

Skills Progression

DT

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms	<p>Making a moving journey (adapted from Y1 making a moving storybook)</p> <p>Design</p> <ul style="list-style-type: none"> Design a journey with one moving part Create a background picture <p>Make</p> <ul style="list-style-type: none"> Make a slider as part of a picture considering tools and materials required <p>Evaluate</p> <ul style="list-style-type: none"> To talk about design and outcome 	<p>Wheels and axels (adapted and combined with constructing a windmill)</p> <p>Design</p> <ul style="list-style-type: none"> Generate ideas <p>Make</p> <ul style="list-style-type: none"> Construct vehicle (windmill) using paper/card and tape Build following instructions <p>Evaluate</p> <ul style="list-style-type: none"> Look at initial design and evaluate against initial criteria 	<p>Fairground wheel</p> <p>Design</p> <ul style="list-style-type: none"> Select a suitable linkage system to produce the desired motions Design a wheel selecting appropriate materials based on their properties <p>Make</p> <ul style="list-style-type: none"> Select materials based on their characteristics Follow a design brief <p>Evaluate</p> <ul style="list-style-type: none"> Evaluate different designs Test and adapt a design <p>Making a moving monster</p> <p>Design</p> <ul style="list-style-type: none"> Create a class design for a moving monster Design a moving monster for a specific audience in accordance with design criteria 	<p>Make a slingshot car (moved from Y4)</p> <p>Design</p> <ul style="list-style-type: none"> Design a shape that reduces air resistance Draw a net to create a structure from Choose shapes that increase or decrease speed as a result of air resistance Personalise a design <p>Make</p> <ul style="list-style-type: none"> Measure, mark, cut and assemble with increasing accuracy Make a model based on a chosen design <p>Evaluate</p> <ul style="list-style-type: none"> Evaluate the speed of a final product based on the effect of shape on speed and the accuracy of workmanship on performance 		<p>Pop up book</p> <p>Design</p> <ul style="list-style-type: none"> Design a pop up book which uses a mixture of structures and mechanisms Name each mechanism, input and output accurately Storyboard ideas for a book <p>Make</p> <ul style="list-style-type: none"> Follow a design brief to make a pop up book, neatly and with focus on accuracy Make mechanisms and/or structures using sliders, pivots and folds to produce movement Use layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result <p>Evaluate (N/A on Kapow)</p>	

			<p>Make</p> <ul style="list-style-type: none"> • Make linkages using card for levers and split pins for pivots • Experiment with linkages adjusting the widths, lengths and thicknesses of card used • Cut and assemble components neatly <p>Evaluate</p> <ul style="list-style-type: none"> • Evaluate own designs against design criteria • Use peer feedback to modify a final design 			<ul style="list-style-type: none"> • Evaluate own designs against design criteria • Do chosen structures and mechanisms enhance story? 	
Structures	<p>Make a castle</p> <p>Design</p> <ul style="list-style-type: none"> • To design a castle <p>Make</p> <ul style="list-style-type: none"> • To explore and investigate the tools in the junk modelling area • To explore and investigate ways to attach • To work collaboratively to create a castle incorporating different ways of attaching <p>Evaluate</p>	<p>Constructing a windmill</p> <p>Design</p> <ul style="list-style-type: none"> • Learn the importance of a clear design criteria <p>Make</p> <ul style="list-style-type: none"> • Make stable structures from card, tape and glue • Learn how to turn 2D nets into 3D structures • Follow instructions to cut, assemble and support a structure • Make functional turbines/axles which are assembled into a main supporting structure 	<p>Baby Bear's Chair</p> <p>Design</p> <ul style="list-style-type: none"> • Generate and communicate ideas using sketchbooks and modelling <p>Make</p> <ul style="list-style-type: none"> • Make a structure according to design criteria • Create joints and structure from paper/card and tape • Build a strong and stiff structure by folding paper 	<p>Constructing a castle</p> <p>Design</p> <ul style="list-style-type: none"> • Design a castle with key features to appeal to a specific person/purpose • Draw and label a castle design using 2D shapes, labelling, the 3D shapes that will create the features – materials needed and colours • Design and decorate a castle tower on software 	<p>Pavilions</p> <p>Design</p> <ul style="list-style-type: none"> • Design a stable structure that is aesthetically pleasing and select materials to create a desired effect • Build frame structures designed to support weight <p>Make</p> <ul style="list-style-type: none"> • Create a range of different shaped frame structures • Make a variety of free standing frame structures 		<p>Playgrounds</p> <p>Design</p> <ul style="list-style-type: none"> • Design a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs <p>Make</p> <ul style="list-style-type: none"> • Build a range of play apparatus structures drawing upon new and prior knowledge of structures

