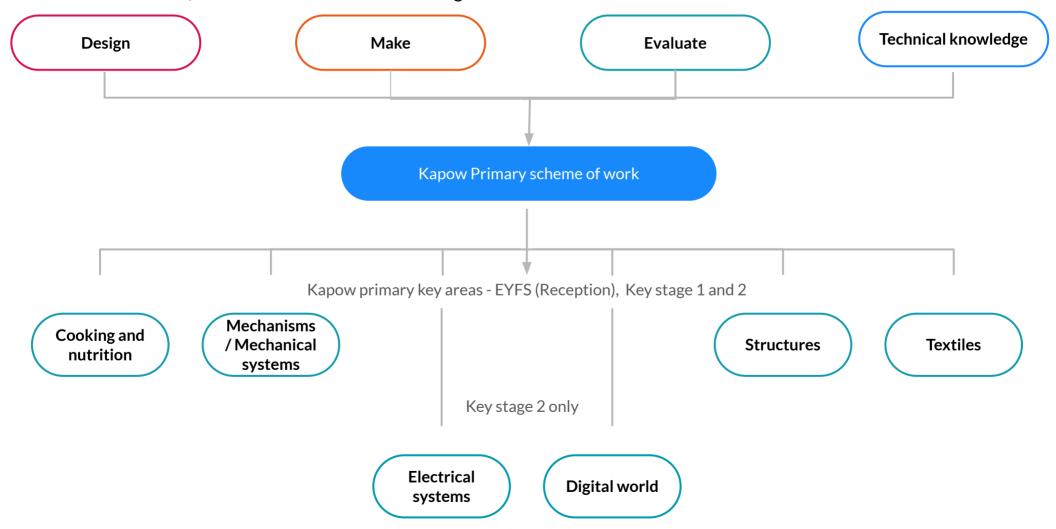


Introduction

Kapow Primary offers full coverage of the KS1 and KS2 Design and technology curriculum and we have categorised our content into six areas, with four strands that run throughout:



Overview

	Cooking and nutrition	Mechanisms	Structures	Textiles	Electrical systems	Digital world				
Aside from Electrical systems and Digital world, which are taught in KS2 only, each of these acts as the focus for a unit within each year group										
EYFS (Reception)	Soup		Boats Junk modelling	Bookmarks						
Year 1	Fruit and vegetables Smoothie	Moving storybook Wheels and axles	Windmills	Puppets						
Year 2	A balanced diet	Moving monsters Ferris wheels	Baby bear's chair	Pouches						
Year 3	Eating seasonally	Pneumatic toys	Castles	Cross stitch and appliqué	Electric poster	Electronic charm				
Year 4	Adapting a recipe	Slingshot cars	Pavilions	Fastenings	Torches	Mindful moments timer				
Year 5	What could be healthier?	Pop-up books	Bridges	Stuffed toys	Doodlers	Monitoring devices				
Year 6	Come dine with me	Automata toys	Playgrounds	Waistcoats	Steady hand games	Navigating the world				

The four strands (below) of the Design and technology curriculum run through each unit; with Cooking and nutrition as the focus of one Food unit per year

D Design

M Make

E Evaluate

TK Technical knowledge

Early years outcomes in Kapow Primary's units

Early Years Foundation Stage (Reception) Kapow Primary's units	Early years outcomes: Prime Areas Development Matters 2021 statements Early Learning Goals	Early years outcomes: Specific Areas Development Matters 2021 statements Early Learning Goals	Characteristics of effective learning
Structures: Junk modelling	Physical development -Develop small motor skills so that they can use a range of tools competently, safely and confidently. -ELG: Fine Motor Skills > Use a range of small tools, including scissors, paint brushes and cutlery.	Expressive Arts and Design -Explore, use and refine a variety of artistic effects to express ideas and feelingsReturn to and build on their previous learning, refining ideas and developing their ability to represent themCreate collaboratively, sharing ideas, resources and skillsELG: Creating with materials > Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and functionELG: Creating with materials > Share their creations, explaining the process they have used.	 ✓ Playing and exploring ✓ Active learning ✓ Creating and thinking critically
Food: Soup	-Learn new vocabularyUse new vocabulary throughout the dayELG: Speaking > Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Personal, social and emotional development -Know and talk about the different factors that support their overall health and wellbeing: healthy eatingELG: Managing self > Manage their own basic hygiene and personal needs, including understanding the importance of healthy food choices. Physical development -Develop small motor skills so that they can use a range of tools competently, safely and confidentlyELG: Use a range of small tools, including scissors, paint brushes and cutlery.	Understanding the world -Explore the natural world around them. -ELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants. Expressive Arts and Design -Explore, use and refine a variety of artistic effects to express ideas and feelings. -ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	 ✓ Playing and exploring ✓ Active learning

