

Year	Autumn		Spring		Summer	
EYFS	By the end of EYFS children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Use a range of small tools, including scissors, paint brushes and cutlery; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories.					
	FOR MORE DETAILS, PLEASE VISIT THE EARLY YEARS CURRICULUM MAPS ON THE WEBSITE HERE					
1	AUTUMN TERM Mechanisms - Let's move it		SPRING TERM Textiles - Let's Join it		Cooking and Nutrition - Fruit Salad Let's eat it	
	(Children experiment with levers, before planning and making a moving holiday card. They will make the moving parts and assemble it.		(Children explore different ways of joining fabrics before creating their own bag s based upon characters from a well-known fairytale. Throughout they work to develop their technical skills of cutting, glueing, stapling and pinning.)		(Children handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish their chosen ingredients for the smoothie they will make a design packaging for)	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	To know that a mechanism is the parts of an object that move together.	Technical knowledge - Explaining how to adapt mechanisms, using bridges or guides to control the movement.	To know that ‘joining technique’ means connecting two pieces of material together.	Technical knowledge - Sequencing steps for construction.	To know that a blender is a machine which mixes ingredients together into a smooth liquid.	Technical knowledge - Identifying if a food is a fruit.
	To know that a slider mechanism moves an object from side to side.	Design - Designing a moving card for a given audience.	To know that there are various temporary methods of joining fabric by using staples, glue or pins.	Design - Using a template to create a design.	To know that a fruit has seeds and a vegetable does not.	Technical knowledge - Learning where and how fruits and vegetables grow.
	To know that a slider mechanism has a slider, slots, guides and an object.	Make - Following a design to create moving models that use levers and sliders.	To understand that different techniques for joining materials can be used for different purposes.	Make - Using joining methods to create.	To know that fruits grow on trees or vines.	Design - Design packaging
	To know that bridges and guides are bits of card that purposefully restrict the movement of the slider.	Evaluate - Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed.	To understand that a template (or pattern) is used to cut out the same shape multiple times.	Make - Cutting materials neatly with scissors.	To know that vegetables can grow either above or below ground.	Make - Chopping fruit and vegetables safely to make a fruit salad
			To know that drawing a design idea is useful to see how an idea will look.	Evaluate - Reflecting on a finished product, explaining likes and dislikes.	To know that vegetables are any edible part of a plant.	Make - Juicing fruits to make a smoothie.
						Evaluate - Tasting and evaluating different foods. Describing appearance, smell and taste.
2	Structures - Chair for a Bear		Cooking and Nutrition - A balanced diet (Making healthy wraps)		Textiles - Bunting	
	(Using the tale of Goldilocks and the Three Bears as inspiration, children help poor Baby Bear by making him a brand new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is a strong and stable structure and doesn't break again!)		(Through their exploration of what makes a balanced diet, children taste test food combinations of different food groups. They will also aim to make a wrap that includes a healthy mix of protein, vegetables and dairy, and learn about the term ‘hidden sugars’.)		Having looked at ways to join fabric in Year 1, children are given their first opportunity to sew in this topic. With their fabric cut out, pupils use a simple running stitch to join two pieces together before decorating the front of their bunting, according to their designs.	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	To know that shapes and structures with re the most stable.	Technical knowledge - Learning about different types of structures, found in the natural world and in everyday objects.	To know that ‘diet’ means the food and drink that a person or animal usually eats.	Technical knowledge - Identifying the five food groups.	To know that sewing is a method of joining fabric.	Technical knowledge - Cut a piece of bunting using scissors and a template.
	To know that a structure is something which has been formed or made from parts.	Technical knowledge - Exploring the features of structures.	To know what makes a balanced diet.	Technical knowledge - Learning about a balanced diet.	To know that a needle needs to be threaded in order to sew.	Design - To create a design on a piece of bunting
	To know that a ‘strong’ structure is one which does not break easily.	Design - Generating and communicating ideas using sketching and modelling.	To know that the five main food groups are: carbohydrates, fruits and vegetables, protein, dairy and fat/sugary food.	Technical knowledge - Chopping foods safely to make a wrap.	To know that a running stitch can join two pieces of material together when sewing.	Make - Sew running stitch to join fabric.
	To understand that the shape of a structure affects its strength.	Design - Creating joints and structures from paper/card and tape.	To know that ‘ingredients’ means the items in a mixture or recipe.	Design - Designing wrap ideas.	To know that sequins can be sewn onto a piece of material to decorate it	Make - Decorate a bunting by joining sequins to material
	To know that a ‘stable’ structure is one which is firmly fixed and unlikely to change or move.	Make - Making a structure according to design criteria.	To know how to cut, grate, snip and spread to prepare foods.	Make - Grating foods to make a wrap, Spreading soft foods to make a wrap, Using a bridge cut to cut cucumber.		Evaluate: Identify aspects of their peers’ work that they particularly like and why.
