KING'S ACADEMY MEADOW VALE

Curriculum Progression Map - DT

EYFS Expectations
Expressive Arts and Design - ELG **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. • Make use of props and materials when role playing characters in narratives and stories **Physical Development** • Use a range of small tools, including scissors, paintbrushes and cutlery.

Key Stage 1 National Curriculum Expectations	Key Stage 2 National Curriculum Expectations
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,	**Pupils should be taught to:** **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

including construction materials, textiles and ingredients, according to their characteristics **Evaluate** ● explore and evaluate a range of existing products evaluate their ideas and products against design criteria **Technical knowledge** ● build structures, exploring how they can be made stronger, stiffer and more stable ● explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. **Cooking and Nutrition** ● use the basic principles of a healthy and varied diet to prepare dishes ● understand where food comes from.	● 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 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. **Cooking and Nutrition** ● 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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	Autumn	Spring	Summer
Year 1	**Cooking and Nutrition** **Fruit Kebab and Sandwich Making** The children will learn about healthy eating and lifestyle habits. They will then verbally design their own fruit kebab and sandwich. The children will have the opportunity to chop, cut and spread different items of food to make their own fruit kebab and sandwich. The class will then evaluate the ease of the methods they used. ● **Design:** They will design by choosing items from a list. ● **Make:** They will make using tools such as knives and chopping boards. Using the basic principles of a healthy and varied diet to prepare dishes ● **Evaluate:** Verbal evaluation whether they liked it or not. ● **Technical knowledge**: How to cut with a knife safely.	**Textiles** Castle cloth. The children will learn a simple line stitch. They will alternate colours to create a pattern that could be hung in a castle. This will be a link to tapestries found within a castle. ● **Design:** The children will draw a pattern using colours which they will follow. Generate, develop, model and communicate their ideas through talking, ● **Make:** They will sew. select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] ● **Evaluate:** colour coded face system to evaluate how they found the project. ● **Technical knowledge:** threading of a needle and accuracy of going through the material and out again.	**Structure** **Beach Boxes** The class will research beaches. The children will then plan and design on their own beach box (using a planning template). The children will then make a beach box using resources provided. The class will evaluate the materials and methods they used. ● **Design:** They will design a beach box, labelling parts that they need. Design purposeful, functional, appealing products for themselves and other users based on design criteria ● **Make:** They will make the beach box using the resources that are provided and collected. 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:** Verbal evaluation whether they liked it or not. ● **Technical knowledge**: how to make miniature objects that will go in the beach box
Year 2	**<u>Textiles - Mop Hats and Scarves</u>** ● **Design:** generate and communicate ideas through simple labelled drawings based on 1666 clothing. ● **Make:** select, cut, join, and shape fabric using basic textile techniques such as stitching. ● **Evaluate:** compare the finished product with the original design and discuss what worked well and what could be improved. ● **Technical knowledge:** understand that textiles can be joined in different ways (e.g. stitching, tying, gluing) and that products are made for specific purposes.	**<u>Structure - Bug Hotels</u>** ● **Design:** create and label simple plans for a bug hotel, showing chosen natural materials and where they will be placed. ● **Make:** select, shape, and assemble natural and reclaimed materials safely to construct a stable bug hotel structure. ● **Evaluate:** discuss how well the finished bug hotel meets its purpose and identify one thing that could be improved. ● **Technical knowledge:** understand that structures need to be strong and stable, and that different	**<u>Cooking and Nutrition - Marinara Dip</u>** ● **Design:** plan a simple marinara dip by learning about and choosing suitable ingredients and sketching or listing the steps to make it. ● **Make:** prepare ingredients safely using basic cooking skills such as chopping, mixing, and measuring to create the dip. ● **Evaluate:** taste and describe the finished dip, comparing it to the design intentions and identifying one improvement. ● **Technical knowledge:** understand where ingredients come from (plant-based sources) and how

		materials suit different parts of a design.	basic food preparation processes change them.
Year 3	**Mechanics - Pop Up Christmas Cards** ● **Design**: generate, develop, model and communicate their ideas through discussion and annotated sketches ● **Make**: 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**: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ● **Technical knowledge:** apply their understanding of how to strengthen, stiffen and reinforce more complex structures ● **Technical knowledge:** understand and use mechanical systems in their products	**Cooking and Nutrition - The Great Bread Bake Off** ● **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 ● **Design**: generate, develop, model and communicate their ideas through discussion and annotated sketches ● **Make:** select from and use a wider range of tools and equipment to perform practical tasks accurately ● **Evaluate:** understand how key events and individuals in design and technology have helped shape the world *(Warburtons)* ● **Evaluate**: 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	**Textiles - Juggling Balls** ● **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 ● **Make**: 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**: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ● **Technical knowledge**: apply their understanding of how to strengthen, stiffen and reinforce more complex structures

		• **Cooking**: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	
Year 4	**<u>Electrical and Digital - Light Boxes</u>** • **Design:** Generate and discuss ideas to make a light box focussing on using the electrical circuits which they learn about it science and Christmas Story which they look at in RE. • **Make:** Children use different materials to connect the frame together. They are then to build a series circuit and create a silhouette display. • **Evaluate:** Children think critically about their project against the design criteria. • **Technical knowledge:** Apply their understanding of series circuits and the components needed.	**<u>Structure</u>** **Design:** Generate, develop and discuss ideas to create a model soldier. Look at different materials and discuss which would be the most effective. Sketch and label plan. **Make:** Select, shape, assemble and join materials together to create a structure. **Evaluate:** Evaluate their finished product against their design and consider the views of others to improve their work. **Technical knowledge:** Apply their understanding of how to shape and layer materials to strengthen and reinforce their structure.	**<u>Cooking and Nutrition</u>** • **Design:** Create a plan to design a margarita pizza by learning about different ingredients and where they are sourced, sketch it and label the ingredients. • **Make:** Prepare ingredients safely in a restaurant kitchen demonstrating good hygiene practice. Use skills such as kneading and shaping the dough before adding the toppings. • **Evaluate:** Taste and describe the pizza, compare it to the design intention. Identify an improvement. • **Technical knowledge:** Understand where ingredients come from and how utensils are used. Q and A and quiz with pizza express staff.

