



The National Curriculum for Design and Technology is organised through the following four strands: Design, Make, Evaluate and Technical Knowledge. We use Kapow to support our Design and Technology curriculum. The Kapow curriculum reflects each of the National Curriculum strands through the following key areas: Structures, Mechanisms/Mechanical systems, Cooking and Nutrition and finally Textiles. The table below shows how the Kapow curriculum and our strands achieve this:

## STRUCTURES

	EYFS	Year 1 structures -pencil pots	Year 2 structures – baby bear’s chair
	Knowledge		
Technical	<ul style="list-style-type: none"> <li>To know there are a range of different materials that can be used to make a model and that they are all slightly different.</li> </ul>	<ul style="list-style-type: none"> <li>Recognising that different structures are used for different purposes.</li> <li>Exploring the features of structures.</li> <li>Describing structures as buildings or freestanding structures.</li> <li>Making stable structures from card.</li> <li>Creating supporting structures to aid stability.</li> <li>Using stable objects like cylinders to create structures.</li> </ul>	<ul style="list-style-type: none"> <li>To know that shapes and structures with wide, flat bases or legs are the most stable.</li> <li>To understand that the shape of a structure affects its strength.</li> <li>To know that materials can be manipulated to improve strength and stiffness.</li> <li>To know that a structure is something which has been formed or made from parts.</li> <li>To know that a ‘stable’ structure is one which is firmly fixed and unlikely to change or move.</li> <li>To know that a ‘strong’ structure is one which does not break easily.</li> <li>To know that a ‘stiff’ structure or material is one which does not bend easily</li> </ul>
Additional	<ul style="list-style-type: none"> <li>To create collaboratively, sharing ideas, resources and skills.</li> <li>To explain what I am making and which materials I am using</li> <li>To select materials to meet simple design criteria (e.g. shiny)</li> </ul>	<ul style="list-style-type: none"> <li>To know that the ‘user’ is the person who will use the product.</li> <li>To know that different users may want different things from a design.</li> <li>To know that who they are designing for makes a difference to what they design.</li> <li>To know that the purpose is what something is for.</li> <li>To know that existing products can help when deciding what to design.</li> <li>To know that drawings are a way to explain ideas.</li> </ul>	<ul style="list-style-type: none"> <li>To know that natural structures are those found in nature.</li> <li>To know that man-made structures are those made by people.</li> </ul>

		<ul style="list-style-type: none"> <li>• To know that a plan is deciding what to do first and next.</li> <li>• To know that different equipment does different things.</li> <li>• To know the names of common pieces of equipment.</li> <li>• To know that some products will be better than others.</li> <li>• To know that their ideas or products can be made better.</li> <li>• To know that their ideas can make someone else's work better</li> </ul>	
<b>Skills: So that they can:</b>			
Design	<ul style="list-style-type: none"> <li>• To explain what I am making and which materials I am using</li> <li>• To select materials to meet simple design criteria (e.g. shiny)</li> </ul>	<ul style="list-style-type: none"> <li>• Thinking about what others might want from a design.</li> <li>• Beginning to recognise how products and designs in the world around us solve certain needs.</li> <li>• Considering who they are designing for – identifying the user.</li> <li>• Stating what they intend to make and why – identifying the purpose.</li> <li>• Talking about ideas, with purpose and user in mind.</li> <li>• Talking about existing products when generating ideas.</li> <li>• Using basic drawing skills to communicate ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Generating and communicating ideas using sketching and modelling.</li> <li>• Learning about different types of structures, found in the natural world and in everyday objects.</li> </ul>
Make	<ul style="list-style-type: none"> <li>• To create collaboratively, sharing ideas, resources and skills.</li> <li>• To join two items together e.g. with glue or tape.</li> </ul>	<ul style="list-style-type: none"> <li>• Choosing between a small number of materials, ingredients or components.</li> <li>• Explaining their choices based on personal experiences.</li> </ul>	<ul style="list-style-type: none"> <li>• Making a structure according to design criteria.</li> <li>• Creating joints and structures from paper/card and tape.</li> <li>• Building a strong and stiff structure by folding paper.</li> </ul>

