

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 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.		Make 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.		Evaluate 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.	Technical Knowledge 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.	Food and Nutrition 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 – Cooking and Nutrition	1. Investigate and evaluate existing products. 2. To identify if a food is a fruit or a vegetable 3. To identify where plants grow and which parts we eat 4. To cut, juice, taste and compare fruit and vegetables 5. To make and evaluate fruit and vegetable smoothies	Blender Carton Fruit Cut Fruit Ingredients Juice/r Leaf Root Seed Stem Table knife 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	Learn to identify stable and unstable structural shapes, identify the features that make a chair stable, work independently to make and	Kapow Y2 Structures – Baby Bears Chair	1. Investigate and evaluate existing products. 2. To explore the concept and features of structures and the stability of different shapes. 3. To understand that the shape of structure effects its strength. 4. To make a structure according to design criteria 3. To produce a finished structure and evaluate its strength, stiffness and stability.	Design criteria Man-made Natural Properties Structure Stable Shape Model Test	To make a chair for a toy bear.

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		evaluate a stable structure.				
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	1. Investigate and evaluate existing products. 2. To explore making mechanisms 3. To design a moving story book 4. To construct a moving picture 5. To test and evaluate their finished product	Assemble Design Design criteria Evaluation Mechanism Model Sliders Stencil Target audience Template Test	Children design, create and evaluate a moving story book.
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	1. Investigate and evaluate existing products. 2. To know what makes a balanced diet. 3. To identify an appropriate piece of equipment to prepare a given food. 4. To taste test food combinations. 5. To design a healthy wrap. 6. To make a healthy wrap and evaluate it based on a design criteria.	Balance Balanced diet Carbohydrate Design criteria Fruit Ingredients Oils Protein Sugar Vegetable	Children will design, make and evaluate a healthy wrap.
Spring 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	1. Investigate and evaluate existing products. 2. To practise basic sewing techniques (children will use large needles and pre punched fabric to practise sewing) 3. To design and use a template (children will practise creating and cutting a template of 2 identical pieces) 4. To explore features that bring puppets to life (children will explore and draw a range of facial features on paper) 5. To design a puppet to perform a story (children will explore a range of puppets and design their own to use in a puppet show)	Decorate Design Fabric Glue Model Hand puppet Safety pin Stencil Technique Template	Children will design, make and evaluate a puppet.

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				6. To make puppets using a own design (children will use a range of tools and techniques to join their templates together) 7. To evaluate their design (children will decide WWW/EBI)		
Summer B	Kapow Y1 Use a range of tools and textiles to create a puppet Y2 Kapow structures Y1/Y2 Science – Everyday Materials	Identify the correct terms for levers, linkages and pivots, analyse popular toys using the correct terminology, create functional linkages, design and evaluate monsters suitable for children.	Kapow Y2 Mechanisms: Making a Moving Monster	1. Investigate and evaluate existing products. 2. To look at objects and understand how they move. 3. To look at objects and understand how they move 4. To explore different design options 5. To make a moving monster	Axle Input Linkage Mechanical Output Pivot Wheel	Children will make and evaluate a moving monster.

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Lower Key Stage 2							
Design 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.		Make 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.		Evaluate 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.		Technical Knowledge Understand how to strengthen and reinforce structures. Use mechanical and electrical systems in own work.	Food and Nutrition 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 – Automata 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 Cooking and Nutrition: 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	
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 a variety of materials, tools and techniques Y1/2 Science Everyday Materials Kapow Y1 Textiles	Identify the features, benefits and disadvantages of a range of fastenings; write design criteria and design to meet this; make a template; assemble	Kapow Y4 Textiles – Fastenings	1. Explain the advantages and disadvantages of different types of fastenings. 2. Design a product to meet design criteria. 3. Make and test a paper template 4. Assemble a book jacket 5. Evaluate product	Criteria Fabric Fastening Fix Mock-up Stitch Template	Children will design and make a book jacket.
Spring 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.
Summer 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										
Design 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 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 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 Use mechanical and electrical systems in own work, including programming.		Food and Nutrition 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								
	Prior Learning	Intent (children will learn)		Unit	Sequence of Lessons WALT (children will...)		Vocabulary	Outcome / Composite
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