Early years outcomes in Kapow Primary's units

Early Years Foundation Stage (Reception) Kapow Primary's units	Early years outcomes: Prime Areas Development Matters 2021 statements Early Learning Goals	Early years outcomes: Specific Areas Development Matters 2021 statements Early Learning Goals	Characteristics of effective learning
Textiles: Bookmarks	Physical development -Develop small motor skills so that they can use a range of tools competently, safely and confidently. -ELG: Fine Motor Skills > Use a range of small tools, including scissors, paint brushes and cutlery.	Expressive Arts and Design -Explore, use and refine a variety of artistic effects to express ideas and feelings. -Return to and build on their previous learning, refining ideas and developing their ability to represent them. -ELG: Creating with materials > Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. -ELG: Creating with materials > Share their creations, explaining the process they have used.	 ✓ Playing and exploring ✓ Active learning ✓ Creating and thinking critically
Structures: Boats	-Articulate their ideas and thoughts in well-formed sentencesConnect one idea or action to another using a range of connectivesUse talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. -ELG: Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabularyELG: Speaking> Offer explanations for why things might happen.	Understanding the world -Explore the natural world around themELG: The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants. Expressive Arts and Design -Explore, use and refine a variety of artistic effects to express ideas and feelingsELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and functionELG: Creating with materials> Share their creations, explaining the process they have used.	 ✓ Playing and exploring ✓ Active learning ✓ Creating and thinking critically

Vov. Store 1. Notional guyriculum Design and technology	Kapow Primary's	Kapow Primary topics Key stage 1 - Year 1					
Key Stage 1 - National curriculum Design and technology content	Design and technology strands	*Moving story books	*Windmills	* <u>Puppets</u>	*Wheels and axles	*Fruit and vegetable smoothies	
Design purposeful, functional, appealing products for themselves and other users based on design criteria.	Design	~	~	~	~		
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.	Design	V	V	V	•	~	
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].	Make	V	V	~	~	v	
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Make	V	V	V	~	v	
Explore and evaluate a range of existing products.	Evaluate	V	V		~		
Evaluate their ideas and products against design criteria.	Evaluate	~	~	~	~	~	

^{*}Units that are included in the condensed curriculum

Key Stage 1 - National curriculum Design and technology	Kapow Primary's	Kapow Primary topics Key stage 1 - Year 1					
content	Design and technology strands	*Moving story books	*Windmills	* <u>Puppets</u>	*Wheels and axles	*Fruit and vegetable smoothies	
Build structures, exploring how they can be made stronger, stiffer and more stable.	Technical knowledge		V				
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Technical knowledge	~	V		~		
Use basic principles of a healthy and varied diet to prepare dishes.	D M E						
Understand where food comes from.	D M					•	

^{*}Units that are included in the condensed curriculum

Key Stage 1 - National curriculum Design and technology	Kapow Primary's	Kapow Primary topics Key stage 1 - Year 2					
content	Design and technology strands	*Moving monsters	*Baby bear's chair	*Pouches	* <u>Ferris</u> wheels	* <u>A</u> <u>balanced</u> <u>diet</u>	
Design purposeful, functional, appealing products for themselves and other users based on design criteria.	Design	~	~	V	~	~	
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.	Design	~	~	V	~		
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].	Make	~	~	V	~		
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Make	~	~	V	~		
Explore and evaluate a range of existing products.	Evaluate	~		~	~	V	
Evaluate their ideas and products against design criteria.	Evaluate	~	~	V	~	~	

^{*}Units that are included in the condensed curriculum

Key Stage 1 - National curriculum Design and technology	Kapow Primary's	Kapow Primary topics Key stage 1 - Year 2					
content	Design and technology strands	*Moving monsters	*Baby bear's chair	* <u>Pouches</u>	* <u>Ferris</u> wheels	*A balanced diet	
Build structures, exploring how they can be made stronger, stiffer and more stable.	Technical knowledge		~		~		
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Technical knowledge	V			~		
Use basic principles of a healthy and varied diet to prepare dishes.	D M					•	
Understand where food comes from.	D M					~	

