

D&T		AUTUMN	SPRING	SUMMER
EYFS	Unit title and key focus	Food & Feasts / Pets	The Pond / Feelings	Journeys / Creepy Crawlies
	Key learning by the end of the unit	<p>Expressive Arts & Design</p> <ul style="list-style-type: none"> Choose the right resource to carry out their own plan biscuit baking and decorating, chip and parsnip preparation, break and bun baking. <p>Physical Development</p> <ul style="list-style-type: none"> Cooking opportunities – fine motor. Cutting, chopping, rolling, pressing, choice, and discussion of food groups. use a range of small tools (fine motor – scissor use) 	<p>Expressive Arts & Design</p> <ul style="list-style-type: none"> Return to previous learning and refine ideas and represent them (3D modelling, Easter cooking) use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (colour monster, <p>Physical Development</p> <ul style="list-style-type: none"> development of small motor skills so they can use a range of tools competently, safely and confidently. ○ Use core strength when sitting on the floor. 	<p>Expressive Arts & Design</p> <ul style="list-style-type: none"> explore, use and refine a variety of artistic effects to express their ideas (Junk modelling) <p>Physical Development</p> <ul style="list-style-type: none"> development of small motor skills so they can use a range of tools competently, safely and confidently. <p>Understanding the world</p> <ul style="list-style-type: none"> ○ Exploring how things work (exploring outside, tools, creepy crawlies)
Year 1	Unit title and key focus	<p>Mechanisms – Moving books</p> <p>Explore levers and sliders to make a moving story book.</p>	<p>Food</p> <p>Handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish chosen ingredients for a smoothie they will make, with accompanying packaging.</p>	<p>Structures</p> <p>Design, decorate and build a windmill for a mouse (client) to live in, develop an understanding of different types of windmill, how they work and their key features. Look at real existing examples and the functions that they carry out.</p>
	<p>Key learning by the end of the unit</p> <p>Links to NC:</p> <p>Design</p>	<p>Design Planning and sketching the mechanical elements in the moving story book</p> <p>Make Assembling mechanisms to create various movements (up, down, along, around)</p> <p>Evaluate Reflecting on the finished moving story book, by expressing likes, dislikes and improvements</p>	<p>Design Designing smoothie carton packaging by-hand or on ICT software</p> <p>Make 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</p> <p>Evaluate</p>	<p>Design Learning the importance of a clear design criteria Including individual preferences and requirements in a design</p> <p>Make Making stable structures from card, tape and glue Making functioning turbines and axles which are assembled into a main supporting structure</p> <p>Evaluate</p>

	<p>Make</p> <p>Evaluate</p> <p>Technical Knowledge</p>	<p>Technical knowledge Exploring how levers and sliders work in a paper-card format to create different movements</p>	<p>Tasting and evaluating different food combinations Describing appearance, smell and taste Suggesting information to be included on packaging</p> <p>Technical Knowledge Understanding the difference between fruits and vegetables Describing and grouping fruits by texture and taste</p>	<p>Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't Suggest points for improvements</p> <p>Technical Knowledge Describing the purpose of structures, including windmills Learning how to turn 2D nets into 3D structures Learning that the shape of materials can be changed to improve the strength and stiffness of structures</p>
	<p>Key vocabulary</p>	<p>See Kapow Key facts sheet - https://www.kapowprimary.com/wp-content/uploads/2020/05/KO-DT-Y1-Fruit-Vegetables-PRINT.pdf</p>	<p>See Kapow Key facts sheet – https://www.kapowprimary.com/wp-content/uploads/2020/05/KO-DT-Y1-Mechanisms-Moving-Story-Book-PRINT.pdf</p>	<p>See Kapow Key facts sheet – https://www.kapowprimary.com/wp-content/uploads/2020/05/KO-DT-Y1-Structures-Constructing-a-Windmill-PRINT.pdf</p>
Year 2	<p>Unit title and Core Knowledge</p>	<p>Mechanisms – Fair ground wheel Explore existing mechanisms in order to design, test and make their own big wheel style ride.</p>	<p>Textiles – Pouches Threading a needle, sewing a running stitch, preparing fabrics for sewing, tying a secure knot</p>	
	<p>Key learning by the end of the unit</p>	<p>Design Designing for others, using criteria and applying knowledge of structures through planning</p> <p>Make Cutting and assembling accurately, selecting appropriate crafting materials and tools such as card, paper, glue and paper fasteners</p> <p>Evaluate Identifying flaws in a pre-modelled design and thinking about ways to fix or strengthen them, cutting and assembling accurately, selecting from materials based on their characteristics</p>	<p>Design Developing and sketching design ideas using a template</p> <p>Make Discussing the making process and finished product,</p> <p>Evaluate Reviewing other's final outcome</p> <p>Technical knowledge Identifying parts of a needle (point and eye), understanding the products</p>	

