

z LONG TERM FORECAST		Key Stage 2 Design and Technology		2017-2019	
		Autumn	Spring	Summer	
<p>Aims The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others understand and apply the principles of nutrition and learn how to cook. 		<p>When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> 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>Make</p> <ul style="list-style-type: none"> 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>Evaluate</p> <ul style="list-style-type: none"> 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>Technical knowledge</p> <ul style="list-style-type: none"> 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>Cookery and Nutrition</p> <ul style="list-style-type: none"> 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. 			
Year 3- Topic	Food To make flat bread for a Greek restaurant (T2)	Mechanical systems (levers and linkages) To create a moving animal from the stone age. (T1)	Structures To make a volcano pencil holder (T2)		
Y3 Assessment milestone	<ul style="list-style-type: none"> Use equipment safely. They work in a safe and hygienic way. They use the correct ingredients for a product and describe how they combined them. Carefully choose materials and equipment that are appropriate for the product 	<ul style="list-style-type: none"> To explore how mechanisms can be used to make things move in different ways. They can use appropriate equipment and tools for the purpose of the product. They can make a product that uses both electrical and mechanical components. 	<ul style="list-style-type: none"> To measure and mark our materials with care and increasing accuracy (cm) To use scoring and folding to shape materials accurately To make holes accurately To join materials to make products using both permanent and temporary fastenings 		

	<ul style="list-style-type: none"> • They can order the main stages of making and equipment they need. • To know some designers from history • Understand that products are designed for a purpose 	<ul style="list-style-type: none"> • Carefully choose materials and equipment that are appropriate for the product • They can order the main stages of making and equipment they need. • To know some designers from history • Understand that products are designed for a purpose 	<ul style="list-style-type: none"> • Carefully choose materials and equipment that are appropriate for the product • They can order the main stages of making and equipment they need. • To know some designers from history • Understand that products are designed for a purpose
Year 4 Topic	Food To make pizza subs (T1)	Electrical systems To create a warning system (T1)	Textiles To create a purse (T1)
Y4 Assessment milestone	<ul style="list-style-type: none"> • They can say where food comes from e.g. country. • They describe their food products e.g. taste, texture, flavour and relate this to the intended purpose. • They work in a safe and hygienic way. • Record a step by step plan for making. • Can research and evaluate existing products to inform their planning • They evaluate their product considering how they would improve it. • Look at the work of related designers and discuss tools and techniques used • 	<ul style="list-style-type: none"> • They make a product that has electrical components. • Devise and use templates. • Explore how circuits are used for lighting and incorporated into designs. • Use simple circuits to either illuminate or create motion.. • Record a step by step plan for making. • Can research and evaluate existing products to inform their planning • They evaluate their product considering how they would improve it. • Look at the work of related designers and discuss tools and techniques used 	<ul style="list-style-type: none"> • To select the appropriate textiles for their product • To know that the texture and other properties of materials affect their choice • To combine materials to add strength or visual appeal • Textile products include structural changes, such as plaiting or weaving to create new products • Record a step by step plan for making. • Can research and evaluate existing products to inform their planning • They evaluate their product considering how they would improve it. • Look at the work of related designers and discuss tools and techniques used
Year 5- Topic	Mechanical systems (Pulleys and gears) To create a flag pole for a circus tent (T1)	Food To create a new bread for the Anglo-Saxons (T1)	Structures To create a stable bridge (T1)
Y5 Assessment milestone	<ul style="list-style-type: none"> • Use their hands and other materials to mould materials into very accurate shapes. • To explore mechanical movement using hydraulics and pneumatics • Their product is well finished in a way that would appeal to users • They use and understand mechanical systems in their products. e.g. gears, pulleys, levers and linkages. 	<ul style="list-style-type: none"> • Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. • Understand and apply the principles of a healthy and varied diet. • They work in a safe and hygienic way. • To research and evaluate existing product giving reasons for the decisions of the designers • To identify what is working well and what can be improved 	<ul style="list-style-type: none"> • To select from a variety of materials best suited to their design • To create joins that are strong and stable, giving extra strength to their product • To create some joins that are flexible to allow for dismantling or folding • The methods of working are precise so that products have a high quality finish • To research and evaluate existing product giving reasons for the decisions of the designers

	<ul style="list-style-type: none"> To research and evaluate existing product giving reasons for the decisions of the designers To identify what is working well and what can be improved To represent ideas in diagrams, annotated sketches and computer based programmes To know how key events and individuals have influenced the world in terms of products 	<ul style="list-style-type: none"> To represent ideas in diagrams, annotated sketches and computer based programmes To know how key events and individuals have influenced the world in terms of products 	<ul style="list-style-type: none"> To identify what is working well and what can be improved To represent ideas in diagrams, annotated sketches and computer based programmes To know how key events and individuals have influenced the world in terms of products
Year 6 Topic	Food To create a healthy soup (T2)	Textiles To create a coat of arms for a family in Macbeth (T1)	Electrical systems (circuits) To create a game of a spider catching a fly (T1)
Y6 Assessment milestone	<ul style="list-style-type: none"> Prepare and cook a variety of savoury dishes using a range of cooking techniques. Understand that some foods cannot be eaten raw as it is unsafe. They work in a safe and hygienic way. Understand how to achieve a healthy and balanced diet. Can use the ideas from current designers to help with their own design To reflect on their designs and develop them bearing in mind the way they will be used Can compare and contrast the work of different designers (e.g. historical and modern) Can create pattern pieces and prototypes 	<ul style="list-style-type: none"> Experiment with a range of materials until the right mix of affordability, appeal and appropriateness is found Combine art skills to add colour and texture to work Mark out using their own patterns and templates Join textiles to make durable and desirable products Can use the ideas from current designers to help with their own design To reflect on their designs and develop them bearing in mind the way they will be used Can compare and contrast the work of different designers (e.g. historical and modern) Can create pattern pieces and prototypes 	<ul style="list-style-type: none"> Choose components that can be controlled by switches or by ICT equipment Use science skills to alter the way the electrical Understand and use electrical systems in their products e.g. circuits, switches, bulbs, buzzers and motors. Can improve the product after testing Can use the ideas from current designers to help with their own design To reflect on their designs and develop them bearing in mind the way they will be used Can compare and contrast the work of different designers (e.g. historical and modern) Can create pattern pieces and prototypes