^{*}Units that are included in the condensed curriculum

Key Stage 2 - National curriculum Design and	Kapow Primary's Design and	Kapow Primary topics Lower key stage 2 - Year 3						
technology content	technology strands	* <u>Eating</u> seasonally	* <u>Castles</u>	*Cross stitch and appliqué	* <u>Pneumatic</u> <u>toys</u>	Electric poster	*Electronic charm	
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.	Design		~	~	~	V	~	
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	Design		~	~	V	V	~	
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	Make		~	~	✓	V		
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Make		~	~	~	V		
Investigate and analyse a range of existing products.	Evaluate		~		~		~	
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate		~	~	~	✓	~	

^{*}Units that are included in the condensed curriculum

Key Stage 2 - National curriculum Design and	Kapow Primary's Design and technology strands	Kapow Primary topics Lower key stage 2 - Year 3						
technology content		*Eating seasonally	*Castles	*Cross stitch and appliqué	*Pneumatic toys	Electric poster	*Electronic charm	
Understand how key events and individuals in design and technology have helped shape the world.	Evaluate				~		~	
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Technical knowledge		~					
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Technical knowledge				~			
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Technical knowledge					~		
Apply their understanding of computing to program, monitor and control their products.	Technical knowledge						•	
Understand and apply principles of a healthy and varied diet.	D M E	~						
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	D M E	V						
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	D M E	V		*Units tha	nt are included in	n the condens	ed curriculum	

Key Stage 2 - National curriculum Design and	Kapow Primary's	Kapow Primary topics Lower key stage 2 - Year 4							
technology content	Design and technology strands	*Pavilions	*Adapting a recipe	*Fastenings	* <u>Slingshot</u> <u>cars</u>	* <u>Torches</u>	Mindful timer		
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.	Design	~	~	~	V	~	~		
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computeraided design.	Design	~	~	~	V	~			
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	Make	V	V	~	V	~	~		
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Make	V	~	✓	V	V			
Investigate and analyse a range of existing products.	Evaluate	V	V	V	V	V	V		
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate	~	~	~	V	~	~		

^{*}Units that are included in the condensed curriculum

Key Stage 2 - National curriculum Design and	Kapow Primary's Design and technology strands	Kapow Primary topics Lower key stage 2 - Year 4							
technology content		*Pavilions	*Adapting a recipe	*Fastenings	*Slingshot cars	* <u>Torches</u>	Mindful timer		
Understand how key events and individuals in design and technology have helped shape the world.	Evaluate				✓	~			
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Technical knowledge	~							
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Technical knowledge				~				
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Technical knowledge					~			
Apply their understanding of computing to program, monitor and control their products.	Technical knowledge						~		
Understand and apply principles of a healthy and varied diet.	D M E								
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	D M E		~						
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	D M E			*Units t	hat are included	l in the condens	ed curriculum		

Vov Stago 2 National curriculum Decign and	Kapow Primary's Design and technology strands	Kapow Primary topics Upper key stage 2 - Year 5						
Key Stage 2 - National curriculum Design and technology content		*What could be healthier?	*Pop-up books	Stuffed toys	* <u>Doodlers</u>	*Bridges	*Monitoring devices	
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.	Design	V	V	~	~	~	~	
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	Design	V	V	~		~	~	
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	Make	V	~	~	~	~		
Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	Make		~	V		~		
Investigate and analyse a range of existing products.	Evaluate	✓	~	~	~	•		
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate	V	~	~	~	~	~	

^{*}Units that are included in the condensed curriculum

Vov. Store 2. National curriculum Decim and	Kapow Primary's	Kapow Primary topics Upper key stage 2 - Year 5						
Key Stage 2 - National curriculum Design and technology content	Design and technology strands	*What could be healthier?	* <u>Pop-up</u> <u>books</u>	Stuffed toys	* <u>Doodlers</u>	*Bridges	*Monitoring devices	
Understand how key events and individuals in design and technology have helped shape the world.	Evaluate	~					~	
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Technical knowledge				~	~	~	
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Technical knowledge		~					
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Technical knowledge				•			
Apply their understanding of computing to program, monitor and control their products.	Technical knowledge	~					•	
Understand and apply principles of a healthy and varied diet.	D M E	~						
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	D M E	~						
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	D M E	V						

