Year 1	Design & Technology		
KS1 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Baking bread and making packaging. Christmas cards with pop-ups of levers.**	**Wind chime. Fruit kebabs.**	**Sew a simple flap and button pencil case (like an envelope)**
Evaluate: explore and evaluate a range of existing products.	To look at, discuss and compare different types of cards and their purpose.	To look at, discuss and compare different wind chimes and the noises they make.	To understand how the function of a pencil case influences its design.
Technical knowledge: build structures, exploring how they can be made stronger, stiffer and more stable.	To know that folding, layering or weaving paper and card makes it stiffer and stronger.	To know how to knot, join and thread using string.	To learn how to do running or blanket stitch to sew two edges together and how to attach a button.
Technical knowledge: explore and use mechanisms (eg levers, sliders, wheels and axles) in their products.	To construct a range of moving examples – including flaps, springs, fanfold and sliders and split pins.		
Design: To design purposeful, functional and appealing products for themselves or other users based on design criteria.	To design and label a moving Christmas card to give to a family member.	To design and label a wind chime for the school rose garden or copse and include a list of tools and equipment.	To create own design criteria and use it to design a simple flap and button pencil case for themselves.
Design: generate, develop, model and communicate their ideas through talking, drawing templates, making mock-ups, and where appropriate, using computer technology.	To create a simple mock-up of their Christmas card design and check in meets the design criteria.	To talk through and explain their design to a group, including details about how they will attach their chime items.	To use the design criteria to draw a model of the pencil case and label how it will be joined and why.

Make: select from and use a range of tools and equipment to perform practical tasks (eg cutting, shaping, joining and finishing).	To select appropriate tools to complete their product eg scissors, glue, tape, pens and pencils etc.	To select appropriate tools to cut, measure, waterproof and attach the wind chime objects.	To use a simple pattern template to draw the fabric size and cut carefully.
Make: select from and use a wide range of materials, textiles and ingredients according to their characteristics.	To select appropriate materials from a selection of paper, card, tissue, corriflute, etc.	To select appropriate materials for both the structure and the sound of their wind chime.	To select appropriate fabric for the pencil case, based on its properties and explain why they chose it.
Evaluate: evaluate their ideas and products against the design criteria.	To evaluate their finished Christmas card.	To evaluate theirs and their partner's wind chime against the design criteria.	To evaluate their pencil case against their own design criteria.
Cooking and nutrition: use the basic principles of a healthy and varied diet to prepare dishes.	To use flour that the children saw milled using traditional methods at Calbourne Water Mill on their school trip to bake an individual cottage loaf and create a package to deliver it home.	To understand that fruit forms part of a healthy diet and how to cut and prepare different fruits for a fruit salad/kebab (including the bridge technique for sharp knives).	
Cooking and nutrition: to understand where food comes from.	To know where the wheat is grown that is milled at Calbourne Mill, how it is turned into flour and to see the mechanisms inside the mill in use. Bring back bags of flour to bake own cottage loaves in a traditional style.	To know where some common fruits come from.	

Year 2	Design & Technology		
KS1 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Construction** **Make a Fire Engine**	**Food** **Holibob Bear's Picnic Snacks**	**Textiles** **Make African Animal Puppets**
Evaluate: explore and evaluate a range of existing products.	To explore a range of mechanisms that make toy vehicles move.	To understand what makes a healthy snack. To explore a variety of picnic snacks and evaluate their nutritional content.	To look at different types of puppets and how they are operated.
Technical knowledge: build structures, exploring how they can be made stronger, stiffer and more stable	To look at a range of designs and discuss stability and strength of the structures. To know how to safely cut and attach axles and wheels.	To explore a variety of foods and consider the importance of presentation.	To know how to do running stitch to sew two edges together and how to attach additional fabric shapes and a button.
Technical knowledge: explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	To know that axles can be used to make wheels move and how they interconnect to allow movement.		
Design: Design purposeful, functional, appealing products for themselves and other users based on design criteria.	To explore the features of a fire engine and draw and label own wheeled vehicle including a list of tools and materials with reasons for choices.	To design an appealing picnic snack for Holibob Bear, to celebrate his return from travelling the UK, using knowledge about existing products.	To design an African animal hand puppet, including a list of tools and materials with reasons for choices.
Design: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate,	To share design ideas by presenting them to the class and explaining their reasons for their choices.	To draw and label the picnic snacks and design the packaging using the four countries of the UK as inspiration.	To follow careful designs to create templates for their hand puppets.

