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	Nursery and Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	EYFS **Children ~** **understand that media can be combined to create new effects.** **construct with a purpose in mind, using a variety of resources.** **use simple tools and techniques competently and appropriately.** **select appropriate resources and adapt work where necessary.** **select tools and techniques needed to shape, assemble and join materials they are using.** **safely use and explore a variety of materials, tools and techniques, experimenting with design, form and function.** **create simple representations of objects.** **use what they have learnt about media and materials in original ways, thinking about uses and purposes.**	**• Design appealing products for a particular user based on a simple given design criteria.** **• Generate initial ideas and design through own experiences e.g (select picture to help ideas)** **Select appropriate technique explaining what it does.** **• Develop and communicate these ideas through talk and drawings and mock ups where relevant.**	- Generate ideas using a simple design criteria based on their own experiences, explaining what they could make. -Propose more than one idea for their product and decide on the most effective/appropriate. **-Select appropriate techniques explaining why it is effective.** - Develop, model and communicate their ideas through talking, mock-ups and drawings.	**KS2 National Curriculum** ● **Children** ● **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.** ● **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.** ● **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.** ● **apply their understanding of how to strengthen, stiffen and reinforce more complex structures** ● **understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].** ● **understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].** ● **apply their understanding of computing to program, monitor and control their products.** ● **understand and apply the principles of a healthy and varied diet.** ● **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.**		

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
M A K E	**Children can:** explore collections of materials with similar and/or different properties. use a variety of tools and materials to make models. explore different materials freely, develop their ideas about how to use them and what to make. develop their own ideas and then decide which materials to use to express them. join different materials and explore different textures. use one-handed tools and equipment, for example, making snips in paper with scissors;	**Children can:** Select and use simple utensils, tools and equipment from a limited range to perform a job e.g. peel, cut, slice, squeeze, grate and chop safely; marking out Name the tools they are using. select from a limited range of materials, textiles and components for a chosen product. Use simple finishing techniques suitable for the products they are creating.	**Children can:** select from a range of tools and equipment to perform practical tasks explaining their choices. Name the tools they are using. select from a range of materials, textiles and components according to their characteristics, **discussing why they are appropriate for the task.** Use simple finishing techniques suitable for the products they are creating.	**Children can:** Plan with growing confidence, carefully select from a range of tools and equipment, explaining their choices Select from a range of materials according to their functional properties and aesthetic qualities; (Sewing) Follow a recipe/method in a systematic order. (Pizza + Sewing) Learn to use a range of tools and equipment safely. Learn to follow hygiene procedures (Pizza) With growing independence,	**Children can:** Plan with growing confidence, carefully select from a range of tools and equipment, explaining their choices Select from a range of materials and components according to their functional properties and aesthetic qualities (CAMS) Follow a recipe/method in a systematic order (CAMS) Use a range of tools and equipment safely. Reinforce knowledge of hygiene procedures (Biscuits)	**Children can:** Plan independently by suggesting what to do next Select from a wide range of tools and equipment, explaining their choices (Bread+soup) select from a range of materials according to their functional properties and aesthetic qualities (Sewing) Create step-by-step plans as a guide to making (Sewing + bread+soup) Learn to use a range of tools and	**Children can:** Plan independently plan by suggesting what to do next Select from a wide range of tools and equipment, explaining their choices (Pies + fairground rides) Select from a range of materials and components according to their functional properties and aesthetic qualities (Fairground rides) Create step-by-step plans as a guide to making (Fairground rides and pies) Learn to use a range of tools and

