.
Summer B	Kapow Y1 Food: Fruit and Vegetables Kapow Y3 Food: Eating Seasonably Kapow Y4 Food: Super	Understand where food comes from To understand what a healthy meal consists of.		Kapow Y5: What could be healthier?	<ol style="list-style-type: none"> 1. Recap and assess prior learning 2. Market research: Trying Bolognese sauce, which taste nice? Why? Is it healthy? 3. Learn new skills needed: chopping, tusing hobs safely. 4. Design product 5. Make product 6. Evaluate product 	Balanced Ethical Processe d Reared	Follow a recipe to produce a healthy bolognaise sauce

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	Salads						
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