	To know that a ‘stiff’ structure or material is one which does not bend easily.	Make - Building a strong and stiff structure by folding paper.	To know how to review and give a score to evaluate.	Evaluate - Tasting and evaluating different food combinations.		Evaluate:Discuss the success of their stitching against the success criteria.
To know that materials can be manipulated to improve strength and stiffness.	Evaluate - Evaluating and testing the strength, stiffness and stability of their own structure.		Evaluate - Describing taste and reviewing taste, quality of wrap and whether it has food from at least three food groups.			
	Packaging - Structures / Cooking and Nutrition - From farm to fork UK (Making apple flapjacks bites)		Mechanical systems - Pneumatic Toys		Applique - Egyptian collar	

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3	(Children will look at different packaging and how to reinforce the structure and brand it. They will then make apple flapjacks and take them home in the packaging)		(Children will make a moving monster using pneumatics)		(Children will consolidate Year 2 work using running stitch to join)	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	1. Packaging for flapjack bites. I can join card with accuracy.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	1. Make things move with air. I can analyse familiar objects that use air to make them work	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.	1. Exploring Egyptian Jewellery. I can plan and sketch 3 collar designs focusing on symmetry, repeating shapes and colour choices.	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.
	2. Strengthening my packaging. I can make sure my packaging is strong.	Select from and use a wider range of tools and equipment to perform practical tasks accurately.Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	2. Pneumatic systems. I can use air to create movement in prototypes	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and 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 group	2. Practising appliqué techniques. I can practise cutting shapes and attaching using glue or running stitch	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and 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 group
	3. Food from the UK. I can name and locate food which is from the UK.	Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	4. To develop ideas through sketches. I can design a meaningful and authentic design brief		3.Design an Egyptian collar. I can create a final labelled collar design using a template.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
	4. Food from around the world. I can name and locate food which is from outside the UK.	Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	5. Plan a pneumatic system. I can create a clear plan to make a moving animal.	Understand and use mechanical systems in their products.	4. Create a collar using appliqué. I can cut the base, add shapes, attach and decorate.	Understand and use mechanical systems in their products.
		Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	6. To make a pneumatic system. I can embed a working pneumatic system into a product and evaluate it.	Select from and use a wider range of tools and equipment to perform practical tasks accurately.Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.		Select from and use a wider range of tools and equipment to perform practical tasks accurately.Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
	5. Making apple flapjack bites. I can make flapjack bites and describe the origins of the ingredients from the UK. and evaluate my product.	Understand and apply the principles of a healthy and varied diet.				
	Levers and Linkages :Interactive books		Cooking and Nutrition - Eatwell guide for me and you (Making mini Frittatas)		Textiles - Hats and Caps	
	(Children will consolidate Year 2 work using running stitch to join)		(Children work in groups to make a simple mini frittata recipe link to the Ancient Romans)		(Children will revisit learning in Year 2 and use running stitch)	
	1. Reverse motion levers and linkages. I can make reverse motion linkages.	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for	Knowledge	Skills	Knowledge	Skills
	2. Parallel and push-pull linkages. I can make parallel and push-pull linkages.		1. My meals the Eatwell Guide way. I can sort meals and snacks into Eatwell Guide food groups.	- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. - Understand seasonality, and know where and how a variety of ingredients are	1. Virgil Abloh and hat design. I can identify decisions made by a designer.	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - Use research and develop design
	3. Bell crank and lazy- tong linkages. I can make bell crank and lazy-tong linkages.		2. Eat well every day. I can suggests improvements to meals, with reasons for my choices.	- Prepare and cook a variety of predominantly savoury dishes using a range - Understand and apply the principles of a healthy and varied diet.	2. Research interviews. I can generate ideas by carrying out research interviews.	
	4. Levers and linkages in products. I can identify different linkages within existing products.					

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4	5. User research . I can undertake research to influence design specifications.	purpose, aimed at particular individuals or groups. - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Select from and use a wider range of tools and equipment to perform practical tasks accurately. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use mechanical systems in their products.	3. Making mini frittatas. I can use food skills to make mini frittatas.	- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. - Understand seasonality, and know where and how a variety of ingredients are - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. - Understand and apply the principles of a healthy and varied diet.	3. Fabric patterns. I can identify pattern pieces in complex nets.	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. - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Select from and use a wider range of tools and equipment to perform practical tasks accurately. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use mechanical systems in their products.
