Year 4
Design and Technology Scheme of Work

	Autumn	Spring	Summer
Design and Technology projects through which the skills are taught.	**Investigate and deconstruct food packaging. Evaluate packaging materials and their suitability. Design their food packaging.** **Make a pizza.**	**Design, make and evaluate a torch. (Including electrical systems) Investigate inventor Thomas Edison and his impact on the world.** **Make and bake buns and cakes for younger children.**	**Design, make and evaluate a suspension bridge. Investigate engineer Isambard Kingdom Brunel.** **Develop sewing skills, focusing on a range of sewing stitches.**
Skills	**Design, make and evaluate.** I can research and develop design criteria to inform my design. I can design an innovative, functional and appealing product that is fit for purpose and aimed at a particular audience or group. I can generate and develop my ideas through discussion,	**Design, make and evaluate.** I can research and develop design criteria to inform my design. I can design an innovative, functional and appealing product that is fit for purpose and aimed at a particular audience or group. I can generate and develop my ideas through discussion,	**Design, make and evaluate.** I can research and develop design criteria to inform my design. I can design an innovative, functional and appealing product that is fit for purpose and aimed at a particular audience or group. I can generate and develop my ideas through discussion,

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	annotated sketches, cross sectional and exploded diagrams and prototypes. I can select and use a wider range of tools and equipment. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate a range of existing products. I can evaluate my own idea/product against my design criteria. I can begin to understand how key events and individuals in D&T have helped shape the world. **Construction** I can create a shell or frame structure. I can use a glue gun (under 1-1 supervision). **Materials**	annotated sketches, cross sectional and exploded diagrams and prototypes. I can select and use a wider range of tools and equipment. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate a range of existing products. I can evaluate my own idea/product against my design criteria. I can begin to understand how key events and individuals in D&T have helped shape the world **Construction.** I can use a glue gun (under 1-1 supervision. **Materials**	annotated sketches, cross sectional and exploded diagrams and prototypes. I can select and use a wider range of tools and equipment. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate a range of existing products. I can evaluate my own idea/product against my design criteria. **Construction.** I can create a shell or frame structure, strengthening with diagonal struts. I can use a glue gun (under 1-1 supervision.) I can measure and mark a square section and dowelling to the nearest cm. I can use a bradawl to mark hole positions.

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	I can cut slots I can cut internal shapes. I can cut accurately and safely to a marked line. **Technical Knowledge** I can apply my understanding of how to strengthen and reinforce more complex structures. **Cooking and Nutrition.** I can prepare and cook a range of ingredients to produce predominantly savoury dishes. I can work safely and hygienically. I can understand and apply the principles of a healthy and varied diet. I can weigh and measure using scales. I can cut and shape ingredients using tools and equipment. I can analyse taste, texture, smell and appearance of a range of foods.	I can cut slots I can cut accurately and safely to a marked line. **Technical Knowledge** I can understand and use electrical systems in my product. (eg- switches, bulbs, buzzers and motors). **Cooking and Nutrition.** I can prepare and cook a range of ingredients. I can work safely and hygienically. I can cut and shape ingredients using tools and equipment. I can weigh and measure using scales. I can analyse taste, texture, smell and appearance of a range of foods. I can join and combine food ingredients by beating, kneading and rubbing in.	**Materials** I can cut slots I can cut internal shapes. I can cut accurately and safely to a marked line. **Technical Knowledge** I can apply my understanding of how to strengthen and reinforce more complex structures. I can use levers and pulleys within designs. **Textiles** I can use a running stitch, over stitch, cross stitch and back stitch.

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	I can join and combine food ingredients by beating, kneading and rubbing in.		
Outcomes	Children to deconstruct food packaging and then design their own using what they've learnt. Children to make pizzas including dough and toppings.	Children to design, make and evaluate a light up torch. Children will make and bake cakes and buns for younger children.	Children will work together in small groups to design and make suspension bridges which will allow toy cars to pass over them. Evaluate the most effective designs. Children to refine sewing skills, focusing on a range of stitch variations.
Key Knowledge Outcome	Children to investigate inventor Thomas Edison and understand his relevance to their torch design. Children to investigate Isambard Kingdom Brunel and understand his relevance to their bridge design.		