^{*}Units that are included in the condensed curriculum

Key Stage 2 - National curriculum Design and	Kapow Primary's	Kapow Primary topics Upper key stage 2 - Year 6						
technology content	Design and technology strands	*Come dine with me	* <u>Automata</u> <u>toys</u>	*Steady hand game	*Playgrounds	*Navigating the world	<u>Waistcoats</u>	
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.	Design	~	~	~	~	V	V	
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.	Design	V	V	~	~	V	V	
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	Make	~	~	~	~	V	~	
Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	Make	~		~	~		V	
Investigate and analyse a range of existing products.	Evaluate		~	~	~		~	
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate	~	~	*Un	✓ its that are include	ed in the conden	✓ sed curriculum	

Key Stage 2 - National curriculum Design	Kapow Primary's Design	Kapow Primary topics Upper key stage 2 - Year 6						
and technology content	and technology strands	*Come dine with me	* <u>Automata</u> <u>toys</u>	*Steady hand game	*Playgrounds	*Navigating the world	<u>Waistcoats</u>	
Understand how key events and individuals in design and technology have helped shape the world.	Evaluate		~	~				
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Technical knowledge				✓			
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Technical knowledge		~					
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Technical knowledge			~				
Apply their understanding of computing to program, monitor and control their products.	Technical knowledge					~		
Understand and apply principles of a healthy and varied diet.	D M E	~						
Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	D M E	~						
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	D M E	V		*L	nits that are includ	led in the conden	sed curriculum	

National			Kapow Primary topics		
curriculum subjects	*Fruit and vegetables	*Making a moving story book	*Constructing a windmill	* <u>Puppets</u>	*Wheels and axles
English		Reading - appreciating rhymes such as Humpty Dumpty		Reading - Listening to and answering questions about the main character's appearance in Little Red Riding Hood (or another story of your choice)	
Maths			Recognising 2D and 3D shapes, beginning to recognise how a net can make a 3D shape		Identifying lengths on their design, considering how wheels work
Science	Thinking scientifically - classifying fruit and vegetables Animals, including humans - learning about the importance of fruit and vegetables in the diet and food hygiene				
Art and design		Drawing the background of their design along with the moving parts			
Computing					Digitally painting a flag for their car (extension activity)
Geography			Learning about how windmills are used today to generate electricity (wind turbines)		

National	Kapow Primary topics								
curriculum subjects	*Fairground wheel	*A balanced diet	*Making a moving monster	*Baby bear's chair	*Pouches				
English		Reading - reading a letter and summarising the key points		Reading - discussing the events from 'Goldilocks and the three bears'					
Maths	Talking about 3d shapes and naming them correctly	Using inequalities signs (<>) to compare sugar in drinks, using grams (g) to give weights	Recording a tally survey	Creating 3D shapes from playdough, Recording totals on a tally chart					
Science	Discussing the properties of materials when choosing materials for their fairground wheel	Discussing the senses that humans have, having an awareness of food hygiene		Interpreting the results of the tip-test					
Art and design			Sketching design ideas		Decorating the pouch using a range of materials				
Computing	Practising drag and drop skills by creating an inspiration board (extension activity)								
Geography				Identifying natural and man-made structures					

National		Kapow Primary topics								
curriculum subjects	*Cross-stitch and appliqué <u>Cushions</u> or <u>Egyptian collars</u>	<u>Electric</u> <u>poster</u>	*Pneumatic toys	*Electronic charm	*Eating seasonally	*Castles				
English				Reading - considering language on sales displays and how it persuades us to buy the product	Reading - following the instructions in a recipe					
Maths	Choosing a 2D shape for their cushion, using knowledge of length to leave correct space for stuffing, seam and running stitch length			Drawing and manipulating 2D shapes, working with nets of 3D shapes (extension activity)		Identifying and naming 2D and 3D shapes in castle structures, drawing 2D shapes, constructing nets to make 3D shapes				
Science		Electricity (Y4) - building a simple circuit and identifying components of a circuit								
Art and design	Designing a theme for their applique shapes (maybe around another topic)		Decorating their pneumatic toys with embellishments							
Computing				Learning about the history of Computers and how they have developed over time into smart wearables today, writing a programme to enable an LED to flash on a button press, using CAD software to design		Using powerpoint to create their own net (extension activity)				
Geography			Discussing how electricity can be made using wind and sea power		Knowing what climate is and that it affects food growth, reading information from a map of the world, knowing the environmental impact of importing food					
History	Learning about Egyptian collars (If you choose the Egyptian collars theme for this unit)	Creating posters that give information about Ancient Rome		Learning about the Digital revolution and the history of computers		Learning about the features of castles and their purpose				
RSE/PSHE					Considering food hygiene, knowing that fruit and vegetables give us nutritional benefits					

