



CRIGGLESTONE ST. JAMES CE PRIMARY ACADEMY

Design and Technology Progression Grid

(Progression of skills, knowledge and vocabulary)

‘Ready for the Future’

2022- 2024









INTENT:

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At St James, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. As part of this, we look at designs which already exist, and we look at a variety of designers who have helped to change the world that we all experience.

We aim, wherever possible, to make links with other subjects, particularly history and geography allowing children to make connections within their learning. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.



CRIGGLESTONE ST. JAMES CE PRIMARY ACADEMY

EYFS Overview Year A & B						
	Autumn One 2022	Autumn Two 2022	Spring One 2023	Spring Two 2023	Summer One 2023	Summer Two 2023
Area/Topic:	Marvellous Me 	Superheroes (linked to 'Superworm' T4W) 	Weather- Come Outside (linked to 'Bear Hunt' T4W) 	Once Upon a Time (linked to 'TLRH' T4W) 	Wonderful Minibeasts (linked to 'TVHC' T4W) 	Only One Earth (linked to 'The Life of a Little Plastic Bottle' T4W) 
Big question	What makes you unique? (PSED Driver)	Are superheroes real? (PSED Driver)	Can we go out in any weather? (UW Driver)	Should we forgive people for making bad choices? (PSED Driver)	What is a lifecycle? (UW Driver)	What can we do to look after our environment? (UW Driver)
Provocative Statement	To be special you have to be good at something.	All superheroes wear a cape.	People are happier when its warm.	Traditional tales are just silly stories.	Some animals are more important than others.	Our environment can look after itself.
Subject content from EY Framework 2021 Notes from Becky: These are generic rather than DT.	N/A	Physical development ELG- Fine motor skills <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery; Begin to show accuracy and care when drawing. Expressive arts and design 	Physical development ELG- Fine motor skills <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery; Begin to show accuracy and care when drawing. Expressive arts and design Creating with materials 	Physical development ELG- Fine motor skills <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery; Expressive arts and design Creating with materials Safely use and explore a variety of materials, tools and 	Physical development ELG- Fine motor skills <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery; Begin to show accuracy and care when drawing. Expressive arts and design 	Physical development ELG- Fine motor skills <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery; Begin to show accuracy and care when drawing. Expressive arts and design



		<ul style="list-style-type: none"> • Creating with materials • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;-Share their creations, explaining the process they have used; 	<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;-Share their creations, explaining the process they have used; 	<p>techniques, experimenting with colour, design, texture, form and function;-Share their creations, explaining the process they have used;</p>	<ul style="list-style-type: none"> • Creating with materials • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;-Share their creations, explaining the process they have used; 	<ul style="list-style-type: none"> • Creating with materials • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;-Share their creations, explaining the process they have used;
Knowledge taught	N/A	Using scissors to make snips and cut around shapes. Designing their own cape/costume and mask. Make masks and props linked to the Christmas story and Diwali.	Using different materials from the provision areas to create a story box. E.g stormy scene, forest	Using a range of small tools to create chocolate crispy for the Easter basket. Baking bread.	Using split pins to join materials to make movable minibeasts.	Using recycled materials to make upcycled products e.g. bird feeder from a water bottle.
Vocabulary	N/A	Scissors,Cut, Snip, Design		N/A		
Link texts	N/A	-Diwali and Christmas Stories (RE links) -Supertato -Spiderella	-Elmer in the Snow -Rain Before Rainbows -Little Polar Bear	-Jack and The Beanstalk -Jaspers Beanstalk -Little Red Reading Hood Other Traditional Tales	-What the Ladybird Heard. -Aaaarrgghh Spider! -The Teeny Weeny Tadpole -The Bad Tempered Ladybird	-Michel Recycle