Year 2	Design & Technology		
KS1 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
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].	To safely cut axles to the correct length and choose an appropriate method of joining axles to chassis.	To select appropriate tools for making the snack and demonstrate safe use.	To use a hand puppet template to draw the fabric size and cut it out carefully.
Make: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	To choose an appropriate material from a selection, to create their vehicle chassis and wheels.	To choose appropriate ingredients, considering both flavour and nutritional value.	To create a hand puppet with given materials, explain reasons for design choices.
Evaluate: evaluate their ideas and products against design criteria	To explain ways in which their fire engine is successful and identify future improvements.	To compare their own snacks and packaging to the nutritional content of one of the ones first looked at.	To evaluate their puppet against the design criteria and provide peer feedback.
Cooking and Nutrition: use the basic principles of a healthy and varied diet to prepare dishes		To show an awareness of the importance of healthy eating when designing picnic snacks.	
Cooking and Nutrition: understand where food comes from.		To show an understanding of the origins of the ingredients used in creating their snacks.	

Year 2	Design & Technology		
KS1 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
HC Confidence /Aspiration /Resilience / Spirituality	Confidence – to try ideas and designs. Resilience – to keep on trying when parts of the design aren't successful.	Aspiration – to design food items and packaging of the highest standard.	Confidence – to learn new skills (sewing).

Year 3	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Textiles** Weaving	**Construction** Shadow puppet theatre	**Food** Roman Feast
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	To research the design and construction of woven cloth	To research the design and construction of shadow puppets. To design a shadow puppet with moving parts.	To research the food eaten during the Roman period. To design a Roman feast for their class/parents
Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern	To draw annotated sketches of their woven cloth design, creating a pattern for the finished product.	To draw annotated sketches and make prototypes of the puppets.	To design a Roman influenced dish. To consider a range of audiences eg children, vegetarians etc

Year 3	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
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	To use appropriate tools to make their card loom and woven cloth.	To choose appropriate tools to make a puppet and the levers required to make it move.	
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	To select appropriate materials to construct loom and yarns to enhance design	To select appropriate materials to create a shadow puppet- considering functional and aesthetic qualities.	
Evaluate: investigate and analyse a range of existing products	To investigate and analyse a range of woven cloth, - yarn, pattern etc.	To review and evaluate a range of moving puppets	Investigate and analyse traditional Roman ood- ingredients, texture, visual appeal etc
Evaluate: understand how key events and individuals in design and technology have helped shape the world	To learn about historical development of weaving (link to bronze age/iron age topic)	To learn about the development of puppet design.	

Year 3	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures		To identify areas of decoration that need strengthening and suggest ways to do this	
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]		To understand and use levers and linkages in order to ensure their puppet can move.	
Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]			
Technical knowledge: 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			To design and make a Roman dish that follows the principles of a healthy and varied diet

Year 3	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Cooking and Nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			To prepare and cook a Roman using a range of cooking techniques. To cook flat breads to accompany the feast.
Cooking and Nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			
HC Confidence /Aspiration /Resilience / Spirituality			

Year 4	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Textiles** Christmas decoration	**Construction** Electrical- battery powered nightlight or torch	**Food** Mexican Cuisine
Design: use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed	To research a range of fabric Christmas decorations	To design a switch operated light	To explore traditional food eaten in Mexico To research what foods and vegetables are usually available and create design criteria for a typical Mexican dish

Year 4	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
at particular individuals or groups			
Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	To sketch and annotate a design for Christmas decoration To create templates needed for finished product. To create prototype of design	To draw an annotated sketch and make a prototype of their light	To design a Mexican influenced dish. To consider a range of audiences eg children, vegetarians etc
Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	To experiment and use a range of tools required to make a fabric decoration	To experiment and use a range of tools required to make a light	
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	To select appropriate materials to create and decorate decoration	To select appropriate materials to make a light	

Year 4	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Evaluate: investigate and analyse a range of existing products	To investigate and analyse other fabric decorations- materials used, type of stitching and embellishments	To investigate and analyse other lights	Investigate and analyse traditional Mexican food- ingredients, texture, visual appeal etc
Evaluate: understand how key events and individuals in design and technology have helped shape the world	To learn about historical development of Christmas decorations	To learn about the development of electricity and battery powered items	
Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures	To identify areas of decoration that need strengthening and suggest ways to do this		
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]		To understand how a simple series circuit can be incorporated into a design	

Year 4	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Technical knowledge: 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			To design and make a Mexican dish that follows the principles of a healthy and varied diet
Cooking and Nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			To prepare and cook a Mexican dish using a range of cooking techniques
Cooking and Nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			To understand seasonal variation in Mexico and the implications for UK buyers. To research where in Mexico ingredients may grow, be reared, caught or processed.
HC Confidence /Aspiration /Resilience / Spirituality			

