

DT Curriculum Map

	EYFS:		
Reception	Autumn <ul style="list-style-type: none"> • Making a split pin Mini Me • Build models using construction equipment. • Design and make rockets • Design and make lanterns, 	Spring <ul style="list-style-type: none"> • Making a boat for The Gingerbread Man • Design and make gingerbread men 	Summer <ul style="list-style-type: none"> • Junk modelling / construction materials: making habitats
	Unit 1	Unit 2	Unit 3
Year 1	KAPOW unit - Textiles: Puppets <ul style="list-style-type: none"> • Using a template to create a design for a puppet. • Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing steps for construction. • Reflecting on a finished product, explaining likes and dislikes. NC links: Pupils should be taught to: Design <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. Make <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks Evaluate <ul style="list-style-type: none"> • Evaluate their ideas and products against design criteria Technical knowledge <ul style="list-style-type: none"> • Explore and use mechanisms in their products. 	KAPOW unit - Mechanisms: Making a moving storybook <ul style="list-style-type: none"> • Explaining how to adapt mechanisms, using bridges or guides to control the movement. • Designing a moving story book for a given audience. • Following a design to create moving models that use levers and sliders. • Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. • Reviewing the success of a product by testing it with its intended audience. NC links: Pupils should be taught to: Design <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. Make <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks Evaluate <ul style="list-style-type: none"> • Evaluate their ideas and products against design criteria Technical knowledge <ul style="list-style-type: none"> • Explore and use mechanisms in their products. 	KAPOW unit - Food: fruit and vegetables (making a smoothie) <ul style="list-style-type: none"> • Designing smoothie carton packaging by-hand or on ICT software. • Chopping fruit and vegetables safely to make a smoothie. • Identifying if a food is a fruit or a vegetable. • Learning where and how fruits and vegetables grow. • Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. NC links: Pupils should be taught to: <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from

<p>Year 2</p>	<p>KAPOW unit food; a balanced diet TBC</p> <p>Pizzas</p> <ul style="list-style-type: none"> • Designing a healthy pizza based on a food combination which works well together. • Slicing food safely using the bridge or claw grip. • Constructing a wrap that meets a design brief. • Describing the taste, texture and smell of fruit and vegetables. • Taste testing food combinations and final products. • Describing the information that should be included on a label. • Evaluating which grip was most effective. <p>NC links: Pupils should be taught to:</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from 	<p>KAPOW unit mechanisms fairgrounds or moving monster; TBC</p> <p>There is an option of baby bear chair which would link with traditional tales.</p> <ul style="list-style-type: none"> • Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move. • Creating clearly labelled drawings that illustrate movement. • Adapting mechanisms. • Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. <p>Make</p> <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks <p>Evaluate</p> <ul style="list-style-type: none"> • Evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> • understand and use mechanical systems in their products 	<p>KAPOW unit textiles: pouchesTBC</p> <p>Sewing - Bunting</p> <ul style="list-style-type: none"> • Designing a pouch. • Selecting and cutting fabrics for sewing. • Decorating a pouch using fabric glue or running stitch. • Threading a needle. • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. • Neatly pinning and cutting fabric using a template. • Troubleshooting scenarios posed by teacher. • Evaluating the quality of the stitching on others' work <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. <p>Make</p> <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks <p>Evaluate</p> <ul style="list-style-type: none"> • Evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> • understand and use mechanical systems in their products
<p>Year 3</p>	<p>KAPOW unit - DT- Eating seasonally</p> <ul style="list-style-type: none"> • Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. 	<p>KAPOW unit - DT- Pneumatic toys</p> <ul style="list-style-type: none"> • Designing a toy that uses a pneumatic system. • Developing design criteria from a design brief. 	<p>KAPOW unit - DT- Constructing a Castle</p> <ul style="list-style-type: none"> • Designing a castle with key features to appeal to a specific person/purpose. • Drawing and labelling a castle design using 2D shapes.