KS1 Overview YEAR A

	Autumn 2022	Spring 2023	Summer 2023
Area:	Cooking and Nutrition	Textiles	Construction
Big question		Create a pouch using an overstitch stitch	Are some chairs stronger than others?
Provocative Statement	A sandwich is only a sandwich if it uses bread.		
Outcome	Make a sandwich using a variety of carbohydrates and fillings.	Make a pouch with a handle using running stitch.	To make a prototype of a chair that will hold a teddy bear.
Substantive Knowledge (sticky)	<ul style="list-style-type: none"> - Understand basic safety and hygiene procedures such as washing hands with soap and hot water, tying back long hair and making sure that equipment is clean when using. - Simple utensils can be used to process food and make it easier to eat. - We need to eat a range of foods from the 5 food groups as part of each meals to stay healthy. These are called nutrients. - A vegetable is a plant that is used for food, they can be grown at home or farmed - Explore an evaluate a range of products 	<ul style="list-style-type: none"> - To thread a needle you thread cotton through the eye of the needle. (Some more able children should be able to attempt this independently). - To know which equipment is needed to sew material together. - Explore and evaluate a range of products - Know that a 3-d textiles product can be designed from two identical fabric shapes. 	<ul style="list-style-type: none"> - How to join components together effectively - A range of tools can be used for different purposes e.g. cutting, bending, joining, sticking etc. - To understand how structures can be made stronger and stiffer. - Be aware of the resources available and make design decisions based on this. - Explore and evaluate a range of products
Disciplinary Skills	<ul style="list-style-type: none"> - How to safely use a sharp knife using claw position. - Design an appealing product based on a simple design criteria. - Generate initial ideas and design criteria by investigating a range of vegetables. - Use simple utensils to peel, cut, slice, chop and grate safely. - Evaluate ideas and finished products against the design criteria. - Assemble ingredients to make a finished product. 	<ul style="list-style-type: none"> - Know how to safely use a needle. - How to thread a needle - Create their own design criteria and design and create a pouch based on this. - Creating a seam. - Evaluate their own products against a design criteria. - Suggest how their product could be improved. 	<ul style="list-style-type: none"> - How to design a simple structure - With adult support, safely use tools for different purposes. - With adult support, select and use a range of materials and components according to the characteristics of each item. - With adult support, build their own 3D structure. - Suggest how their product could be improved.



	- Suggest how their product could be improved.		
Vocabulary *highlighted shows vocabulary that is prior knowledge	Healthy, Unhealthy, ingredients, Peel, Grate, Drain, Y-shaped peeler, Paring, knife, Serrated knife, Mix, Stir, Combine, Assemble, Drizzle, Shape, Vegetarian, Vegan, Allergy	Needle, Thread, Cotton, running stitch, Joining, decoration, eye (of the needle)	Prepare, Market research, Template, Diagram, successful/unsuccessful, prototype stiffness, evaluate, axel, structure, strength, stability, centimetre (CM), wind up, decorate, Model, development
Link texts			

KS1 Overview YEAR B

	Autumn 2023	Spring 2024	Summer 2024
Area:	Construction	Cooking and nutrition	Textiles
Big question		Can an ice lolly taste delicious and be healthy?	Does a blanket always need to be made of one piece of fabric?
Provocative Statement	Vehicles always need 4 wheels		
Outcome	Make a moving wheeled vehicle including an axel	Make fruit and milk (or alternative) based ice lollies	Create a patchwork blanket using running stitch (each child to create their own patch which they will decorate)
Substantive Knowledge (sticky)	<ul style="list-style-type: none"> - Learn how to use a range of materials and components including kits and mechanical components. - Begin to measure, mark out and cut products. - With adult support, assemble, join and combine materials and components. - With adult support learn finishing techniques (these may be similar to those used in art lessons) 	<ul style="list-style-type: none"> - To be able to use claw position to chop vegetables. - To know which part of a fruit is edible and how to prepare it. - To understand seasonality and be able to identify fruits which are in season in the UK at different times of the year. - With adult supervision, be able to use a blender. 	<ul style="list-style-type: none"> - To be aware that you thread a needle by placing cotton through the eye of the needle. (Some more able children should be able to attempt this independently). - To know which equipment is needed to sew material together. - Explore and evaluate a range of products - Know that a 3-d textiles product can be designed from two identical fabric shapes.
Disciplinary knowledge	<ul style="list-style-type: none"> - How to design a simple structure - With adult support, safely use tools for different purposes. - With adult support, select and use a range of materials and components according to the characteristics of each item. 	<ul style="list-style-type: none"> - Cutting using a serrated knife to cut soft foods using bridge and claw positions. - Design an appealing product based on a simple design criteria. - Generate initial ideas and design criteria by investigating a range of vegetables. 	<ul style="list-style-type: none"> - To be able to perform <u>overstitch</u> - Know how to safely use a needle. - How to thread a needle - Create their own design criteria and design and create a pouch based on this. - Creating a seam. - Evaluate their own products against a design criteria.



