Year 1 Long Term Curriculum Plan for Design Technology		
Big Question Can I create a structure using a variety of materials? Area of learning Designing and constructing Focus Exploring types of windmills, how they work and their key features. NC Links: - design purposeful, functional, appealing products for themselves and other uses based on success criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology -select from and use a range of tools and equipment to perform practical tasks -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria -build structures, exploring how they can be stronger, stiffer and more stable	Big Question Can I use textiles to create a puppet? Area of learning Textiles Focus Designing products and joining fabrics NC Links - design purposeful, functional, appealing products for themselves and other uses based on success criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology -select from and use a range of tools and equipment to perform practical tasks -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics -evaluate their ideas and products against design criteria	Big Question Can I identify and discuss different fruits and vegetables? Area of learning Food and nutrition Focus Where fruits and vegetables grow and making fruit smoothies NC Links - use the basic principles of a healthy and varied diet to prepare dishes -understand where food comes from -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics -evaluate their ideas and products against design criteria

Year 2 Long Term Curriculum Plan for Design Technology		
Big Question How can we build reliable structures? Area of learning Structures Focus Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use. NC Links -to use a range of materials creatively to design and make products -to use drawing, painting and sculpture -to develop and share their ideas, experiences and imagination -to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space	Big Question How can we make a structure with different components? Area of learning Mechanisms Focus Design and create a functional Ferris wheel, learn how different components fit together so that the wheel rotates and the structure stands freely. NC Links -to use a range of materials creatively to design and make products -to use drawing, painting and sculpture -to develop and share their ideas, experiences and imagination -to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space	Big Question How can we make a moving mechanism? Area of learning Mechanisms Focus Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster NC Links -to use a range of materials creatively to design and make products -to use drawing, painting and sculpture to develop and share their ideas, experiences and imagination -to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space

Year 3 Long Term Curriculum Plan for Design Technology		
Big Question Can I make a seasonal tart? Area of learning: Food- eating seasonally Focus: Learning about fruits and vegetables NC Links: - 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 -understand and apply the principles of a healthy and varied diet -cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet - become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] -understand the source, seasonality and characteristics of a broad range of ingredients	Big Question Can I create a point of sale display badge? Area of learning: Digital world- electronic charm Focus: Exploring technology NC Links: - 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 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 -understand and use electrical systems in their products	Big Question Can I build a castle? Area of learning Structures- constructing a castle Focus Designing and building a castle using a net NC Links - 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 -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 -apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Year 4 Long Term Curriculum Plan for Design Technology		
Big Question How do we create a structure? Area of learning Structures Focus Pavilions NC Objectives -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.	Big Question Can I explore mechanical elements? Area of learning Mechanical elements Focus Making a Slingshot Car NC Objectives -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. -Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Big Question How are torches made? Who created them? Area of learning Electrical systems Focus Torches NC Objectives -Investigate and analyse a range of existing products. -Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. -Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Understand how key events and individuals in design and technology have helped the world.

Year 5 Long Term Curriculum Plan for Design Technology		
Big Question Can I explore how circuits can be adapted to suit different purposes, investigate using a series circuit and then apply this knowledge to design and create an electronic greeting card? Area of learning Electrical system Focus Electronic greetings cards NC Links - 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 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 and use electrical systems in their products	Big Question Can I create a pop-up storybook design incorporating a range of mechanisms and decorative features? Area of learning Mechanical systems Focus Making a pop-up book NC Links - 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 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	Big Question Can I research and modify a traditional sauce recipe to make it healthier, make appropriate packaging and learn about farming cattle? Area of learning Food Focus What could be healthier? NC Links - understand and apply the principles of a healthy and varied diet -understand the source, seasonality and characteristics of a broad range of ingredients -investigate and analyse a range of existing products

Year 6 Long Term Curriculum Plan for Design Technology		
A Big Question: Can I select suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat? Area of Learning: Textiles: Waistcoats Focus: Selecting suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat for a person or purpose of their choice. NC Objectives: -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.	A Big Question: Can I design and create a model of a new playground featuring five pieces of apparatus, made from three different structures? Area of Learning: Structure: Playgrounds Focus: Designing and creating a model of a new playground featuring five apparatus, made from three different structures. Creating a footprint as the base, pupils visualise objects in plan view and get creative with their use of natural features. NC Objectives: -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. -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. -apply their understanding of how to strengthen, stiffen and reinforce more complex	A Big Question: Can I programme a navigation tool to produce a multifunctional device for trekkers, combining 3D objects to form a complete product in CAD 3D modelling software? Area of Learning: Digital World: Navigating the world Focus: Programming a navigation tool to produce a multifunctional device for trekkers. Combining 3D objects to form a complete product in CAD 3D modelling software and presenting a pitch to 'sell' their product. NC Objectives: -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. -apply their understanding of computing to program, monitor and control their products. -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.