

# Willerby Carr Lane

Primary School



## Curriculum Long Term Plan

### DESIGN & TECHNOLOGY

#### **POLICY MANAGEMENT**

<b>Approved by</b>	
<b>Date approved</b>	
<b>Effective date</b>	
<b>Next review date</b>	
<b>Version Control</b>	The most up to date version of this document is held on the school's intranet

Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
<b>Topic</b>	Ourselves	Great Fire of London	United Kingdom	United Kingdom	Plants	Animals
<b>Subject Focus</b>	Split-pin models	Paper models Baking	Moving vehicle Baking	Textiles Cooking	Junk modelling	Design a fruit salad
<b>Programme of Study</b>	<ul style="list-style-type: none"> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>evaluate their ideas and products against design criteria</li> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>evaluate their ideas and products against design criteria</li> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> <li>explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> <li>build structures, exploring how they can be made stronger, stiffer and more stable.</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>evaluate their ideas and products against design criteria</li> </ul>
<b>Skills</b>	•	•	•	•	•	•
<b>Activities</b>	<ul style="list-style-type: none"> <li>Ongoing construction, design and build area</li> <li>Split pin moving models.</li> <li>Writing and following instructions: How to make toast</li> <li>Learn about hygiene and safety in the kitchen</li> </ul>	<ul style="list-style-type: none"> <li>Model building workshop. Parent workshop.</li> <li>Making model houses London 1666. Following instructions and making paper models.</li> <li>Following instructions and baking cheese straws.</li> </ul>	<ul style="list-style-type: none"> <li>Katie Morag on the Island of Struay.</li> <li>Following instructions and baking welsh cakes, butterfly buns, porridges and soda bread. Practising mixing, kneading and rolling skills.</li> <li>Making a moving vehicle for Grannie Island. Parent afternoon.</li> </ul>	<ul style="list-style-type: none"> <li>Textiles - Make a glove puppet to act out a story.</li> </ul>	<ul style="list-style-type: none"> <li>Recycling and junk modelling - Design a classroom tray for tidying stationary.</li> </ul>	<ul style="list-style-type: none"> <li>Oliver's Vegetables and Oliver's Fruit Salad. Design and make a summer salad.</li> <li>Prepare dishes using principles of a healthy diet.</li> <li>Understand where food comes from.</li> </ul>

Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
<b>Topic</b>	Where in the World	Where in the World	Florence Nightingale and Mary Seacole	Florence Nightingale and Mary Seacole	Habitats	Habitats
<b>Subject Focus</b>	None	Decorations	Food - sweets	Water well for soldiers	None	Woodwork
<b>Programme of Study</b>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>explore and evaluate a range of existing products</li> <li>evaluate their ideas and products against design criteria</li> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Activities</b>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Mouldable materials: salt dough decorations</li> <li>Replica Amy Johnson planes</li> <li>Plane building challenge</li> </ul>	<ul style="list-style-type: none"> <li>Focus: Food</li> <li>Designing and making sweet treats</li> <li>Charlie and the chocolate factory imagination room.</li> <li>Data handling – favourite treats</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Design and build an insect house</li> </ul>

Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
Topic	The Stone Age to The Iron Age	The Stone Age to The Iron Age	Romans	Romans	Extreme Earth	Forces and Magnets
Subject Focus			Cooking		3d modelling	3d modelling
Programme of Study	•	•	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> </ul>	•	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> </ul>
Skills			<ul style="list-style-type: none"> <li>• To examine the types of foods that Romans ate</li> <li>• To identify the significance of Roman banquets and why the Romans overfed people</li> <li>• To understand the key ingredients of a pizza</li> <li>• To be able to design a traditional Italian pizza</li> <li>• To be able to budget the costs of pizza ingredients using maths skills and knowledge</li> <li>• To understand how to prepare ingredients hygienically/prepare ingredients</li> <li>• To identify the times needed to cook a pizza for the correct length of time</li> <li>• To be able to self-reflect and evaluate our pizza making process</li> </ul>		<ul style="list-style-type: none"> <li>• To understand how to create a strong structure/the method behind creating a strong structure</li> <li>• To find the most appropriate material</li> <li>• To work as part of a team to build a successful volcano – team working skills/communication/listening and attention</li> <li>• To be able to self-evaluate team working skills (PSHE link) and building skills</li> </ul>	<ul style="list-style-type: none"> <li>• Link to school trip</li> </ul>
Activities			<ul style="list-style-type: none"> <li>• <b>Roman food</b> – Visitor from out of school(?)</li> <li>• Roman banquet/lunch. Analysing health of this.</li> <li>• <b>Italian food</b> – design own pizzas from a list of ingredients</li> </ul>		<ul style="list-style-type: none"> <li>• Examine how to build a strong structure/the material needed</li> <li>• Trial and error, investigating different materials as a team</li> <li>• Use investigation outcome to build a strong volcano</li> <li>• Paint/gloss volcanoes</li> </ul>	<ul style="list-style-type: none"> <li>• Design and make a rocket.</li> </ul>

