

## DT Knowledge, Skills, Sequencing and Progression

	EYFS	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Design</b>	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.
<b>Make</b>	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.
<b>Evaluate</b>	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.
<b>Technical Knowledge</b>	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.
<b>Food and Nutrition</b>	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						
<b>Design</b> 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.		<b>Make</b> 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.		<b>Evaluate</b> 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.	<b>Technical Knowledge</b> 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.	<b>Food and Nutrition</b> 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	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	1. To identify if a food is a fruit or a vegetable 2. To identify where plants grow and which parts we eat 3. To taste and compare fruit and vegetables 4. To make a fruit and vegetable smoothie	Blender Carton Fruit Healthy Ingredients Peel Peeler Recipe Slice Smoothie Slice Template Vegetable	Children will make a smoothie based on vegetables and fruit they have tried.
Spring A	EYFS: Safely use and explore a variety of materials, tools and techniques.  Y1/2: Moving vehicles: Wheels and axles	Use clear design criteria to turn 2D nets into 3D structures.	Kapow Y2 - Structures: constructing a windmill	1. Design a structure including individual preferences and requirements in my design. 2. Assemble a stable structure. 3. To assemble the components of my structure. 4. Evaluate my project and adapt my design.	Axle Bridge Design Design criteria Model Net structure Packaging Stable Strong Template Unstable	Children design, create and evaluate a windmill structure.

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<b>Summer A</b>	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"> <li>To explore making mechanisms</li> <li>To design a moving story book</li> <li>To construct a moving picture</li> <li>To test and evaluate their finished product</li> </ol>	Assemble Design Design criteria Evaluation Mechanism Model Sliders Stencil Target audience Template Test	Children design, create and evaluate a moving story book.
<b>Year B</b>						
	<b>Prior Learning</b>	<b>Intent (children will learn)</b>	<b>Unit</b>	<b>Sequence of Lessons WALT (children will...)</b>	<b>Vocabulary</b>	<b>Outcome / Composite</b>
<b>Autumn B</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"> <li>To know what makes a balanced diet.</li> <li>To taste test food combinations.</li> <li>To design a healthy wrap.</li> <li>To make a healthy wrap.</li> </ol>	Balance Balanced diet Carbohydrate Design criteria Fruit Ingredients Oils Protein Sugar Vegetable	Children will design, make and evaluate a healthy wrap.
<b>Spring B</b>	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"> <li>WALT: practise basic sewing techniques (children will use large needles and pre punched fabric to practise sewing)</li> <li>WALT: design and use a template (children will practise creating and cutting a template of 2 identical pieces)</li> <li>WALT: explore features that bring puppets to life (children will explore and draw a range of facial features on paper)</li> <li>WALT: design a puppet to perform a story (children will explore a range of puppets and design their own to use in a puppet show)</li> <li>WALT: make puppets using a own design (children will use a range of tools and techniques to join their templates together)</li> <li>WALT: evaluate their design (children will decide WWW/EBI)</li> </ol>	Decorate Design Fabric Glue Model Hand puppet Safety pin Stencil Technique Template	Children will design, make and evaluate a puppet.

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<b>Summer B</b>	<p>Kapow Y1 Use a range of tools and textiles to create a puppet</p> <p>Y2 Kapow structures</p> <p>Y1/Y2 Science – Everyday Materials</p>	To make a vehicle with wheels and axles	<p>Kapow Y2 Mechanisms - wheels and axles</p>	<ol style="list-style-type: none"> <li>1. WALT: explore a range of different vehicles and consider their similarities and differences - what does a vehicle need?</li> <li>2. WALT: investigate using a range of tools and techniques to make moving axles and wheels (range of materials)</li> <li>3. WALT: design a vehicle that will successfully carry a container of water</li> <li>4. WALT: make a vehicle</li> <li>5. WALT: evaluate a design and suggest improvements</li> </ol>	<p>Axle</p> <p>Axle holder</p> <p>Design</p> <p>Design criteria</p> <p>Frame</p> <p>Mechanism</p> <p>Pods</p> <p>Wheel</p>	<p>Children will design, make and evaluate a vehicle for carrying water</p>
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Lower Key Stage 2							
<b>Design</b> 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.		<b>Make</b> 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.		<b>Evaluate</b> 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.		<b>Technical Knowledge</b> Understand how to strengthen and reinforce structures. Use mechanical and electrical systems in own work.	<b>Food and Nutrition</b> Understand the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes.
Year A							
	Prior Learning	Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)	Vocabulary	Outcome / Composite	
Autumn A	Kapow Y2 Structures: Constructing a windmill  Kapow Y2 Mechanisms: Wheels and Axles	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.	Kapow Y3 Mechanical systems and pneumatic toys.	1. WALT: investigate and explore different pneumatic systems. 2. WALT: develop our understanding of pneumatics to design out on toys. 3. WALT: create a working pneumatic system. 4. WALT: assemble and evaluate a final piece.	Function Input Linkage Mechanism Motion Net Output Pivot Pneumatic system	Children will produce a working pneumatic toy.	
Spring A	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.	1. WALT: know that climate effects food growth. 2. WALT: understand the advantages of eating seasonal foods grown in the UK. 3. WALT: create a recipe that is healthy and nutrition using seasonal fruits and vegetables. 4. WALT: safely follow a recipe when cooking.	Climate Evaluate Export Import Natural Recipe Seasons Sugar Vegetable Weather	To plan and make a seasonal dish.	
Summer A	Kapow Y2 Structures: constructing a windmill	The children will explore 2D and 3D shape and think about how these can be combined to	Kapow Y3: Structures: Constructing a Castle	WALT: Recognise how multiple shapes (2D and 3D) are combined to form a string and stable structure. WALT: design a castle. WALT: Construct 3D nets. WALT: Construct and evaluate a final product.	2D; 3D Castle Design; Net Scoring Shape	To design and create a 3D structure inspired by St Michaels Mount.	