		<p>Technical knowledge</p> <p>Understanding strength, stability and stiffness, knowing that different shapes can strengthen or weaken structures, know materials can be manipulated to improve strength and stiffness</p>		
	Key vocabulary	https://www.kapowprimary.com/wp-content	https://www.kapowprimary.com/wp-content	
Year 3	Unit title and key NC content	<p>Structures – Constructing a castle</p> <p>Pupils learn more advanced construction techniques and plan for complex arrangements of structures with continual emphasis on evaluating throughout.</p>	<p>Food – Eating seasonally</p> <p>Pupils learn about seasonality and how the climate a food is grown in can alter the way it tastes and make a crumble and tart using seasonal ingredients</p>	<p>Textiles – Cushions</p> <p>Pupils learn how to sew cross stitch and applique and then apply this to the designing and creation of a cushion.</p>
	Key learning by the end of the unit	<p>Design Planning for manufacture. Establishing and using a design criterion to help focus and evaluate their work</p> <p>Make Using more demanding practical skills (paper engineering / paper folding techniques)</p> <p>Evaluate Evaluating as they work Evaluating their own and other's final product</p> <p>Technical knowledge Application of prior knowledge and increasing knowledge of nets</p>	<p>Design Designing to criteria</p> <p>Make Safely prepare fruit and vegetables Follow a recipe</p> <p>Evaluate Tasting and evaluating their dessert</p> <p>Technical knowledge Knowing what foods are in season and when Understanding the benefits of foods by their colour Knowing how climate alters the sweetness of food</p>	<p>Design Designing for a purpose</p> <p>Make Sewing cross stitch and using applique</p> <p>Evaluate Compare to designs</p> <p>Technical knowledge Construction of cushions Understanding that fabrics can be layered for effect Knowing different stitching styles</p>
	Key vocabulary	https://www.kapowprimary.com/wp-content	https://www.kapowprimary.com/wp-content	https://www.kapowprimary.com/wp-content
Year 4	Unit title and key NC content	<p>Mechanical Systems – Making a slingshot car</p> <p>Use kinetic energy to power slingshot cars, designing and making their own and then testing their effectiveness in time trials</p>	<p>Electrical systems - Torches</p> <p>Be introduced to electricity and electrical safety before making a simple electric circuit to create a functioning torch.</p>	