			<ul style="list-style-type: none"><li>• Budget the costs needed for making the pizzas</li><li>• Prepare the ingredients needed for the pizza (dough, puree, cheese, vegetables)</li><li>• Identify timings for cooking the pizzas</li><li>• Cook the pizzas</li><li>• Evaluate the pizzas and reflect by identifying possible improvements</li></ul>		<ul style="list-style-type: none"><li>• Test liquids that when combined create an explosion/eruption (science link)</li><li>• Erupt volcanoes</li><li>• Evaluate volcanoes structures and compare to other groups – evaluate liquids used and the best combinations for eruptions</li></ul>	
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Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
Topic	Ancient Egypt	Humans	Anglo Saxons	Electricity	Indian Summer	Animals and their Habitats
Subject Focus	Clay coil canopic jars	Christmas decoration	none			K'nex challenge
Programme of Study	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li>• use research and develop design criteria...</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>• select from and use a wider range of tools and equipment ...</li> <li>• select from and use a wider range of materials and components...</li> <li>• investigate and analyse a range of existing products and evaluate their own ideas</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>• apply their understanding of computing to program, monitor and control their products</li> </ul>
Skills	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• understand and apply the principles of a healthy and varied diet</li> <li>• cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet</li> <li>• 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]</li> <li>• understand the source, seasonality and characteristics of a broad range of ingredients</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<p><b>Activities</b></p>	<ul style="list-style-type: none"> <li>• Coil canopic jar</li> <li>• Design and make an Ancient Egyptian box for Scarab Beetle, reflect on work in relation to intended use (and users)</li> <li>• Identify improvements needed.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Sewing/ weaving mat and an Anglo Saxon woven basket, evaluate design and suggest improvements.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• D.T. India food tasting, preparation and cooking</li> <li>• talk about which Indian foods like or dislike through tasting. Learn the vocabulary to describe tastes and flavours.</li> <li>• Make a simple Indian dish.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
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Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
<b>Topic</b>	Sense of Belonging	Mayans	Journey into Space	The Vikings	On the Banks of the Humber	On the Banks of the Humber
<b>Subject Focus</b>	Cookery Sewing	Cookery	None	None	Design and build a bridge	
<b>Programme of Study</b>	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	•	•	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	•
<b>Skills</b>	<ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet</li> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet</li> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li></li> </ul>	•	•	<ul style="list-style-type: none"> <li>Investigate ways to strengthen paper and card</li> <li>Investigate ways to create a rigid structure (triangles)</li> <li></li> </ul>	•
<b>Activities</b>	<ul style="list-style-type: none"> <li>Design and make a Caribbean fruit salad or Caribbean fruit smoothie</li> <li></li> <li><b>Sewing</b> (see Art &amp; Design)</li> <li>African animal – tie-dye, then felt sewing.</li> </ul>	<ul style="list-style-type: none"> <li>Guacamole and tortillas/peppers to dip</li> <li>Make Mayan Mystery cookies and place in decorated Mayan box (Xmas gift!)</li> </ul>	•	•	<ul style="list-style-type: none"> <li>Investigate types of bridges</li> <li>Investigate ways to strengthen paper</li> <li>Investigate ways to make a rigid shape from strips of card</li> <li>Design and build a bridge to fulfil criteria given in a design brief</li> </ul>	•



Curriculum Long Term Plan: DESIGN & TECHNOLOGY

YEAR 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
<b>Topic</b>	Victorians	World War II	Rainforests	Cold Climates	Ancient Greece	Moving On
<b>Subject Focus</b>	Motorised vehicles	Victorian cross stitch samplers	none	Biscuits for polar explorers	None	None
<b>Programme of Study</b>	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>use research and develop design criteria...</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>select from and use a wider range of tools and equipment ...</li> <li>select from and use a wider range of materials and components...</li> <li>investigate and analyse a range of existing products and evaluate their own ideas</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Skills</b>	•	•	•	•	•	•
<b>Activities</b>	<ul style="list-style-type: none"> <li>Design and build motorised electric vehicle and race</li> </ul>	<ul style="list-style-type: none"> <li>Design and make a Christmas sampler</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Food groups/ healthy eating</li> <li>Eatwell plate</li> <li>Design a biscuit with changes to the recipe</li> <li>Make and ice biscuits</li> <li>Hygiene focus (related to microbes from Spring 1)</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>