	<ul style="list-style-type: none"> Knowing how to prepare themselves and a workspace to cook safely in, learning the basic rules to avoid food contamination. Following the instructions within a recipe. Establishing and using design criteria to help test and review dishes. Describing the benefits of seasonal fruits and vegetables and the impact on the environment. Suggesting points for improvement when making a seasonal tart. <p>NC links: Pupils should be taught to:</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy ad varied diet prepare and cook using a range of cooking techniques understand seasonality, and know where ad how a variety of ingredients are grown, reared, caught and processed. 	<ul style="list-style-type: none"> Generating ideas using thumbnail sketches and exploded diagrams. Learning that different types of drawings are used in design to explain ideas clearly. Creating a pneumatic system to create a desired motion. Building secure housing for a pneumatic system. Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy. Selecting materials due to their functional and aesthetic characteristics. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> apply their knowledge of how to strengthen, stiffen and reinforce structures understand and use mechanical systems in their products 	<ul style="list-style-type: none"> Designing and/or decorating a castle tower on CAD software. Constructing a range of 3D geometric shapes using nets. Creating special features for individual designs. Making facades from a range of recycled materials. Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design. Suggesting points for modification of the individual designs. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> apply their knowledge of how to strengthen, stiffen and reinforce structures understand and use mechanical systems in their products
Year 4	<p>KAPOW unit - adapting a recipe</p> <ul style="list-style-type: none"> Designing a biscuit within a given budget, drawing upon previous taste testing. 	<p>KAPOW unit - structure; pavilions</p> <ul style="list-style-type: none"> Designing a stable pavilion structure that is aesthetically pleasing and selecting materials 	<p>KAPOW unit - Textiles; fastenings</p> <ul style="list-style-type: none"> Writing design criteria for a product, articulating decisions made.

	<ul style="list-style-type: none"> ● Following a baking recipe. ● Cooking safely, following basic hygiene rules. ● Adapting a recipe. ● Evaluating a recipe, considering: taste, smell, texture and appearance. ● Describing the impact of the budget on the selection of ingredients. ● Evaluating and comparing a range of products. ● Suggesting modifications. <p>NC links: Pupils should be taught to:</p> <ul style="list-style-type: none"> ● understand and apply the principles of a healthy ad varied diet ● prepare and cook using a range of cooking techniques 	<p>to create a desired effect.</p> <ul style="list-style-type: none"> ● Building frame structures designed to support weight. ● Creating a range of different shaped frame structures. ● Making a variety of free-standing frame structures of different shapes and sizes. ● Selecting appropriate materials to build a strong structure and for the cladding. ● Reinforcing corners to strengthen a structure. ● Creating a design in accordance with a plan. ● Learning to create different textural effects with materials. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ● generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes. <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Technical knowledge</p> <ul style="list-style-type: none"> ● apply their knowledge of how to strengthen, stiffen and reinforce structures 	<ul style="list-style-type: none"> ● Designing a personalised book sleeve. ● Making and testing a paper template with accuracy and in keeping with the design criteria. ● Measuring, marking and cutting fabric using a paper template. ● Selecting a stitch style to join fabric. ● Sewing neatly using small regular stitches. ● Incorporating a fastening to a design. ● Testing and evaluating an end product against the original design criteria. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ● generate, develop, model and communicate their ideas through discussion, annotated sketches and pattern pieces <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of tools and equipment to perform practical tasks. <p>Evaluate</p> <ul style="list-style-type: none"> ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> ● apply their understanding of how to strengthen structures
Year 5	<p>Unit name - Vehicles</p> <ul style="list-style-type: none"> ● Use step by step instructions to draw a car in the oblique method ● Use grid paper to draw out a net ● Use pinning as a technique to re draw the outline of the net using a pencil and ruler to match the dots together ● Understanding the orientation of the vehicle net enabling designs to be added ● Scoring card using a ruler and scissors 	<p>Unit name - 3D Printed Bubble Wands</p> <ul style="list-style-type: none"> ● Undertake research into how different shapes and sizes of bubbles are created. ● Understand how the user interacts with the bubble pot and stick. ● Understand the user group for the product being children. ● Understand what CAD (Computer aided design) is 	<p>Unit name - Lighthouse</p> <ul style="list-style-type: none"> ● Understand the purpose of a lighthouse and what it does ● Design on a mini lighthouse net 4 different sides. ● Scaling design up onto full size lighthouse net. ● Cutting, scoring and folding a net ● Be able to identify circuit symbols ● Use wire cutters/strippers to strip and cut wire. ● Understand the difference between a series circuit and a parallel circuit. ● Understand what a conductive material is