	<ul style="list-style-type: none"> - With adult support, build their own 3D structure. - Suggest how their product could be improved. 	<ul style="list-style-type: none"> - Use simple utensils to peel, cut, slice, chop and grate safely. - Evaluate ideas and finished products against the design criteria. - Assemble ingredients to make a finished product. - Suggest how their product could be improved. 	<ul style="list-style-type: none"> - Suggest how their product could be improved.
Vocabulary *highlighted shows vocabulary that is prior knowledge	prepare, market research, template , diagram, successful/unsuccessful, prototype , measure, evaluate , dowel , centimetre (CM)decorate, model, development, wheel , axel	healthy , unhealthy, ingredients , peel , Grate, Drain, Y-shaped peeler , Serrated knife , Mix, Stir, Combine , Assemble, Drizzle, Shape, Vegetarian, Vegan, Allergy	needle , thread , cotton , overstitch , joining , decoration
Link texts			

LKS2 Overview YEAR A

	Autumn 2022	Spring 2023	Summer 2023
Area:	Construction	Cooking and nutrition	Textiles
Big question			How many ways can you decorate fabric?
Provocative Statement		A vegetable can't be made into a dip!	
Outcome	Design and make a photo frame either to hang on the wall or to stand up.	Make a range of healthy vegetable dips	Make a cushion cover that is decorated using dye
Substantive Knowledge (sticky)	<ul style="list-style-type: none"> - With limited adult guidance, use a range of materials and components including kits and mechanical components. - Begin to independently, assemble, join and combine materials and components. (adult support may still be necessary depending on the task) - Independently choose and execute finishing techniques (these may be similar to those used in art lessons) 	<ul style="list-style-type: none"> - To understand what prototypes are used for and learn how to create their own. - Know that humans need to eat a range of foods from the eatwell guide to be healthy. - Identify different foods and where they sit on the eatwell guide. - Food ingredients can be fresh- pre-cooked or processed e.g. canned chickpeas. - Different vegetables are in season at different times of the year, be able to 	<ul style="list-style-type: none"> - To understand what prototypes are used for and learn how to create their own. - To know that a simple fabric shape can be used to make a 3D textiles product. - Different fastenings have different functions. - Pins can be used to hold together 2 pieces of fabric whilst sewing. - Fabrics can change colour by using dyes. Different effects can be created using different techniques e.g. tie dye.



	<ul style="list-style-type: none"> - To understand what prototypes are used for and learn how to create their own. - To understand that some materials are stronger than others e.g. a glue gun would provide more strength than PVA glue. 	<p>identify which of their ingredients would be in season.</p>	
Disciplinary Skills	<ul style="list-style-type: none"> - Use a simple design specification to guide the design of a product. - Make design decisions that take account of the availability of resources. - Begin to independently measure, mark out and cut products. - To be able to use a ruler to accurately measure components and materials to the nearest cm. - With adult supervision be able to safely use a saw with accuracy. - With adult support, to be able to use a glue gun. - How to safely assemble a cutting area and how to saw wood with accuracy and safety. - 	<ul style="list-style-type: none"> - Understand how to prepare and cook a variety of savoury dishes safely. - Use a range of techniques such as mashing, whisking, crushing, grating, kneading and baking. - Prepare ingredients using appropriate utensils. - Measure and weigh ingredients using grams and ml. - With adult support, follow a recipe. - Use a simple design specification to guide the design of a product. - Order the main stages of making. - Make design decisions that take account of the availability of resources. 	<ul style="list-style-type: none"> - Some children will be able to independently thread a needle. - To generate a mock up from their design piece. - To be able to attach 2 pieces of fabric together using running stitch - Use a simple design specification to guide the design of a product. - Make design decisions that take account of the availability of resources. - Use a simple design specification to guide the design of a product. - More able children to order the make process.
Vocabulary *highlighted shows vocabulary that is prior knowledge	fit for purpose, effective , purposeful, sandpaper, packaging, dimensions, adhesive, initial ideas, butt joint, right angle, finishing process	Bridge and claw technique, Weighing scales, Grams (g), Kilo (KG), Millilitre (ML), Dietary requirements, Nutrients, Vegetarian, Blender, mash	Print, Fastening, Pattern, Texture, Dying, Stitch
Link texts			

LKS2 Overview YEAR B

	Autumn 2023	Spring 2024	Summer 2024
Area:	Cooking and nutrition	Textiles	Construction
Big question	How many ways can you make a loaf of bread?		