	<ul style="list-style-type: none"> <li>• To select and name the tools I will need (e.g. glue, scissors)</li> <li>• To explain what I am making and which materials I am using</li> <li>• To select materials to meet simple design criteria (e.g. shiny)</li> <li>• To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>• To join two items together e.g. with glue or tape. I can think about whether it is temporary or permanent.</li> <li>• To use improving fine motor/scissor skills with a variety of materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Requesting equipment appropriate to the purpose. (e.g. scissors for cutting, glue for joining)</li> <li>• Beginning to use objects with a fixed width or length to create even spacing of markings or cuts (e.g. a lolly stick).</li> <li>• Refining their grip to cut competently and confidently.</li> <li>• Cutting straight lines and evenly spaced lines.</li> <li>• Beginning to cut large shapes and thicker materials like card</li> </ul>	
Evaluate	<ul style="list-style-type: none"> <li>• To simply talk about changes I made during the making process</li> <li>• To explain how my product works</li> <li>• To share their creations, explaining the process they have used.</li> <li>• To talk about what I like or dislike about my construction, and begin to say why</li> <li>• To make simple suggestions to fix a junk model.</li> </ul>	<ul style="list-style-type: none"> <li>• Discussing existing products, saying what they like about them.</li> <li>• Comparing two products and discuss which is better for a specific purpose.</li> <li>• Saying what they like about their peers' designs and products.</li> <li>• Accepting feedback and understanding it is meant to improve their work.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploring the features of structures.</li> <li>• Comparing the stability of different shapes.</li> <li>• Testing the strength of own structures.</li> <li>• Identifying the weakest part of a structure.</li> <li>• Evaluating the strength, stiffness and stability of own structure.</li> </ul>

## MECHANISMS/MECHANICAL SYSTEMS

	EYFS/yr 1	Year 2 – Fairground wheel	Year 2 – Moving monsters
	<b>Knowledge</b>		
Technical	<ul style="list-style-type: none"> <li>To explore cause and effect toys e.g. pop-up pirate, water wheels, moving parts, construction, large scale construction outside</li> </ul>	<ul style="list-style-type: none"> <li>To know everyday objects have mechanisms.</li> <li>To know many things that move have parts inside to help them work.</li> <li>To know mechanisms usually limit unwanted movement.</li> <li>To know everyday objects utilise wheels and axles.</li> <li>To know wheels must be able to turn to work effectively.</li> </ul> <p>To know axles allow wheels to turn without falling off.</p>	<ul style="list-style-type: none"> <li>To know that mechanisms are a collection of moving parts that work together as a machine to produce movement.</li> <li>To know that there is always an input and output in a mechanism.</li> <li>To know that an input is the energy that is used to start something working.</li> <li>To know that an output is the movement that happens as a result of the input.</li> <li>To know that a lever is something that turns on a pivot.</li> <li>To know that a linkage mechanism is made up of a series of levers</li> </ul>
Additional		To know the features of a fairground wheel include the wheel, frame, pods, a base an axle and an axle holder.	<ul style="list-style-type: none"> <li>To know some real-life objects that contain mechanisms</li> </ul>
	<b>Skills: so that they can:</b>		
Design		<ul style="list-style-type: none"> <li>Conducting simple surveys or discussions to gather opinions on what others need or like in a design.</li> <li>Knowing that a survey is used to find out what people like.</li> <li>Using a simple design brief that outlines the intended use, target user, and key features of the product, to create simple design criteria.</li> <li>Knowing that a design brief helps to decide what to make.</li> </ul>	<ul style="list-style-type: none"> <li>Creating a class design criteria for a moving monster.</li> <li>Designing a moving monster for a specific audience in accordance with a design criteria.</li> </ul>

