

## Design & Technology- Substantive Knowledge Map

Unit	Year 4	Vocabulary	Retrieval Opportunities
<b>Mechanical Systems Levers and linkages</b>	<b>Moveable Puppet</b> <ul style="list-style-type: none"> <li>- To 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</li> <li>- To generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes</li> <li>- To select from and use a wider range of tools and equipment to perform practical tasks accurately</li> <li>- To investigate and analyse a range of existing products</li> <li>- To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>- To understand and use mechanical systems in their products</li> </ul>	mechanism, lever, linkage, pivot, slot, bridge, guide, system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief	Using rulers, pencils and scissors accurately- measuring to the nearest mm  Homework and seasonal activities  Additional cooking and preparing food for school events
<b>Electrical Systems Simple circuits and switches (including programming and control)</b>	<b>Nightlight</b> <ul style="list-style-type: none"> <li>- 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.</li> <li>- To generate, develop, model and communicate their ideas through discussion, annotated sketches and cross-sectional.</li> <li>- Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities.</li> <li>- Investigate and analyse a range of existing products.</li> <li>- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>- To understand and use electrical systems in their products.</li> </ul>	series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, light emitting diode (LED), bulb, bulb holder, USB cable, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, process, user, purpose, function, prototype, design criteria, innovative, appealing, design brief	

<p><b>Food</b> <b>Healthy and varied diet</b></p>	<p><b>Healthy Salad Snacks</b></p> <p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.</li> <li>• Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Plan the main stages of a recipe, listing ingredients, utensils and equipment.</li> <li>• Select and use appropriate utensils and equipment to prepare and combine ingredients.</li> <li>• Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.</li> <li>• Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Know how to use appropriate equipment and utensils to prepare and combine food.</li> <li>• Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</li> <li>• Know and use relevant technical and sensory vocabulary appropriately.</li> </ul>	<p>name of products, names of equipment, utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet, planning, design criteria, purpose, user, annotated sketch, sensory evaluations</p>	
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