	<ul style="list-style-type: none"> To talk about design and outcome To discuss best ways found to attach 	<p>Evaluate</p> <ul style="list-style-type: none"> Evaluate 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>Evaluate</p> <ul style="list-style-type: none"> Test the strength of own structures Identify the weakest part of a structure Evaluate the strength, stiffness and stability of own structure 	<p>Make</p> <ul style="list-style-type: none"> Construct a range of 3D geometric shapes using nets Create special features for individual designs Make facades from a range of recycled materials <p>Evaluate</p> <ul style="list-style-type: none"> Evaluate own work and the work of others based on the aesthetic of the finished product and in comparison to the original design Suggest points for modifications of the individual designs 	<p>of different shapes and sizes</p> <ul style="list-style-type: none"> Select appropriate materials to build a strong structure for the cladding Reinforce corners to strengthen a structure Create a design in accordance with a plan Learn to create different textural effects with materials <p>Evaluate</p> <ul style="list-style-type: none"> Evaluate structures made by the class Describe what characteristics of a design and construction made it the most effective Consider effective and ineffective designs 		<ul style="list-style-type: none"> Measure, mark and cut wood to create a range of structures Use a range of materials to reinforce and add decoration to structures <p>Evaluate</p> <ul style="list-style-type: none"> Improve a design plan based on peer evaluation Test and adapt a design to improve it as it is developed Identify what makes a successful structure
Textiles		<p>Puppets</p> <p>Design</p> <ul style="list-style-type: none"> Use a template to create a design for a puppet <p>Make</p>		<p>Rivers</p> <p>(Cross stitch and applique linked to river topic)</p>			<p>Waistcoats</p> <p>Design</p> <ul style="list-style-type: none"> Design a waistcoat in accordance to specification linked to a set of design

		<ul style="list-style-type: none"> • Cut fabric neatly with scissors • Use joining methods to decorate a puppet • Sequence steps for construction <p>Evaluate</p> <ul style="list-style-type: none"> • Reflect on a finished product explaining likes and dislikes 					<p>criteria to fit a specific theme</p> <ul style="list-style-type: none"> • Annotate designs <p>Make</p> <ul style="list-style-type: none"> • Use a template when pinning panels onto fabric • Mark and cut fabric accurately in accordance with a design • Sew a strong running stitch, making small neat stitches and following the edge • Tye strong knots • Decorate a waistcoat, attach objects using thread and add a secure fastening • Learn different decorative stitches • Sew accurately with even regularity of stitches <p>Evaluate</p> <ul style="list-style-type: none"> • Evaluate work continually as it is created
<p>Cooking and nutrition</p>	<p>Healthy eating Growing and cooking with own food (herbs peas beans potatoes)</p> <p>Design</p> <ul style="list-style-type: none"> • Discuss what dishes could be 	<p>Fruit and vegetables</p> <p>Design</p> <ul style="list-style-type: none"> • Design a smoothie carton packaging by hand or using ICT software <p>Make</p>	<p>Hidden sugars in drinks (stand alone lesson)</p>	<p>Eating seasonally</p> <p>Design</p> <ul style="list-style-type: none"> • Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, 	<p>Adapting a recipe</p> <p>Design</p> <ul style="list-style-type: none"> • Design a biscuit within a given budget, drawing upon previous taste testing <p>Make</p>	<p>What could be healthier?</p> <p>Design</p> <ul style="list-style-type: none"> • Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if 	