		<ul style="list-style-type: none"> <li>• Knowing that design criteria are the steps for making a product successful.</li> <li>• Creating ideas with design criteria in mind.</li> <li>• Referring to specific parts of existing products when generating ideas.</li> <li>• Knowing that the design criteria help when thinking of ideas.</li> <li>• Using labels to explain parts of a design, label materials, etc.</li> <li>• Using labels to explain parts of a design, label materials, etc.</li> <li>• Knowing that drawings can help explain how something works.</li> <li>• Knowing that a label explains part of a drawing.</li> </ul>	
Make		<ul style="list-style-type: none"> <li>• Choosing materials, ingredients or components from a wider range of materials, ingredients or components.</li> <li>• Explaining their choices based on the properties of materials and components.</li> <li>• Knowing some properties of materials like hard, soft, flexible, waterproof, strong etc.</li> <li>• Following and recalling simple safety instructions.</li> <li>• Knowing that some tools are sharp like scissors and knives.</li> <li>• Choosing known geometric shapes when making.</li> <li>• Beginning to shape objects to improve how they work.</li> <li>• Knowing the names of some geometric shapes: triangle, pyramid, square, cube, circle, sphere.</li> </ul>	<ul style="list-style-type: none"> <li>• Making linkages using card for levers and split pins for pivots.</li> <li>• Experimenting with linkages adjusting the widths, lengths and thicknesses of card used.</li> <li>• Cutting and assembling components neatly</li> </ul>

		<ul style="list-style-type: none"> <li>Considering balance in their finishing, like evenly spaced decoration.</li> </ul>	
Evaluate		<ul style="list-style-type: none"> <li>Discussing a range of existing products and saying what they like and dislike about them.</li> <li>Evaluating existing products against design criteria.</li> <li>Evaluating their ideas and creations against simple design criteria.</li> <li>Knowing that design criteria help to decide if their product is a success.</li> <li>Suggesting improvements to their peers' designs and products.</li> <li>Knowing that improve means to make something better.</li> <li>Knowing that their suggestions can improve someone else's work</li> </ul>	<ul style="list-style-type: none"> <li>Evaluating own designs against design criteria.</li> <li>Using peer feedback to modify a final design.</li> </ul>

## COOKING AND NUTRITION

	EYFS	Year 1 Cooking and nutrition - smoothies	Year 2
	Knowledge		
	To grow and eat potatoes	<ul style="list-style-type: none"> <li>To know that a blender is a machine which mixes ingredients together into a smooth liquid.</li> <li>To know that a fruit has seeds and a vegetable does not.</li> <li>To know that fruits grow on trees or vines.</li> <li>To know that vegetables can grow either above or below ground.</li> </ul>	

		<ul style="list-style-type: none"> <li>To know that vegetables is any edible part of a plant.</li> </ul>	
	<b>Skills: So that they can:</b>		
Design		<ul style="list-style-type: none"> <li>Designing smoothie carton packaging by-hand.</li> <li>Learning where and how fruits and vegetables grow.</li> </ul>	
Make		<ul style="list-style-type: none"> <li>Chopping fruit and vegetables safely to make a smoothie.</li> <li>Juicing fruits safely to make a smoothie.</li> <li>Identifying if a food is a fruit.</li> </ul>	
Evaluate		<ul style="list-style-type: none"> <li>Tasting and evaluating different food combinations.</li> <li>Describing appearance, smell and taste.</li> <li>Suggesting information to be included on packaging.</li> <li>Comparing their own smoothie with someone else's.</li> </ul>	

## TEXTILES

	EYFS	Year 1 Textiles - puppets	Year 2
	<b>Knowledge</b>		
		<ul style="list-style-type: none"> <li>To know that 'joining technique' means connecting two pieces of material together.</li> <li>To know that there are various temporary methods of joining fabric by using staples. glue or pins.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

		<ul style="list-style-type: none"> <li>• To understand that different techniques for joining materials can be used for different purposes.</li> <li>• To understand that a template (or fabric pattern) is used to cut out the same shape multiple times.</li> <li>• To know that drawing a design idea is useful to see how an idea will look.</li> </ul>	
	<b>Skills: So that they can:</b>		
Design		<ul style="list-style-type: none"> <li>• Using a template to create a design for a puppet.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
Make	<ul style="list-style-type: none"> <li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> </ul>	<ul style="list-style-type: none"> <li>• Cutting fabric neatly with scissors.</li> <li>• Using joining methods to decorate a puppet.</li> <li>• Sequencing the steps taken during construction</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
Evaluate		<ul style="list-style-type: none"> <li>• Reflecting on a finished product, explaining likes and dislikes.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>