Provocative Statement		All fastenings do the same job.	Light can't be used for decoration.
Outcome	Make a flavoured loaf of bread using dried yeast as a raising agent.	Create a tablet case with a fastening	Design and make a lightbox to decorate a room
Substantive Knowledge (sticky)	<ul style="list-style-type: none"> - Bread had been made and consumed as a main part of the diet for thousands of years. - Bread was traditionally made using a sourdough starter to make the bread rise and would have been baked in community ovens. - Now, we make bread using yeast as a rising agent, this could be fresh or dried. - Bread can be adapted by adding different ingredients to change the texture and taste e.g. different flours or herbs and spices etc. - Different fresh ingredients are grown seasonally, therefore ingredients used in a product could change with the seasons. e.g. wild garlic could only be used to season bread during spring. - 	<ul style="list-style-type: none"> - Different fabrics have different textures, these should be chosen carefully depending on the use of the product and the brief of from the adult. - Different fastenings have different purposes and should be chosen to best suit the product being made. 	<ul style="list-style-type: none"> - How to safely assemble a cutting area and how to saw wood with accuracy and safety. - Use a simple design specification to guide the design of a product. - Make design decisions that take account of the availability of resources. - Begin to independently measure, mark out and cut products. - To be able to use a ruler to accurately measure components and materials to the nearest cm. - With adult supervision, be able to safely use a saw with accuracy. - With adult support, to be able to use a glue gun. -
Disciplinary Skills	<ul style="list-style-type: none"> - Kneading - Moulding - Shaping - Accurately measuring ingredients to the nearest gram or ml - tearing - mixing - Use a bridge or claw to flavour some ingredients. 	<ul style="list-style-type: none"> - Attempt to thread a needle independently, using a needle threader to help where necessary. - Learn to attach buttons, poppers and other fastenings. - With adult supervision, use a glue gun to attach decorative fabric (where necessary) 	<ul style="list-style-type: none"> - Measure and mark wood. - With adult supervision, use a saw, g clamp and saw bench correctly. - With adult supervision use a glue gun and know how to assemble a structure.
Vocabulary *highlighted shows vocabulary that is prior knowledge	Bridge and claw technique, Weighing scales, Grams (g), Kilo (KG), Millilitre (ML), Dietary requirements, Nutrients, Vegetarian, Knead, Dough, Bake, Leavening, Binder, Gluten, Texture, Elastic, Proving, Shaping, Knocking back	Print, Fastening, Pattern, Texture, Dying, Stitch,	fit for purpose, effective , purposeful, sandpaper, packaging, dimensions, Adhesive, initial ideas
Link texts			



UKS2 Overview YEAR A

	Autumn 2022	Spring 2023	Summer 2023
Area:	Textiles	Construction	Cooking and nutrition
Big question			Can a meal be cheap, tasty and healthy?
Provocative Statement	Fabrics can only be recycled in a factory	You can't be a gardener without outside space	You can't make a tasty meal on a limited budget
Outcome	Make a shopping bag with a strong handle	Make a mini green house with a hinge to fit on a windowsill	
Substantive Knowledge (sticky)	<p>Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <ul style="list-style-type: none"> • Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional diagrams. • Select from and use a wider range of tools and equipment to perform practical tasks • Select from and use a wider range of materials and components and textiles according to their functional properties and aesthetic qualities. 	<ul style="list-style-type: none"> - With confidence, select and use a wide range of materials and components suitable for the product being made. Explain why these materials have been chosen according to their functional properties. - Create an appropriate list of tools, equipment and materials. - Formulate a step-by-step plan as a guide to making. - Use techniques that involve a number of steps. 	<ul style="list-style-type: none"> - Know and give examples of foods that are grown, reared and caught in the UK, Europe and wider world) - Understand that seasonality may affect food availability and plan a recipe according to seasonality. - Understand that ingredients are processed into ingredients that can be eaten in cooking. E.g. chickpeas>hummus. - Be able to plan a meal that contains a balance of ingredients that are necessary for good health (using eatwell guide recommendations). - To understand how to simply read a food label to identify whether a food is nutritious or not. - To be aware of food safety and the 4C's (cleaning, cooking, chilling and cross-contamination) - Understand that a recipe can be adapted by adding or substituting more ingredients. - Recipes can be adapted to change the appearance, taste, texture and aroma. -