	6. Plan and make an interactive book. I can plan and make a page of an interactive book.					
	7. Assembling components for an interactive book. I can assemble component and make my book aesthetically pleasing.					
	8. Present the book to the user. I can respond to feedback and evaluate my design thinking.					
5	Combining Fabrics: Accessible Textiles		Pulleys and Gears: Electric Vehicles		CAD (Computer Aided Design) Structures : Architecture	
	(Children will build on textiles and sewing from Year 4)		(Children will use Year 4 science knowledge of circuits and Year 3 knowledge of joining to make circuits and chassis)		(Children will consolidate maths work on nets using Tinkercad)	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	1. Accessible textile products. I can define the needs of the user within a design specification	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - 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. - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Select from and use a wider range of tools and equipment to perform practical tasks accurately.	1. Dorothee Pullinger and car design. I can describe Dorothee Pullinger contributions to car engineering and discuss sustainable	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - 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. - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Select from and use a wider range of tools and equipment to perform practical tasks accurately. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use electrical systems in their products - Understand and use mechanical systems in their products.	1. Ken Yeung and suitable architecture. I can use the architectural work of Dr Ken Yeang to create my own designs.	Select from and use a wider range of materials and components, including construction materials, textiles and
	2. Select fabrics for functional and aesthetic properties. I can choose fabrics for functions and aesthetics		2. Pulley systems. I can create and understand movement with pulleys		2. The TinkerCAD user interface. I can navigate and use menus on the Tinkercad user interface.	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and
	3. Design action plans. I can create a design action plan		3. Switches in simple circuits. I can make a switch for an electrical circuit		3. Modify 3D shapes. I can translate , rotate and scale 3D shapes in Tinkercad.	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.
	4. Fabric seams and curves. I can sew seams and a curved edge		4. Harry Beck and circuit diagrams. I can relate Harry Beck's work to circuit diagrams and create my own		4. Compound 3D shapes. I can create hollow compound 3D shapes in Tinkercad.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
	5. Fabric pockets and slots. I can shape and join fabric shapes accurately		5. Make an electric vehicle chassis. I can build an accurate vehicle chassis		5. Complex 3D shapes. I can make and manipulate objects to create a complex 3D design in Tinkercad.	
	6. Accessible fasteners. I can fasten fabrics effectively		6. Assemble an electric vehicle. I can add mechanical and electrical components to a vehicle		6. Manipulating 3D shapes. I can manipulate shapes in Tinkercad to meet a design specification .	
	7. Develop and finish an accessible product. I can personalise a fabric product using stitching techniques and applique.		7. Aerodynamics. I can adapt a design to make it more effective		7. Critique 3D eco-houses. I can provide and respond to design critique.	
	8. Impact statements. I can write an impact statement.		8. Add a switch to a design. I can add a switch to the design and evaluate my product.		8. Exploded diagrams in CAD. I can use Tinkercad to draw exploded diagrams.	

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6	Cams: automata		Systems and Control: sensor alarms		Cooking and Nutrition: Cooking showcase	
	(Children will build upon all prior learning and extend skills)		(Children will build upon all prior learning and extend skills)		(Children will build upon all prior learning and extend skills)	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	1 Cam mechanisms I can identify how cams create movement.	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - 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. - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Select from and use a wider range of tools and equipment to perform practical tasks accurately. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use mechanical systems in their products.	1 Museum gallery prototypes I can create a model museum gallery.	- 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. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. - 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. - Select from and use a wider range of tools and equipment to perform practical tasks accurately. - Understand how key events and individuals in design and technology have helped shape the world. - Apply their understanding of computing to program, monitor and control their products. - Understand and use electrical systems in their products	1 Making patatas bravas I can use food skills to make patatas bravas.	- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. - Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. - Understand and apply the principles of a healthy and varied diet.
	2 Cams in a product I can identify how cams work in an automata.		2 Museum gallery artefacts I can create model artefacts for a museum gallery prototype.		2 Making a UK seasonal fruit traybake I can use food skills to make a UK fruit traybake.	
	3 Wood functional properties I can explain the difference between soft and hard woods.		3 Push-to-make switches I can make a push-to-make switch.		3 Making a tear 'n' share pizza I can use food skills to make a tear 'n' share pizza.	
	4 Develop ideas through cross-section diagrams I can draw cross-section diagrams.		4 Off Board components I can name off board components that can be added to a micro:bit.			
	5 Wood construction and joining techniques I can saw, join and drill wood.		5 Input and output design decisions I can choose inputs and outputs for my micro: bit alarm system.			
	6 Make an accurate box frame I can make an accurate box frame.		6 Museum alarm programming and fault finding I can program a micro:bit alarm system and test faults in a circuit.			
	7 Assemble cam mechanisms I can integrate a cam mechanism into an automaton.		7 Integrate programmable systems in a product I can safely secure electrical components into designs.			
	8 Test and adapt cam mechanisms I can test and adapt mechanisms.		8 The Great Exhibition and presenting museum alarms I can prepare and host an exhibition of work.			