

	YEAR 3			YEAR 4			YEAR 5			YEAR 6		
	SHELL STRUCTURES	SYSTEMS MECHANICAL	COOKING AND NUTRITION SEASONAL AND LOCAL	SYSTEMS ELECTRICAL	COOKING AND NUTRITION	TEXTILES	SYSTEMS MECHANICAL	COOKING AND NUTRITION	TEXTILES	FRAME STRUCTURES SURVIVAL / EXPLORERS TENT	SYSTEMS ELECTRICAL	COOKING AND NUTRITION
FAMOUS IN THE FIELD	<a href="#">Shell Structures</a>	<a href="#">Levers and Linkages</a>	<a href="#">Healthy and Varied Diet</a>	<a href="#">Simple circuits and switches</a>	<a href="#">Healthy and Varied Diet</a>	<a href="#">2D Shape to 3D</a>	<a href="#">CAMS</a>	<a href="#">Celebrating culture and seasonality</a>	<a href="#">Combining different fabric shapes/ CAD</a>	<a href="#">Frame structures</a>	<a href="#">Monitoring and Control</a>	<a href="#">Celebrating culture and seasonality</a>
NC OBJECTIVE	<p><b>Design</b> 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><b>Make</b> 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><b>Evaluate</b> 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><b>Technical knowledge</b> 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>											
	NC Objective breakdown Year 3 and 4						NC Objective breakdown Year 5 and 6					
DESIGN	<p><u>Understanding contexts, users and purposes</u></p> <ul style="list-style-type: none"> <li>- gather information about the needs and wants of particular individuals and groups</li> <li>- develop their own design criteria and use these to inform their ideas</li> </ul> <p><u>Generating, developing, modelling and communicating ideas</u></p> <ul style="list-style-type: none"> <li>- generate realistic ideas, focusing on the needs of the user</li> <li>- make design decisions that take account of the availability of resources</li> </ul>						<p><u>Understanding contexts, users and purposes</u></p> <ul style="list-style-type: none"> <li>- carry out research, using surveys, interviews, questionnaires and web-based resources</li> <li>- identify the needs, wants, preferences and values of particular individuals and groups</li> <li>- develop a simple design specification to guide their thinking</li> </ul> <p><u>Generating, developing, modelling and communicating ideas</u></p> <ul style="list-style-type: none"> <li>- generate innovative ideas, drawing on research</li> <li>- make design decisions, taking account of constraints such as time, resources and cost</li> </ul>					
MAKE	<p><u>Planning</u></p> <ul style="list-style-type: none"> <li>- order the main stages of making</li> </ul> <p><u>Practical skills and techniques</u></p> <ul style="list-style-type: none"> <li>- measure, mark out, cut and shape materials and components with some accuracy</li> <li>- assemble, join and combine materials and components with some accuracy</li> <li>- apply a range of finishing techniques, including those from art and design, with some accuracy</li> </ul>						<p><u>Planning</u></p> <ul style="list-style-type: none"> <li>- produce appropriate lists of tools, equipment and materials that they need</li> <li>- formulate step-by-step plans as a guide to making</li> </ul> <p><u>Practical skills and techniques</u></p> <ul style="list-style-type: none"> <li>- accurately measure, mark out, cut and shape materials and components</li> <li>- accurately assemble, join and combine materials and components</li> <li>- accurately apply a range of finishing techniques, including those from art and design</li> <li>- use techniques that involve a number of steps</li> <li>- demonstrate resourcefulness when tackling practical problems</li> </ul>					
EVALUATE	<p><u>Own ideas and products</u></p> <ul style="list-style-type: none"> <li>- refer to their design criteria as they design and make</li> <li>- use their design criteria to evaluate their completed products</li> </ul> <p><u>Existing products</u></p> <ul style="list-style-type: none"> <li>- who designed and made the products</li> <li>- where products were designed and made</li> <li>- when products were designed and made</li> <li>- whether products can be recycled or reused</li> </ul> <p><u>Key events and individuals</u></p> <ul style="list-style-type: none"> <li>- about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products</li> </ul>						<p><u>Own ideas and products</u></p> <ul style="list-style-type: none"> <li>- critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</li> <li>- evaluate their ideas and products against their original design specification</li> </ul> <p><u>Existing products</u></p> <ul style="list-style-type: none"> <li>- how much products cost to make</li> <li>- how innovative products are</li> <li>- how sustainable the materials in products are</li> <li>- what impact products have beyond their intended purpose</li> </ul> <p><u>Key events and individuals</u></p> <ul style="list-style-type: none"> <li>- about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products</li> </ul>					
TECHNICAL	<p><u>Making products work</u></p> <ul style="list-style-type: none"> <li>- how mechanical systems such as levers and linkages or pneumatic systems create movement</li> <li>- how simple electrical circuits and components can be used to create functional products</li> <li>- how to program a computer to control their products</li> <li>- how to make strong, stiff shell structures</li> <li>- that a single fabric shape can be used to make a 3D textiles product</li> <li>- that food ingredients can be fresh, pre-cooked and processed</li> </ul>						<p><u>Making products work</u></p> <ul style="list-style-type: none"> <li>- how mechanical systems such as cams or pulleys or gears create movement</li> <li>- how more complex electrical circuits and components can be used to create functional products</li> <li>- how to program a computer to monitor changes in the environment and control their products</li> <li>- how to reinforce and strengthen a 3D framework</li> <li>- that a 3D textiles product can be made from a combination of fabric shapes</li> <li>- that a recipe can be adapted by adding or substituting one or more ingredients</li> </ul>					
COOKING AND NUTRITION	<p><u>Where food comes from</u></p> <ul style="list-style-type: none"> <li>- that a recipe can be adapted a by adding or substituting one or more ingredients</li> <li>- that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</li> </ul> <p><u>Food preparation, cooking and nutrition</u></p> <ul style="list-style-type: none"> <li>- that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell Guide</li> <li>- that to be active and healthy, food and drink are needed to provide energy for the body</li> </ul>						<p><u>Where food comes from</u></p> <ul style="list-style-type: none"> <li>- that seasons may affect the food available</li> <li>- how food is processed into ingredients that can be eaten or used in cooking</li> </ul> <p><u>Food preparation, cooking and nutrition</u></p> <ul style="list-style-type: none"> <li>- that recipes can be adapted to change the appearance, taste, texture and aroma</li> <li>- that different food and drink contain different substances - nutrients, water and fibre - that are needed for health</li> </ul>					