			• **Cooking and nutrition:** Making a pizza at a restaurant. Consider recipe and ingredients for pizza.
Year 5	**<u>Textiles - Christmas Decorations</u>** • **Design** - use research and develop design criteria to inform the design of appealing products that are fit for purpose. The children will research a range of Christmas ornaments and use their research to design their own ornament. • **Design** generate, develop, model and communicate their ideas through discussion, annotated sketches and pattern pieces - The children will create 4 draft design ideas and then use all these ideas to create their final design - they will annotate and explain their choices including which stitching choices they will make for each part. • **Make -** use a wider range of materials and components (needles, thread, felt) The children will use	**<u>Cooking and Nutrition - Smoothie Making</u>** • **Design -**understand and apply the principles of a healthy and varied diet. *(Cross curricular link to PSHE Healthy Me and Science Animals and humans in Spring 2)* • **Design -** understand seasonality, and know where and how a variety of ingredients are grown. • **Evaluate**: investigate and analyse a range of existing products - The children will research a range of smoothies and the companies that make them. (Innocent and supermarket brands)They will also use this knowledge to help them in the planning stage - for example, they will be able to understand which fruits and vegetables are in season when designing and planning their ideas.	**<u>Structure - Treehouse</u>** • **Design -** use research and develop design criteria to inform the design of functional products that are fit for purpose, aimed at particular individuals or groups - The children will research a range of miniature tree/bird houses and determine what makes them fit for purpose. • **Design -** generate, develop, model and communicate their ideas through discussion, annotated sketches and cross-sectional diagrams. The children will use their research to aid their designs. • **Design** select from and use a wider range of tools and equipment to perform practical tasks (wood, saws) accurately . • **Evaluate -** The children will evaluate their ideas and

	their careful planning to create their own ornament. ● **Evaluate** -evaluate their ideas and products against their own design criteria. The children will be able to explain what challenges they faced, what went well and what they would change next time and why. ● **Technical knowledge**- apply their understanding of how to strengthen, reinforce their Christmas decoration through the use of different stitches that they will learn about and have the opportunity to practise prior to the planning stage.	● **Design -** Research, taste and evaluate different smoothies using data to represent their findings. The children will use their findings to determine which ingredients they will put in their healthy fruit and vegetable smoothie. ● **Make -** the children will work in groups t**o** prepare their ingredients using a range of cooking techniques. They will also learn about keeping safe in the kitchen when chopping and blending their fruit and vegetable smoothie. ● **Evaluate**: evaluate their ideas and products against their own design criteria and consider how they would improve their design if they were to make it again and explain why. ● **Cooking**: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques - the children will ensure that their smoothie has vegetables in it as well as fruit.	determine how they can ensure this design is safe and environmentally friendly. (Link to materials and their properties earlier in the year) ● **Evaluate** apply their understanding of how to strengthen, stiffen and reinforce more complex structures ● **Technical knowledge** Use rulers/tape measures accurately in cm, Mark out straight lines and right angles. Measure and check before cutting. Use a saw safely with a bench hook or clamp. Cut wood with control and accuracy. ● Follow tool safety rules independently with supervision.Use a hot glue gun to join materials securely. ● Know that wood can split or absorb water, Understand that structures need to be stable and strong.
Year 6	**<u>Cooking - Pasta Making</u>**	**<u>Construction - Trench Making & Soldier on a CAM</u>**	**<u>Pottery - Greek Pots</u>**

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	Design - Plan a recipe, ingredients, and method in advance. **Make -**Prepare, cook, and present pasta in own style. Demonstrate the ability to measure, mix, and shape ingredients independently. Experiment with flavours and presentation. **Evaluate -** Evaluate and refine work while maintaining high standards of hygiene and safety.	**Design -** Planning & Design - Decide on the shape, size, and features of the model trench. Include a cam mechanism so a soldier can 'put his head above the parapet.' **Make -** Select and evaluate materials: Make decisions about which recycled materials are best suited for walls, supports, and flooring to fit the purpose. ● Measuring & Making: Measure, mark out positions, entrances and features clearly. Measure and cut doweling to the correct size for the cam mechanism. ● Problem-Solving & Adaptation - Change and adapt ideas to fit purpose.Solve how to attach the soldier to the cam and how to position the doweling securely in the model. **Evaluate -** Evaluation - Assess stability and appearance: Check how well the trench represents the intended design. Does the model meet the brief of demonstrating a soldier moving up to go over the top? **Technical knowledge -** How to create a cam mechanism. Safety & Care - Use tools safely: Handle scissors, craft knives, and glue responsibly.	**Design -** Planning & Design - Research Greek pottery and create a personal pot design, selecting suitable materials. **Make -** Measuring & Shaping - Prepare and shape clay accurately to achieve intended proportions and stability. Practical Construction - Construct the pot using techniques like coiling or pinching and refine its surface. Decoration - Apply patterns, motifs, and colours inspired by Greek pottery in a creative style. Adaptation - Adjust methods and techniques to overcome challenges and complete the pot successfully. **Evaluate**: Assess the pot's design, function, and appearance, suggesting improvements. **Technical knowledge**: Handle tools and clay safely while keeping the workspace tidy.

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