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	Kapow Y2 – Mechanisms: Make a Moving Story Book	form a strong and stable structure. They will look at 3D nets and design a castle.			Stiff; Stable Strong Structure Tab	
<b>Year B</b>						
	<b>Prior Learning</b>	<b>Intent (children will learn)</b>	<b>Unit</b>	<b>Sequence of Lessons WALT (children will...)</b>	<b>Vocabulary</b>	<b>Outcome / Composite</b>
<b>Autumn B</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 purse or wallet.	Kapow Y3 Textile 2D to 3D	1. Explore a range of stitches used for joining materials. 2. Explore and evaluate a range of different purse/wallet styles. 3. Design and produce a 2D pattern 4. Make and evaluate finished product.	Criteria Cross-stitch Design Fastening Fix Running stitch Seam Stitch Template Texture	Children will design and make a purse or wallet for an Egyptian Pharaoh
<b>Spring B</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	1. Explore a range of switches and lights 2. Design a torch using recycled construction materials 3. Make and evaluate a finished product	Battery Bulb Cell Conductor Insulator Circuit Switch Test	Children will design and make a torch using recycled materials.
<b>Summer B</b>	Kapow Y1 Food Fruit and Vegetables  Kapow Y3 Food Eating Seasonably	Children will explore healthy eating, looking at foods from all food groups, in order to understand a balance of good health.	Kapow Y4 Food – Super Salads	1. Understand hygiene rules, food storage and food safety and equipment safety guidance. 2. Consider ingredient quantity and combinations, including dressings and topping, whilst identifying food groups. Putting into practice hygiene and safety knowledge, when preparing an experimental salad. 3. Investigate and research to develop the ingredients and presentation of a salad and incorporating their knowledge of balance and good health. 4. Plan the steps needed to prepare salad, using equipment safely and hygienically, explaining choices for their decisions. Evaluate against a set of criteria.	Bacteria Design Evaluation Flavour Healthy Hygiene	Children will design and make salad demonstrating their understanding of balance and good health, food hygiene and food safety.

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Upper Key Stage 2										
<b>Design</b> 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.			<b>Make</b> 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.		<b>Evaluate</b> 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.		<b>Technical Knowledge</b> Use mechanical and electrical systems in own work, including programming.		<b>Food and Nutrition</b> Use a range of cooking techniques to cook dishes for a healthy and varied diet. Understand seasonality and where ingredients originate.	
Year A										
	Prior Learning			Intent (children will learn)	Unit	Sequence of Lessons WALT (children will...)		Vocabulary	Outcome / Composite	
Autumn A	Kapow Y2 Structures: Constructing a Windmill  Kapow Y2 Mechanisms: Wheels and Axles  Kapow Y3 Mechanical systems and pneumatic toys		Design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it	Kapow Y5: Mechanical systems	1. To design a pop up book 2. To follow my design brief to make my pop up book 3. To use layers and spacers to cover the working of mechanisms 4. To create a high-quality product suitable for a target user		Criteria Design Input Mechanism Model Motion	Understand and use mechanical systems in their products (or example, gears, pulleys, cams, levers and linkages) in the making of a pop up book.		
Spring A	Kapow Y1 Food: Fruit and Vegetables  Kapow Y3 Food: Eating Seasonably  Kapow Y4 Food: Super Salads		Understand where food comes from To understand what a healthy meal consists of	Kapow Y5: What could be healthier?	1.To understand where food comes from 2.To understand the term ‘healthy’ 3.To adapt a traditional recipe 4.To complete a food product		Balanced Ethical Processed Reared	Follow a recipe to produce a healthy bolognaise sauce		
Summer 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	1. Graphite circuits – to explore circuits using graphite as a conductor. 2. Card design – design a greeting card with a working circuit. 3. Making the card- accurately labelling the negative and positive parts of the battery			Battery Circuit Conductor Design Graphite Negative	To design and make an electronic greeting card		

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	Kapow Y5 Mechanical systems		and create an electronic greeting card.			4. Adding the circuit- integrating the functional circuits in the greeting cards.	Parallel circuit Positive Switch Series circuit	
Year B								
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Autumn B	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	1. Taste a variety of biscuits. 2. Design a recipe for your own biscuit. 3. Make biscuits using melting, combining, mixing, rolling, shaping, moulding, finishing. 4. Design packaging for the biscuit		Combining Melting Moulding Natural Processed Seasonal	Design and make an edible advent calendar.
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	1. Look at techniques for joining 2D frameworks. 2. Make 3 D frameworks with tubes. 3. Draw plans and design a bridge 4. Test and evaluate bridge design using paper. 5. Make bridge with wood. 6. Evaluate final product		Accurate Arch bridge Beam bridge Compression File Mark out Reinforce Set square Structure Suspension bridge Tension Truss bridge	Make a bridge using wood.
Summer B	Kapow: Y1 Textiles  Kapow Y3 Textiles 2D to 3D	Textiles - Combining different fabric shapes.		Kapow Y5 Textiles – Stuffed Toys	1. Evaluate toys that have been made. 2. Design a stuffed toy. 3. Blanket stitch tutorial. 4. Add appendages. 5. Applique. 6. Assemble 7. Evaluate		Appendage Applique Blanket Stitch Design criteria Detail Pattern Reinforce	Make a toy