	develop their fine motor skills so that they can use a range of tools competently, safely and confidently; make with wood, using the appropriate tools; use measuring cups accurately to make playdo, salt dough and bread.			measure and mark out to the nearest cm and millimetre (Pizza) Cut and shape materials with some degree of accuracy; (Pizza + Sewing) Assemble, join and combine materials with some degree of accuracy; (Pizza + Sewing) Demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product; (Sewing) Join fabrics together using simple stitches such as running stitch and back stitch (Sewing)	Use a wider range of materials and components, including construction materials and mechanical components (CAMS) With growing independence, measure and mark out to the nearest cm and millimetre (Biscuits and CAMS) Cut, shape and score materials with some degree of accuracy (Biscuits and CAMS)	equipment safely and appropriately and follow hygiene procedures (Bread+soup) Independently take exact measurements and mark out, to within 1 millimetre/gram (Bread+soup) Cut a range of materials with precision and accuracy (Sewing) Assemble, join and combine materials using a range of techniques such as stitching with accuracy (Sewing) Demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product (Sewing) Join textiles using	equipment safely and appropriately and follow hygiene procedures (Pies) Independently take exact measurements and mark out, to within 1 millimetre/gram (Fairground rides and pies) Use a full range of materials and components, including construction materials and mechanical components (Fairground rides) Cut a range of materials with precision and accuracy (Fairground rides) Shape and score materials with precision and accuracy; Assemble, join and combine materials

						a greater variety of stitches, such as backstitch, whip stitch, blanket stitch (Sewing) Refine the finish using techniques to improve the appearance of their product, such as a more precise scissor cut after roughly cutting out a shape (Sewing)	and components with accuracy (Fairground rides) Refine the finish using techniques to improve the appearance of their product, such as sanding (Fairground rides)

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E V A L U A T E	**Children can:** talk about the differences between materials and changes they notice. talk about what they see, using a widening vocabulary. explore, use and refine a variety of artistic effects to express their ideas. return to and build on their previous learning, refining ideas and developing their ability to represent them. through woodwork, think creatively and critically, solve problems and reflect. create collaboratively, sharing ideas, resources and skills.	**Children can:** Taste, explore and evaluate a range of products to determine the intended user's preferences for the product. Decide how existing products do/do not achieve their purpose. Identify the intended purpose and criteria of the product and discuss their ideas. Discuss if their finished product meets their design criteria. identify strengths and possible changes during the making process.	**Children can:** Explore a range of existing products related to their design criteria, investigate how they have been made. Decide how existing products do/do not achieve their purpose. Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user, identify strengths and possible changes during the making process.	**Children can:** Explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose (Sewing) Explore materials/ingredients and consider the effectiveness for a specific purpose (Sewing + Pizza) Consider their design criteria as they make progress and are willing to alter their plans (Sewing + Pizza) Evaluate their product against their original design criteria (Sewing + Pizza)	**Children can:** Explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose (CAMS) Explore what materials/ingredients products are made from and suggest reasons for this (Biscuits and CAMS) Consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product (Biscuits and CAMS) Evaluate their product against their original design criteria (Biscuits	**Children can:** Complete detailed competitor analysis of other products on the market Critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make (Sewing) Evaluate their ideas and products against the original design criteria, making changes as needed.	**Children can:** Complete detailed competitor analysis of other products on the market Critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make (Fairground rides) Evaluate their ideas and products against the original design criteria, making changes as needed.

					and CAMS) Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.		

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
T E C H N I C A L	**Children can:** explore how things work. program a bee-bot and successfully interact with the SMART board and ipads. develop their own ideas and then decide which materials to use to express them. choose the most appropriate resources to carry out their own plan.	**Children can:** explore and create products using a slider and or lever mechanism. **<u>Lever and sliders</u>** • Understand that different mechanisms produce different types of movement. • Explore different finishing techniques • Know and use technical vocabulary relevant to the project.	**Children can:** **<u>structures</u>** build simple free-standing structures, exploring how they can be made stronger, stiffer and more stable. **<u>wheels and axles</u>** Explore and use wheels, axles and axle holders. • explore, use and distinguish between fixed and freely moving axles. • Explore different finishing techniques • Know and use technical vocabulary relevant to the project.	**Children can:** Understand that materials have both functional properties and aesthetic qualities	**Children can:** Understand that materials have both functional properties and aesthetic qualities Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products (CAMS) Explain how mechanical systems such as CAMS, levers and linkages create movement (CAMS) Use mechanical systems in their products (CAMS)	**Children can:** Understand that materials have both functional properties and aesthetic qualities	**Children can:** Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products Understand and demonstrate that mechanical and electrical systems have an input, process and output (Fairground rides) Explain how mechanical systems, create movement and use mechanical systems in their products (Fairground rides) Apply their understanding of computing to program, monitor and control a product (Fairground rides)

