

	Autumn	Spring	Summer
Design & Technology – Year 4	Year 4 NC objectives		
	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>		
	Year 4 ‘Key Learning’ Structures- Shell Structures using CAD	Year 4 ‘Key Learning’ Food- Healthy and Varied diet.	Year 4 ‘Key Learning’ Electrical Systems -Simple circuits and switches Simple programming and control.
	<p>Key Learning:</p> <ul style="list-style-type: none"> • To know the purpose and user of their product through a chosen design criteria. • To know and explain what tools and equipment they will use. • To explain their thoughts about their product through an evaluation against their design criteria. • They know what is meant by a shell structure. • To construct a net with accuracy when cutting, folding and scoring. • They can strengthen their structure using strengthening techniques. • To understand how CAD can be used to produce designs and nets with accuracy. • To know how key events and individuals how influenced the study of shell structures. 	<p>Key Learning:</p> <ul style="list-style-type: none"> • To know the purpose and user of their product. • To know the difference between sweet and savoury. • To understand seasonality and how some ingredients are grown, harvested and processed. • To explain their thoughts about their product through an evaluation against their design criteria- making reference to sensory evaluations. • To demonstrate the technical ability needed to measure/weigh, shape and combine ingredients. • To be aware of basic hygiene and safety rules. • To write the basic sections of a recipe- ingredients, equipment, method • To know how key events and individuals how influenced the study of food technology. 	<p>Key Learning:</p> <ul style="list-style-type: none"> • To know the purpose and user of their product through a chosen design criteria. • To know and explain what tools and equipment they will use. • To explain their thoughts about their product through an evaluation. • To know the function of a switch. • To know that a battery/cell stores power/electricity • To build a working switch. • To know how key events and individuals how influenced the study of electrical systems/programming and control. • To use simple programming to control and monitor the use of a product.
Vocabulary	Technique, structure, shell, nets, cubes, 3D, strong, stiff, secure, strength, construct, assemble, annotate, measure, score, Computer Aided Design (CAD), laminate, corrugated	Appearance, prepare, combine, recipe, utensil, method, ingredients, safety, sensory, aroma, appealing. measure, score, prototype, aesthetic, fresh/processed, sweet, savoury grown/reared/caught/harvested hazard/risk	Fixed/loose, electrical, system, power, circuit, crocodile clips, volts, battery, cell, lamps. wire, copper, metal. Cable. negative, positive, complex, buzzer, bulb, powered, push switch, pull switch