Design Technology Progression Overview

Year 1/2	Autumn A Why is Richmond Special?	Spring A What's it made of and why?	Summer A How do people tell their stories?	Autumn B How do I care for my body and mind?	Spring B What makes a good home?	Summer B Why is our environment precious?
	Describe how different textiles feel. Make a product from textiles by sewing and gluing. Measure, cut and join textiles. Explain why used particular textiles. (Christmas decoration)	Name and sort food into the five groups in the Eatwell Guide Discuss the importance of a varied and healthy diet. Know that everyone should eat at least five portions of fruit and vegetables every day and start to explain why With support, follow a simple plan or recipe Begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; With support, cut, peel and grate ingredients safely With support, measure and weigh ingredients using measuring cups; Evaluate their products and ideas against their simple design criteria (Food technology)	Use own ideas to design a product. Describe how their idea works. Design a product that moves. Explain to someone else how they want to make their product. Make a simple plan of their product. Consider how to make their model stronger (Making puppets – 3D moveable model)	Explain where in the world different foods originate. Understand that all food comes from plants or animals. With support, follow a simple plan or recipe Begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; With support, cut, peel and grate ingredients safely With support, measure and weigh ingredients using measuring cups; learn to follow hygiene procedures Explain what it means to be hygienic. Describe the ingredients used when making a dish. (Food technology)	Use own ideas to design a product. Describe how their idea works. Design a product that moves. Explain to someone else how they want to make their product. Make a simple plan of their product. Consider how to make their model stronger (Moving Easter card or Easter moving object – 2D moveable model)	Discuss how they want to design their construction. Select appropriate materials and tools. Make simple plans of their building. Consider how to improve their construction. (Home for a mini beast)

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Year 3/4	**Autumn A** **Why is Richmond special?**	**Spring A** **What is beneath us and why does it matter?**	**Summer A** **How do we get our message across?**	**Autumn B** **How do I care for my body and mind?**	**Spring B** **Why is history worth knowing?**	**Summer B** **How can I have my say?**
	Know when food is harvested. Understanding the benefits of eating seasonal foods. Know how some ingredients are grown, reared, caught and processed. Understand and apply the principles of a healthy and varied diet. Create and use a plan with sketches and drawings to explain ideas. Prepare and cook a savoury dish. Follow a simple recipe making minor changes.	Consider design criteria and alter plans if necessary. Consider functional properties and aesthetic qualities of materials, tools and equipment. Know how to use tools and equipment safely, appropriately and accurately Assemble, join and combine material and components with some degree of accuracy. Know how to strengthen a product by stiffening a given part or reinforce a part of the structure	Follow a step-by-step plan choosing the right equipment and materials Select the appropriate tools and techniques. Make a product which used both electrical and mechanical Measure accurately to make cuts and make holes. Use light switches or buzzers Use electrical systems to enhance the quality of the product Suggest changes that could be made. ELECTRICAL SYSTEM – TORCHES	Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. Use annotated sketches and prototypes to develop, model and communicate ideas. Order the main stages of making. Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. Select from and use finishing techniques suitable for the	Explore different initial ideas before coming up with a final design. With growing independence, measure and mark out to the nearest cm and mm. Know how to use tools and equipment safely, appropriately and accurately cut, shape and score materials with some degree of accuracy; Use tools and equipment safely Explain how to improve a finished model	Think what the user would want when using textiles Choose textiles both for their appearance and qualities Devise a template Make their product strong Join textiles with an appropriate sewing technique Sometimes consider the views of others to help them to improve their product Explore what materials

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	Know safe ways to cut food Know how to be both hygienic and safe when using food Describe how they combined ingredients Evaluate their own product. FOOD – HEALTHY RECIPE	Evaluate product against the original design criteria Know why a model has or has not been successful. STUCTURES - BRIDGES		product they are creating. Evaluate their own products and ideas against criteria and user needs, as they design and make MECHANICAL SYSTEMS - PNEUMATIC TOYS	Know why a model has or has not been successful. WOODWORK - WOODEN MAZE	products are made from and suggest reasons for this. TEXTILE - MAKE A HAND PUPPET
Year 5/6	**Autumn A** **Why is Richmond special?**	**Spring A** **Where does it come from and where does it go?**	**Summer A** **How do words make us feel?**	**Autumn B** **How do I care for my body and mind?**	**Spring B** **What legacy will I leave behind?**	**Summer B** **What makes a colourful world?**
	Come up with a range of ideas after collecting information from a range of sources. Produce a detailed step-by-step plan Show that culture and society is considered in plans and designs Evaluate appearance against original criteria. (Design and made collaborative Totem Pole)	Use electrical systems correctly and accurately to enhance a given product. Know which IT product would further enhance a specific product Use knowledge to improve a made product by strengthening, stiffening or reinforcing (Moving space vehicle/buggy)	Link scientific knowledge and ideas to design by using pulleys or gears Use more complex IT programmes to help enhance the quality of the products produced. Incorporate hydraulics and pneumatics (Product with pulleys/gears/hydraulics/pneumatics) (1 week)	Can they justify why they have used specific materials Work within a budget Ensure work is precise and accurate Hide joints to improve the look of their product	Know, explain and give examples of food that is grown, reared, caught and processed. Understand about seasonality, how this may affect the food availability. Consider seasonality when planning a dish. Work within a budget to plan a meal or	Can they come up with a range of ideas once they have collated information Take a user's view into account when designing Produce a detailed step-by-step plan

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	(1 week)	(2 weeks)		Ensure their product is strong and fit for purpose Ensure measurements are accurate (Make do and mend)	recipe, adapting if needed. Independently follow a recipe. Measure and weigh accurately calculating ratios of ingredients to scale up or down from a recipe. Demonstrate how to prepare and cook a predominantly savoury dish safely and hygienically including, where appropriate, the use of a heat source. (Food technology)	Make a product attractive and strong Make a proto-type first Use a range of joining techniques Think about how their product could be sold (Textiles)