National curriculum	Kapow Primary topics					
subjects	* <u>Torches</u>	*Making a slingshot car	Mindful moments timer	*Adapting a recipe	*Pavilions	*Fastenings
English				Spoken language - giving a brief pitch for their biscuit recipe		
Maths		Using nets to create 3D shapes, measuring accurately	Creating a 3D structure using a net	Completing a budget, considering profit margins, using nets to create 3D packages	Building 3D shapes to test the strength of different structures	
Science	Electricity - Identifying electrical products, conductors and insulators, building a simple series circuit with a switch	Forces - understanding the concept of air resistance (Y5) when designing their car				
Art and design		Decorating the panels of the chassis	Decorating their mindful moments timer case		Creating textural effects with materials to clad their structure	
Computing			Programming a micro:bit to function as a timer, debugging code, using software to create logos			Taking photographs of fastenings they find
Geography		Considering eco-friendly ways of powering cars				
History	Learning about life before electricity	Considering life before the motor car				
RSE/PSHE	Identifying electrical hazards		Sharing ways to be mindful and how this helps us to look after our mental health	Following basic food hygiene		

National	Kapow Primary topics					
curriculum subjects	*Pop-up books	* <u>Doodlers</u>	*Monitoring devices	*What could be healthier?	* <u>Bridges</u>	Stuffed toys
English	Adding captions to their pop-up books to suit the audience	Writing - writing instructions on how to make a Doodler				
Maths					Measuring wood accurately to the nearest mm, draw 45° angles	
Science		Electricity -Exploring electrical circuit, identifying and naming components, working investigatively and drawing conclusions	Animals, including humans - finding out about the needs of animals		Using investigative methods to test the strength of a range of bridges, considering properties of materials	
Art and design	Drawing components for their pop-up books			Designing a label for their bolognaise		
Computing			Using search engines to research animals, programming and debugging an animal monitor, using CAD skills to create virtual models	Using search engines to research variations of a recipe		
Geography			Considering how we can use the six Rs of sustainability to develop more sustainable habits			
History			Learning about how thermometers have developed, learning about the history behind plastic use			
RSE/PSHE			Considering our shared responsibilities for protecting the environment	Considering the rights of animals and the ethical issues behind cattle farming, understanding what makes a balanced diet, reading nutritional values and deciding which recipe is healthier		

National			Kapow Prir	nary topics		
curriculum subjects	*Navigating the world	*Come dine with me	* <u>Playgrounds</u>	<u>Waistcoats</u>	*Steady hand game	* <u>Automata toys</u>
English	Reading - finding key points in a clients letter to create design criteria Spoken language - presenting a pitch about their product					
Maths			Measuring accurately to the nearest mm		Using net templates to create the base of their game	Measuring accurately to the nearest mm
Science	Considering materials and their functional properties	Recognising the impact of diet on our bodies			Drawing circuit diagrams, naming components and their functions	
Art and design			Creating textural effects with materials to clad their structure		Exploring one line drawings	
Computing	Programming a compass (all), pedometer and a light/thermometer (extension), using CAD skills to produce a virtual model				Recapping rules for safe online searching	
Geography	Considering sustainability in design					
History						Learning about Victorian toys
RSE/PSHE		Considering different dishes from other cultures, developing awareness of healthy eating, following basic food hygiene				

Version history

This page shows recent updates to the document.

Date	Update
26.07.22	Cross curricular links added p.16-p.21
19.08.22	Alternative theme DT: Egyptian collars added.
09.11.22	Updated to include EYFS.
15.12.22	National curriculum objectives amended for Food.
20.03.23	Title changed to 'National curriculum coverage.' Cooking and nutrition removed as a strand - now only a key area