

Year 2 – Design and Technology Overview



Topic	Cooking and Nutrition	Mechanisms - A moving monster	Structures – rebuilding the cathedral
<p><b>Linked Books</b></p>			
<p><b>Designer/Architect/Engineer</b></p>	<p><b>Jamie Oliver</b></p>	<p><b>Karl Benz</b></p>	<p><b>Sir Edward Maufe (Bradford Cathedral)</b></p>
<p><b>Substantive knowledge</b></p>			
<p><b>Technical</b></p>	<ul style="list-style-type: none"> <li>• To know that ‘diet’ means the food and drink that a person or animal usually eats.</li> <li>• To understand what makes a balanced diet.</li> <li>• To know where to find the nutritional information on packaging.</li> <li>• To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.</li> <li>• To understand that I should eat a range of different foods from each food group, and roughly how much of each food group.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that mechanisms are a collection of moving parts that work together as a machine to produce movement.</li> <li>• To know that there is always an input and output in a mechanism.</li> <li>• To know that an input is the energy that is used to start something working.</li> <li>• To know that an output is the movement that happens as a result of the input.</li> <li>• To know that a lever is something that turns on a pivot.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that shapes and structures with wide, flat bases or legs are the most stable.</li> <li>• To understand that the shape of a structure affects its strength.</li> <li>• To know that materials can be manipulated to improve strength and stiffness.</li> <li>• To know that a structure is something which has been formed or made from parts.</li> </ul>

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<b>Additional</b>	<ul style="list-style-type: none"> <li>To know that nutrients are substances in food that all living things need to make energy, grow and develop.</li> <li>To know that ‘ingredients’ means the items in a mixture or recipe.</li> <li>To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy.</li> <li>To know that many food and drinks we do not expect to contain sugar do; we call these ‘hidden sugars’</li> </ul>	<ul style="list-style-type: none"> <li>To know that a linkage mechanism is made up of a series of levers.</li> <li>To know some real-life objects that contain mechanisms.</li> </ul>	<ul style="list-style-type: none"> <li>To know that a ‘stable’ structure is one which is firmly fixed and unlikely to change or move.</li> <li>To know that a ‘strong’ structure is one which does not break easily.</li> <li>To know that a ‘stiff’ structure or material is one which does not bend easily.</li> <li>To know that natural structures are those found in nature.</li> <li>To know that man-made structures are those made by people</li> </ul>
<b>Skills</b>			
<b>Design</b>	<ul style="list-style-type: none"> <li>Designing a healthy wrap based on a food combination which work well together.</li> </ul>	<ul style="list-style-type: none"> <li>Creating a class design criteria for a moving monster.</li> <li>Designing a moving monster for a specific audience in accordance with a design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Generating and communicating ideas using sketching and modelling.</li> <li>Learning about different types of structures, found in the natural world and in everyday objects.</li> </ul>
<b>Make</b>	<ul style="list-style-type: none"> <li>Slicing food safely using the bridge or claw grip.</li> <li>Constructing a wrap that meets a design brief.</li> </ul>	<ul style="list-style-type: none"> <li>Making linkages using card for levers and split pins for pivots.</li> <li>Experimenting with linkages adjusting the widths, lengths and thicknesses of card used.</li> <li>Cutting and assembling components neatly.</li> </ul>	<ul style="list-style-type: none"> <li>Making a structure according to design criteria.</li> <li>Creating joints and structures from paper/card and tape.</li> <li>Building a strong and stiff structure by folding paper.</li> </ul>
<b>Evaluate</b>	<ul style="list-style-type: none"> <li>Describing the taste, texture and smell of fruit and vegetables.</li> <li>Taste testing food combinations and final products.</li> <li>Describing the information that should be included on a label.</li> <li>Evaluating which grip was most effective.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluating own designs against design criteria.</li> <li>Using peer feedback to modify a final design.</li> </ul>	<ul style="list-style-type: none"> <li>Exploring the features of structures.</li> <li>Comparing the stability of different shapes.</li> <li>Testing the strength of own structures.</li> <li>Identifying the weakest part of a structure.</li> <li>Evaluating the strength, stiffness and stability of own structure.</li> </ul>

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New Vocabulary	Balanced diet, carbohydrate, fruit, oil, protein, dairy, ingredients, sugar, vegetables, design criteria.	Axle, input, mechanical, pivot, design criteria, linkage, output, wheel.	Design criteria, structure, natural, shape, man-made, properties, stable, model, test.
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