



DESIGN & TECHNOLOGY Progression



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

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

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

MECHANISMS/MECHANICAL SYSTEMS

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

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

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

COOKING AND NUTRITION

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

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

TEXTILES

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

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