<p>Disciplinary Skills</p>	<ul style="list-style-type: none"> - Independently thread a needle with confidence. - Tie off at the end of a row of stitches to secure what has been sewn. - Create a prototype and be able to critique this. - To make design decisions, taking account of constraints such as time, resources and cost - Develop a simple design specification to guide their thinking. - To make design decisions, taking account of constraints such as time, resources and cost - Produce a list of tools, equipment and materials they need. - Formulate a step by step plan as a guide to making. - Use techniques that involve a number of steps. - Evaluate their ideas and products against their original design specification. 	<ul style="list-style-type: none"> - To confidently evaluate existing products. - Confidently design a greenhouse which includes a list of materials and measurements. - Confidently measure using a ruler - Confidently saw wood - Independently use sandpaper to make corrections and adaptations to a sawn piece of wood. - Develop a simple design specification to guide their thinking. - To make design decisions, taking account of constraints such as time, resources and cost - Produce a list of tools, equipment and materials they need. - Formulate a step-by-step plan as a guide to making. - Use techniques that involve a number of steps. - Evaluate their ideas and products against their original design specification. 	<ul style="list-style-type: none"> - Apply knowledge of Eatwell plate to design a balanced meal. - Apply bridge or claw technique when cutting vegetables. - Understand and apply the principles of food hygiene - Choose ingredients based on their availability and cost. (know that seasonal produce are cheaper due to their availability) - Develop a simple design specification to guide their thinking. - To make design decisions, taking account of constraints such as time, resources and cost - Produce a list of tools, equipment and materials they need. - Formulate a step by step plan as a guide to making. - Use techniques that involve a number of steps. - Evaluate their ideas and products against their original design specification.
<p>Vocabulary *highlighted shows vocabulary that is prior knowledge</p>	<p>Tie off, Thermal, blanket stitch, tack and pin, seam</p>	<p>mass produce, handmade, functionality, purposeful, alter, durable, hinge</p>	<p>Hand blender, Food processor, Hygiene , Bacteria, Cross contamination Disinfect, Hob, Oven , Savoury, Texture, Food requirements</p>
<p>Link texts</p>			

UKS2 Overview YEAR B

	Autumn 2023	Spring 2024	Summer 2024
Area:	Textiles	Construction	Cooking and nutrition
Big question			



Provocative Statement	Slippers can't be warm and look good.		Traditional foods aren't as nice as modern foods
Outcome	Thermal slippers (KAPOW) prototype only	Create a prototype of a bridge using a mechanism	Cornish Pasty
Substantive Knowledge (sticky)	<ul style="list-style-type: none"> - Know that different fabrics have different functions. - Be aware that some fabrics have thermal insulation properties. - Know that a slipper is created using a range of fabrics which are selected for their functionality. - Understand that slippers are made from different sections attached together. - Observe how a slipper is joined together, including gluing and stitching. 	<ul style="list-style-type: none"> - With confidence, select and use a wide range of materials and components suitable for the product being made. Explain why these materials have been chosen according to their functional properties. - Create an appropriate list of tools, equipment and materials. - Formulate a step-by-step plan as a guide to making. - Use techniques that involve several steps. 	<ul style="list-style-type: none"> - Know and give examples of foods that are grown, reared and caught in the UK, Europe and wider world) - Understand that seasonality may affect food availability and plan a recipe according to seasonality. - Understand that ingredients are processed into ingredients that can be eaten in cooking. E.g. chickpeas>hummus. - Be able to plan a meal that contains a balance of ingredients that are necessary for good health (using eatwell guide recommendations). - To understand how to simply read a food label to identify whether a food is nutritious or not. - To be aware of food safety and the 4C's (cleaning, cooking, chilling and cross-contamination) - Understand that a recipe can be adapted by adding or substituting more ingredients. - Recipes can be adapted to change the appearance, taste, texture and aroma.
Disciplinary Skills	<ul style="list-style-type: none"> - Investigate the thermal properties of different fabrics. - Select a fabric based on its functionality. 	<ul style="list-style-type: none"> - To confidently evaluate existing products. - Confidently design a greenhouse which includes a list of materials and measurements. - Confidently measure using a ruler - Confidently saw wood 	<ul style="list-style-type: none"> - This may change based on what the children decide to choose. - Apply knowledge of Eatwell plate to design a balanced meal. - Apply bridge or claw technique when cutting vegetables.