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
C O O K I N G & N U T R I	**Children can:** discuss healthy choices about food and drink. prepare and cook recipes linked to the relevant topic and area of learning. talk about the different factors that support their overall health and wellbeing including healthy eating. make a food product.**using a range of techniques mixing/ pouring. stirring with different sized equipment/chopping/rolling/kneading.**	**Children can:** explore and discuss food products using taste, smell, texture and feel. Group familiar food products e.g. fruit and vegetables, meat, sugars identify foods that grow/live in different places. e.g potatoes ground/ apple tree/fish live in the sea discuss the needs of a balanced diet and the need for a variety of foods in a diet. (5 fruit and veg a day) discuss how the product made is part of a balanced diet. (e.g how often should it be eaten) discuss that all food comes from plants or animals. design and make a food product. **using a range**	**Children can:** explore and discuss food products using taste, smell, texture and feel. identify familiar foods and where they are typically grown Give examples of food that can be farmed, grown or caught. name and sort foods into the **five groups in the Eatwell Guide.(science link) and** discuss the importance of a balanced diet including. **portion size.** design and make a food product. Using a range of tools and skills. explain how their food product fits in with the Eatwell Guide and a balance diet.	**Children can:** start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world understand how to prepare and cook a savoury dish with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob oven use a range of techniques such as mashing, whisking, crushing, grating, cutting, chopping, kneading and baking using appropriate	**Children can:** understand how to prepare and cook a variety of dishes safely and hygienically with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the oven use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking using appropriate cooking utensils explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the	**Children can:** know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world With growing confidence, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven understand about seasonality, how this may affect the food availability and plan recipes according to seasonality understand that food is processed	**Children can:** know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world understand about seasonality, how this may affect the food availability and plan recipes according to seasonality understand that food is processed into ingredients that can be eaten or used in cooking demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and

T I O N		**of techniques to prepare food Cut, peel, grate and chop a range of fruit and vegetables.** **discuss how they Work safely and hygienically** accurately Measure and weigh food items, using non standard measure.(cups and spoons)	**discuss how they Work safely and hygienically** Measure and weigh food items, using non standard units e.g cups and spoons and begin to use easy to read equipment to measure grams and millilitres (once taught in maths) in multiples of 10 e.g 1 KG or 500g	cooking utensils explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body measure and weigh ingredients to the nearest gram and millilitre start to independently follow a recipe; start to understand seasonality.	Eatwell Guide and be able to apply these principles when planning and cooking dishes Measure and weigh ingredients to the nearest gram and millilitre Start to independently follow a recipe.	into ingredients that can be eaten or used in cooking demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes adapt and refine recipes by adding or substituting one or more ingredients to change the	hygienically including, where appropriate, the use of a heat source demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; alter methods, cooking times and/or temperatures;

						appearance, taste, texture and aroma; alter methods, cooking times and/or temperatures; measure accurately and calculate ratios of ingredients to scale up or down from a recipe; Independently follow a recipe.	measure accurately and calculate ratios of ingredients to scale up or down from a recipe; independently follow a recipe.

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Suggested learning, provocations and exploration ~

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Traditional tales with a twist ~ opportunities for cooking, designing and construction. Group and individual woodwork projects.	Moving puppets. (e.g junk modelling string or stick puppets/hand/sock puppets levers/sliders projects	Improving the strength of structures. Design a model with axles and wheels.	Textiles (sewing) - phone cases Cooking - Pizza making	Mechanical systems - CAMS Cooking - biscuits	Textiles (sewing) - stuffed creatures Cooking - Soup	Mechanical systems - Fairground rides Cooking - pies