	<p>made using the vegetables we have grown</p> <p>Make</p> <ul style="list-style-type: none"> Learn about how to keep safe when preparing food and cooking <p>Evaluate</p> <ul style="list-style-type: none"> Discuss what has been learnt 	<ul style="list-style-type: none"> Chop fruit and vegetables safely to make a smoothie Identify if a food is a fruit or a vegetable Learn where and how fruits and vegetables grow <p>Evaluate</p> <ul style="list-style-type: none"> Taste and evaluate different food combinations Describe appearance, smell and taste Suggest information to be included on packaging 		<p>considering the taste, texture, smell and appearance of the dish</p> <p>Make</p> <ul style="list-style-type: none"> Know how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination Follow the instructions within a recipe <p>Evaluate</p> <ul style="list-style-type: none"> Establish and use design criteria to help test and review dishes Describe the benefits of seasonal fruits and vegetables and the impact on the environment, suggest points for improvement when making a seasonal tart 	<ul style="list-style-type: none"> Follow a baking recipe Cook safely, following basic hygiene rules Adapt a recipe <p>Evaluate</p> <ul style="list-style-type: none"> Evaluate a recipe, considering: taste, smell, texture and appearance Suggest modifications 	<p>you remove, substitute or add additional ingredients</p> <ul style="list-style-type: none"> Write an amended method for a recipe to incorporate the relevant changes to ingredients Design appealing packaging to reflect a recipe <p>Make</p> <ul style="list-style-type: none"> Cut and prepare vegetables safely Use equipment safely including knives, hot pans and hobs Know how to avoid cross-contamination Follow a step by step method carefully to make a recipe <p>Evaluate</p> <ul style="list-style-type: none"> Identify the nutritional differences between different products and recipes Identify and describe healthy benefits of food groups 	
Electrical systems (KS2 only)					Torches Design		Doodlers (changed from Y5) Design

					<ul style="list-style-type: none"> Design a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas <p>Make</p> <ul style="list-style-type: none"> Make a torch with a working electrical circuit and switch Use appropriate equipment to cut and attach materials Assemble a torch according to the design and success criteria <p>Evaluate</p> <ul style="list-style-type: none"> Test and evaluate the success of the final product 		<ul style="list-style-type: none"> Identify factors that could be changed on existing products and explaining how these would alter the form and function of the product Develop design criteria based on findings from investigating existing products Develop design criteria that clarifies the target user <p>Make</p> <ul style="list-style-type: none"> Alter a product's form and function by tinkering with its configuration Make a functional series circuit incorporating a motor Construct a product with consideration for the design criteria Break down the construction process into steps so that others can make the product <p>Evaluate</p> <ul style="list-style-type: none"> Carry out a product analysis to look at the purpose of a product along with
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							<p>its strengths and weaknesses</p> <ul style="list-style-type: none"> • Determine which parts of a product affect its function and which parts affect its form • Analyse whether changes in configuration positively or negatively affect an existing product • Peer evaluate a set of instructions to build a product
Digital world (KS2 only)				<p>Electronic charm</p> <p>Design</p> <ul style="list-style-type: none"> • Develop design ideas for a technology pouch • Draw and manipulate 2D shapes, using computer-aided design, to produce a point of sale badge <p>Make</p> <ul style="list-style-type: none"> • Use a template when cutting and assembling the pouch • Follow a list of design requirements • Select and use appropriate tools and equipment 			<p>Navigating the world</p> <p>Design</p> <ul style="list-style-type: none"> • Write a design brief from information submitted by a client • Develop design criteria to fulfil the client's request • Develop a product idea through annotated sketches <p>Make</p> <ul style="list-style-type: none"> • Place and manoeuvre 3D objects using CAD • Change the properties of or combine one or more 3D objects using CAD <p>Evaluate</p>

				for cutting, joining, shaping and decorating a foam pouch <ul style="list-style-type: none"> • Apply functional features Evaluate <ul style="list-style-type: none"> • Analyse and evaluate an existing product • Identify key features of a pouch 			<ul style="list-style-type: none"> • Consider materials and their functional properties, especially those that are sustainable and recyclable (for example cork and bamboo) • Explain material choices and why they were chosen • Explain key functions and features of navigation tool
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The Kapow DT units have been carefully selected to show gradual progression towards the National Curriculum end of key stage attainment targets and to cover everything in enough detail. Some key areas appear less frequently than others for example Textiles and this is deliberate. Working with textiles is only a small element of the Make strand and many of the making techniques are also covered with a range of materials in other units.

Similarly in Y2 the coverage of key areas is deliberately imbalanced as there are two mechanism units. This is because there is strong progression between the Y1 structures constructing a windmill and the Y2 Mechanisms Fairground Wheel and then again with the Y2 Mechanisms Making a moving monster. To omit one of these units would negatively impact on the progression.