	<ul style="list-style-type: none"> - Children create products using pattern pieces and demonstrate an awareness of seam allowance. - Children build on prior knowledge to choose a stitch which they know to be and fit for purpose. - Children can pin and tack fabric pieces together. They can join fabrics by over sewing, back stitch and blanket stitch. - Children can safely and confidently use a glue gun to attach parts of their design. 	<ul style="list-style-type: none"> - Independently use sandpaper to make corrections and adaptations to a sawn piece of wood. - Develop a simple design specification to guide their thinking. - To make design decisions, taking account of constraints such as time, resources and cost - Produce a list of tools, equipment and materials they need. - Formulate a step by step plan as a guide to making. - Use techniques that involve a number of steps. - Evaluate their ideas and products against their original design specification. 	<ul style="list-style-type: none"> - Understand and apply the principles of food hygiene - Choose ingredients based on their availability and cost. (know that seasonal produce are cheaper due to their availability) - Develop a simple design specification to guide their thinking. - To make design decisions, taking account of constraints such as time, resources and cost - Produce a list of tools, equipment and materials they need. - Formulate a step by step plan as a guide to making. - Use techniques that involve a number of steps. - Evaluate their ideas and products against their original design specification.
<p>Vocabulary *highlighted shows vocabulary that is prior knowledge</p>	<p>Thermal, blanket stitch, tac and pin, seam</p>	<p>mass produce, handmade, functionality, purposeful, alter, durable, mechanism, leaver, linkages</p>	<p>Hand blender, food processor, Hygiene , bacteria, cross contamination, disinfect Hob, Oven, Savoury, Texture, Food requirements</p>
<p>Link texts</p>			

Skill and Aims - NC

Strand	EYFS	KS1	LKS2	UKS2
Construction		<ul style="list-style-type: none"> • Build structures, exploring how they can be made stronger, stiffer and more stable. • Talk about and start to understand the simple working characteristic of materials and components. • Explore and create use mechanisms (e.g. levers, sliders, wheels and axels in their products) 	<ul style="list-style-type: none"> • Apply understanding of how to strengthen, stiffen and reinforce more complex structures. • Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors) • Apply their understanding of computing to programme, monitor and control their products. <p>Children will be able to:</p> <ul style="list-style-type: none"> • understand that materials have both functional properties and aesthetic qualities; • understand and demonstrate how mechanical and electrical systems have an input and output process; • make and represent simple electrical circuits, such as a series and parallel, and components to create functional products; explain how mechanical systems such as levers and linkages create movement; f use mechanical systems in their products 	<ul style="list-style-type: none"> • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics. • Understand and use mechanical systems in their produces (e.g. gears, pullets, cams, leavers and linkages) • Understand and demonstrate that mechanical systems such as cams, create movement and use mechanical systems in their products. • Apply their understanding of computing to programme, monitor and control a product.
Cooking and nutrition		<ul style="list-style-type: none"> • Use the basic principles of healthy eating to prepare a varied diet to prepare dishes. • To understand where food comes from. 	<ul style="list-style-type: none"> • Understand and apply the principles of a healthy and varied diet. • Identify and name a broad variety of ingredients. 	<ul style="list-style-type: none"> • Know and give examples of foods that are grown, reared and caught in the UK, Europe and wider world) • Understand that seasonality may affect food availability and