	<ul style="list-style-type: none"> ● Accurately measuring out lengths of square dowel using a ruler. ● Use a junior hacksaw with a bench hook to saw accurately ● Test the vehicle checking all components move and the vehicle can roll in a straight line. ● Evaluate against design. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ● generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes. <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of tools and equipment to perform practical tasks. <p>Evaluate</p> <ul style="list-style-type: none"> ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Technical knowledge</p> <ul style="list-style-type: none"> ● understand and use mechanical systems in their products 	<ul style="list-style-type: none"> ● Understand was CAM (Computer aided manufacturing) is ● Understand what 3D printing is and how it works ● Create a CAD of chosen wand ● Create a re design to improve the product. <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ● Use research and develop design criteria to inform the design of innovative, functional, appealing products that re fit for purpose. <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Technical knowledge</p> <ul style="list-style-type: none"> ● understand and use mechanical systems in their products 	<ul style="list-style-type: none"> ● Make a tinfoil switch to turn the lighthouse on and off <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ● generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes. <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of tools and equipment to perform practical tasks. <p>Evaluate</p> <ul style="list-style-type: none"> ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Technical knowledge</p> <ul style="list-style-type: none"> ● understand and use electrical systems in their products.
Year 6	<p>Unit name - Class name plaques</p> <ul style="list-style-type: none"> ● Cutting out template using scissors and tracing onto MDF ● Understand MDF is a manufactured board ● Sawing using a coping saw ● Using a handheld power drill to create a hole ● Clamp their work to the bench and having scrap wood underneath to protect the table ● Use sand paper and a cork block to smooth the edges. ● Painting the plaques following the template in their books. ● Using a heat gun to dry a layer of paint if multiple colours/ layers are being used. ● Varnish to seal the paint and finish the MDF ● Evaluation against design 	<p>Unit name- Cam Toys</p> <ul style="list-style-type: none"> ● Understand 4 different types of motion. linear, reciprocating, oscillating and rotary. ● Measuring out lengths of wood using a rule and tri-square ● Sawing lengths of wood using a tenon saw and bench hook in the vice ● Marking out the centre of wood using the cross method. Marking on an arrow making sure the side holes for the cam shaft are level ● Using a power drill to create holes the frame. Understanding the importance of clamping work to the work bench. 	<p>Unit name - Structures</p> <ul style="list-style-type: none"> ● Understand 4 different types of bridges and examples from around the world ● Investigating shapes and structures using spaghetti. Learn how to strengthen a structure with braces ● Design a team name and logo in a group. Team work, communication ● Arithmetic to work out total price, number of units and remaining budget. ● Construction of the bridge working as a team and following a drawn design. ● Evaluating the bridge by testing with weights until failure. Conversion of grams to kilograms

	<p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • generate, develop, model and communicate their ideas through discussion and annotated sketches <p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks. <p>Evaluate</p> <ul style="list-style-type: none"> • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. 	<ul style="list-style-type: none"> • Pinning and glueing the frame in 2 "L" shapes. Understanding this method to be the best way of ensuring a square frame. Hammer, nails and PVA glue used • Assembling the 2 "L" shapes to create the frame. Use of the vice to hold and clamp work. Nails, hammer, pins and PVA glue. • Use stains to add colour to the wooden frame. • Marking out styrofoam with the desired shape • Using a coping saw, surform and abrasive paper to cut and shape the styrofoam • Paint the styrofoam with design • Saw dowel to length and assemble, with PVA glue, all other parts • Test cam toy to evaluate function <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. <p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks. • select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Technical knowledge</p> <ul style="list-style-type: none"> • understand and use mechanical systems in their products 	<ul style="list-style-type: none"> • Redesign bridge to make improvements and so the bridge can take more weights <p>NC links: Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • generate, develop, model and communicate their ideas through discussion and annotated sketches <p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks. • select from and use a wider range of materials and components according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> • investigate and analyse existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> • apply their knowledge of how to strengthen, stiffen and reinforce structures
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