	Key learning by the end of the unit	<p>Design</p> <p>Developing designs following a list of design criteria, modelling and testing the launch chassis</p> <p>Make</p> <p>Selecting the materials and tools to measure, mark, cut and assemble accurately, using nets and tabs to design and make the car chassis</p> <p>Evaluate</p> <p>Testing products in time trials, comparing to other's designs, discussing and recording ways to improve the speed of the car, reviewing and learning about aerodynamic shapes in cars</p> <p>Technical knowledge</p> <p>Utilising car-part terminology (e.g. chassis), consolidating net and template creation, recognising key mechanisms as part of a product's key functionality</p>	<p>Design</p> <p>Designing for a chosen user-profile, identifying key properties (e.g. reflective, waterresistant) of a material and utilising this knowledge to inform design ideas</p> <p>Make</p> <p>Making a functional, operational electrical series-circuit and housing this appropriately, selecting materials based on their characteristics</p> <p>Evaluate</p> <p>Reviewing and discussing existing torches, including use and the reasons behind the materials in their build</p> <p>Technical knowledge</p> <p>Identifying electrical components by name (e.g. bulb, cell), able to build a working electrical series-circuit and correct errors</p>	
	Key vocabulary	https://www.kapowprimary.com/wp-content	https://www.kapowprimary.com/wp-content	
Year 5	Unit title and key NC content	<p>Structures – Bridges</p> <p>Explore and experiment with a range of different bridge structures, forces and components involved in bridge building, before designing and making their own to test to destruction.</p>	<p>Food – What could be healthier?</p> <p>Adapt a Bolognese recipe by adding or altering ingredients and learn about the ethical and hygienic issues of food.</p>	<p>Electrical systems – Electronic greetings cards</p> <p>Explore electric circuits and apply this knowledge to design and make their own electric greetings cards.</p>
	Key learning by the end of the unit	<p>Design</p> <p>Designing arch and truss bridges, modelling various methods of bridge-making</p>	<p>Design</p> <p>Adapting an existing recipe</p> <p>Make</p> <p>Cutting, preparing and cooking vegetables and</p>	<p>Design</p> <p>Applying scientific knowledge to generate design ideas, identifying the target audience, considering methods of incorporating the circuitry</p>

		<p>Make Using triangulation for bracing, selecting appropriate tools and equipment such as saws and bench hooks to cut wood down to size and sandpaper to achieve a high-quality finish</p> <p>Evaluate Testing through trial and error to evaluate the successful and unsuccessful functional properties of a design and its materials</p> <p>Technical knowledge Understanding the importance of compression and tension in bridge structures, establishing methods of reinforcing more complex structures to improve strength, stability and stiffness</p>	<p>meat hygienically, using kitchen equipment such as knives, hot pans and hobs in a safe manner, recognising when meat is cooked</p> <p>Evaluate Tasting and feeding back on existing pre-made Bolognese sauces, suggesting substitute Ingredients</p> <p>Cooking & Nutrition Knowing where meat comes from and understand ethical issues around beef, identifying the nutritional values and contents on packaged food, making healthier ingredient swaps</p>	<p>Make Selecting materials based on their properties (e.g. conductive, insulating), creating and incorporating a functional series-circuit concealing it inside the card</p> <p>Evaluate Experimenting with, and testing, series and parallel circuits to determine which would be fit for purpose as part of their design ideas</p> <p>Technical knowledge Drawing circuit diagrams and symbols, knowing the function of different circuit components, understanding the terminology: insulator, conductor, LED, battery</p>
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Year 6	Unit title and key NC content	<p>Textiles – Waistcoats Learn how to measure, cut and assemble fabric to create a waistcoat. They will draw a design in accordance with their own design criteria.</p>		<p>Mechanical toys – Automata toys Develop their woodworking skills and explore cams to design and make mechanical window displays.</p>
	Key learning by the end of the unit	<p>Design Devising a list of design criteria, sketching and annotating design ideas on to a pattern piece and amending the measurements to suit their desired client</p> <p>Make Marking out, cutting and joining fabrics accurately, creating a consistent seam and attaching fastenings appropriately, applying decorative features such as appliqué</p> <p>Evaluate</p>		<p>Design Drawing and annotating exploded and cross-sectional diagrams to illustrate ideas, modelling various cam shapes, generating design ideas based on a design brief</p> <p>Make Measuring, marking and cutting woodwork accurately, selecting appropriate equipment, assembling components accurately to create a fully functional mechanical toy</p> <p>Evaluate</p>



		<p>Exploring existing products and considering the user, materials and shape, evaluating the final outcome against the design criteria and client's requirements and preferences</p> <p>Technical knowledge Knowing how to create hidden seams, accurate and consistent stitches, and secure fastenings</p>		<p>Experimenting with cams to establish which movement is fit for purpose against their design ideas, investigating and discussing existing automata toys, checking accuracy of joints</p> <p>Technical knowledge Understanding the relationship between the cam, follower, axle, handle and topper, as part of a complete mechanism, creating a stable frame structure to support the mechanism</p>
	Key vocabulary	https://www.kapowprimary.com/wp-content		https://www.kapowprimary.com/wp-content