		<ul style="list-style-type: none"> • To understand basic food hygiene procedures. • Understand that a healthy diet is made of a variety of foods. • To be able to use bridge and claw position to safely prepare foods. 	<ul style="list-style-type: none"> • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. • Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. • Explain that a healthy diet is made of a variety of different foods, as represented by the eatwell guide. Use these principles to plan a meal. • Have a basic understanding of food hygiene. Understand that ingredients are processed into ingredients that can be eaten in cooking. E.g. chickpeas>hummus. 	<p>plan a recipe according to seasonality.</p> <ul style="list-style-type: none"> • Understand that ingredients are processed into ingredients that can be eaten in cooking. E.g. chickpeas>hummus. • Be able to plan a meal that contains a balance of ingredients that are necessary for good health (using eatwell guide recommendations). • To be able to use a hob and oven to cook a variety of foods and ingredients. • To understand how to simply read a food label to identify whether a food is nutritious or not. • To be aware of food safety and the 4C's (cleaning, cooking, chilling and cross-contamination)
Textiles		<ul style="list-style-type: none"> • Children learn how to sew and join fabrics using a over stitch stitch. (Y1 and Y2) • Children learn how to cut shapes which have been created by drawing around a template on the fabric. (Y2 only) 	<ul style="list-style-type: none"> • Children are able to join fabrics using running stitch with increasing independence. • Know that buttons, beads and sequins can be added to decorate and make a product more visually appealing. • Children are able to use a pattern and are introduced to making a prototype of a product. • Children are introduced to pinning and tacing 2 pieces of 	<ul style="list-style-type: none"> • Children create products using pattern pieces and demonstrate an awareness of seam allowance. They are taught how to blanket stitch to add decoration and to crate a strong join. • Children can pin and tack fabric pieces together. They can join fabrics by over sewing, back stitch and blanket stitch.



			fabric before joining using a stitch.	
Construction	<ul style="list-style-type: none"> • plan • draw • ideas • design 	<ul style="list-style-type: none"> • Prepare • Template • Diagram • successful/unsuccessful • prototype • measure • evaluate • axel • dowel • centimetre (CM) • wind up • decorate • Model • development 	<ul style="list-style-type: none"> • fit for purpose • effective • purposeful • sandpaper • packaging • dimensions • Adhesive • initial ideas • Market research • 	<ul style="list-style-type: none"> • mass produce • handmade • functionality • purposeful • alter • durable
Cooking and nutrition		<ul style="list-style-type: none"> • Healthy • Unhealthy • ingredients • Peel • Grate • Drain • Y-shaped peeler • Paring knife • Serrated knife • Mix • Stir • Combine • Assemble • Shape • Vegetarian • Allergy • Bake • Mash 	<ul style="list-style-type: none"> • Bridge and claw technique • Weighing scales • Grams (g) • Kilo (KG) • Millilitre (ML) • Dietary requirements • Nutrients • Vegetarian • Knead • Dough • Market research • Leven • binding 	<ul style="list-style-type: none"> • Hand blender • Food processor • Hygiene • Bacteria • Cross contamination • disinfect • Hob • Oven • Savoury • Texture • Food requirements • Boil • Steam • Drizzle • Rub together • Vegetarian • Vegan • Rolling pin



Textiles	<ul style="list-style-type: none">• Weaving• Loom• Fabric• Woven• Eye• Needle• Fabric• threading	<ul style="list-style-type: none">• Needle• Thread• Cotton• Running stitch• Joining• decoration	<ul style="list-style-type: none">• Print• Fastening• Pattern• Texture• Dying• Stitch	<ul style="list-style-type: none">• thermal• blanket stitch• tac and pin• seam
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Content - NC

Strand	EYFS	KS1	LKS2	UKS2
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Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

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

☒ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

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

Evaluate investigate and analyse a range of existing products

evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

understand how key events and individuals in design and technology have helped shape the world

Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures



		<p>explore and evaluate a range of existing products</p> <p>evaluate their ideas and products against design criteria</p> <p>Technical knowledge</p> <p>build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>☑ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>		<p>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p> <p>☑ apply their understanding of computing to program, monitor and control their products.</p>
Cooking and nutrition		<p>☑ use the basic principles of a healthy and varied diet to prepare dishes</p> <p>☑ understand where food comes from</p>		<p>understand and apply the principles of a healthy and varied diet</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>