Year 5	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Construction** Marble Run	**Food** Curry	**Textiles** Fashion Bag
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	Watch videos of marble runs with different features (levers, different materials etc.) and analyse them for their effectiveness	To learn to use a range of cooking techniques and tools safely to prepare a suitable meal, including peelers, graters, roasting and baking etc.	To research and create design criteria by interviewing a target audience (e.g. choose 3 people - mid 20's male, female, professional etc.)
Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	To create prototypes of small sections of their marble run to check that they function correctly.	To create a detailed sketch of their curry, including labels, list of tools and ingredients and an explanation for why you have selected each one and how it fits the brief. Present it to your client and check that it fits their requirements	To create a highly detailed and annotated sketch of the final design, explaining how it meets the criteria and which stitching will be used for each part
Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	To use tools and other equipment to make a functional and aesthetically pleasing marble run	To choose appropriate ingredients, considering both flavour and nutritional value.	To choose appropriate tools e.g. pinking shears, to cut and finish materials. To choose the correct needle and thread for the fabric type

Year 5	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
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	To create, in teams, a marble run that uses a range of different materials and either a pulley or a lever system	To choose appropriate ingredients, considering both flavour and nutritional value.	To choose appropriate materials that meet their functional and aesthetic design
Evaluate: investigate and analyse a range of existing products	To evaluate their own and each other's finished models against their design criteria and to suggest detailed improvements	To explore a variety of dietary requirements in today's society and evaluate their nutritional needs (allergies/vegan/religious etc)	To explore and compare clothing of the Pop Art era and currently
Evaluate: understand how key events and individuals in design and technology have helped shape the world	Evaluate Bruce Gray's work 'The Rolling Ball Machine' and its place in the world	Explore the difference in diets around the world, including North and South America, Japan and Europe	To explain the impact of different fashion housesl on the world of fashion and society today. Talk about how fashion and clothing media influences how we buy fashion today. E.g. sponsors, advertising and Instagram making it desirable
Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures	To understand what materials, create a rigid structure and how to reinforce them		To know how to sew stronger stitches and reinforce joins and straps. To investigate how to sew a quilting pattern.

Year 5	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	To explore how levers/pulleys work and how they can be utilised in a marble run		
Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]			
Technical knowledge: 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		To understand what makes a healthy balanced meal. (Teach the meal trick - fist sized carbs, palm sized protein, 2 fist sized portions of veg and a thumb sized portion of fats)	
Cooking and Nutrition: prepare and cook a variety of predominantly savoury dishes using a		To use several cooking techniques to prepare and create the healthy curry for their client	

Year 5	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
range of cooking techniques			
Cooking and Nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		To explore a variety of food textures and creative techniques and consider the importance of presentation and style	
HC Confidence /Aspiration /Resilience / Spirituality			

Year 6	Design & Technology		
KS2 Objectives	**Autumn 12 Lessons**	**Spring 12 Lessons**	**Summer 12 Lessons**
Focus	**Textiles** Rosettes/Suffragettes	**Construction** Burglar alarm/electricity	**Food** Healthy eating/science - stir fry/fruit-based pudding
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	To explore the wearable support items worn by the suffragettes, including their purpose and the meaning of the colours. To research how rosettes are made.	To design a burglar alarm that either lights up and/or makes a noise.	

Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	To sketch and annotate a rosette to support the suffragettes. To make a prototype and pattern pieces for making a rosette, using computer designs as necessary.	To make a prototype of their burglar alarm.	
Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	To experiment with and use a range of tools and equipment needed to make a rosette.	To experiment with and use a range of tools and equipment needed to make a burglar alarm.	
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	To explore and experiment with a range of materials of which to make a rosette from.	To explore and experiment with a range of materials to make their burglar alarm from.	
Evaluate: investigate and analyse a range of existing products	To analyse and evaluate a range of rosettes that are already available.	To explore how burglar alarms work and what the circuit system looks like.	
Evaluate: understand how key events and individuals in design and technology have helped shape the world	To explore the use of rosettes throughout history and what they have been used for.		

Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures	To identify the parts of the rosette that need to be more structured/strong and investigate ways in which to do this.	To identify parts of their model that may need strengthening to support a burglar alarm.	
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]		To use an electrical system to design a burglar alarm which lights up and/or makes a noise.	
Technical knowledge: 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			To explore a range of healthy savoury and sweet foods and the principles behind a healthy diet (done in conjunction with science).

Cooking and Nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			To plan, prepare and cook two healthy savoury meals e.g. a stir fry, and a healthy dessert. To use a range of cooking and preparation techniques to make the meals.
Cooking and Nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			To explore seasonality of a range of foods and how they are still available to us throughout the year. To understand where their food comes from.
HC Confidence /Aspiration /Resilience / Spirituality	Confidence – to work with a range of fabrics and to sew Aspiration – to stand up for what you believe and be proud of showing your support Resilience – to alter and change plans when needed	Confidence – to use electrical systems Aspiration – to design electrical systems Resilience – to amend and change designs	Confidence – to prepare, cook and eat different foods Aspiration – to prepare meals from scratch at home Resilience – to hone cutting and chopping skills