



### Knowledge and Skills – Subject Overview

Subject: Design and Technology (DT) Key Stage: 1		
AREAS	KNOWLEDGE	SKILLS
<b>Design</b>	<ul style="list-style-type: none"> <li>Knows what design criteria are and key elements which make it up.</li> <li>Understands that design is a cyclical process.</li> <li>Knows designing can be for oneself and for a user.</li> <li>Understands 'purpose' and 'user.'</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, annotated sketches and prototypes, templates, mock-ups and, where appropriate, information and communication technology.</li> <li>Mind mapping, sketching, labelled drawings, simple modelling (2D).</li> </ul>
<b>Make</b>	<ul style="list-style-type: none"> <li>The name of a range of tools and equipment and how they work.</li> <li>The name and characteristics of key materials and components.</li> <li>Understands how to measure materials and ingredients.</li> <li>Knows how to break down a practical task into individual steps.</li> <li>Knows how to tie a knot.</li> <li>Knows sewing is for decoration and attachment.</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks.</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>Measure materials and ingredients accurately.</li> <li>Follow instructions accurately.</li> <li>Use running and blanket stitch for decorating and attachment.</li> <li>To know how to thread a wide-eye needle.</li> <li>Apply decoration using needle and thread: buttons, sequins.</li> </ul>
<b>Evaluate</b>	<ul style="list-style-type: none"> <li>Knows what products are and how to identify them.</li> <li>Can name key products of current day and from the past.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products.</li> <li>Evaluate their ideas and products against design criteria and consider the views of others to improve their work.</li> </ul>

		<ul style="list-style-type: none"> <li>• Ask questions.</li> </ul>
<b>Technical Awareness</b>	<ul style="list-style-type: none"> <li>• Knows key principles of structure building including: leverage, weight-loading, strong shapes e.g. arches/triangles etc.</li> <li>• Understand what a mechanism is, such as levers, switches and linkages, and begin to understand how they work.</li> <li>• Know how to improve a structure.</li> </ul>	<ul style="list-style-type: none"> <li>• Build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>• Explore and use mechanisms, in their products.</li> <li>• Explores a range of construction principles and comments on successes.</li> </ul>
<b>Cooking and Nutrition</b>	<ul style="list-style-type: none"> <li>• Understand where food comes from.</li> <li>• Know the principles of a healthy and balanced diet.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the basic principles of a healthy and varied diet to prepare dishes.</li> </ul>

<b>Subject: Design and Technology (DT)</b> <b>Key Stage: 2</b>		
<b>AREAS</b>	<b>KNOWLEDGE</b>	<b>SKILLS</b>
<b>Design</b>	<ul style="list-style-type: none"> <li>• Understanding that user's requirements support direction of design process.</li> <li>• Knowledge of research methodology including: surveys/questionnaires/interviews.</li> <li>• Know and understand different types of diagrams and ways of presenting ideas.</li> </ul>	<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>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (3D).</li> </ul>
<b>Make</b>	<ul style="list-style-type: none"> <li>• The name of a wide range of tools and equipment and how they work, such as saws, hammers, drills, clamps, glue guns, batteries, knives, cutters, needles and rulers.</li> <li>• The name and characteristics of a wider range of key materials and components.</li> <li>• The aim of design to create a balance between function and aesthetics, and a knowledge of products which have achieved this well.</li> </ul>	<ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks accurately.</li> <li>• 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.</li> <li>• Textiles: use back stitch and cross stitch for decoration and attachment.</li> <li>• To know how to thread a narrow-eye needle.</li> <li>• Apply decoration using needle and thread: buttons, sequins.</li> </ul>
<b>Evaluate</b>	<ul style="list-style-type: none"> <li>• Understand how key events and individuals in design and technology have helped shape the world.</li> <li>• Knowledge of products which have achieved</li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

	aesthetics and design well.	improve their work.
<b>Technical Awareness</b>	<ul style="list-style-type: none"> <li>• Understand mechanical systems.</li> <li>• Understand electrical systems.</li> <li>• Knowledge of how products could be improved.</li> <li>• Know how to increase the strength of a knot.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• Apply their understanding of computing to programme, monitor and control their products.</li> <li>• Use mechanical systems in their products e.g. gears, pulleys, levers.</li> <li>• Use electrical systems in their products e.g. circuits.</li> </ul>

<b>Cooking and Nutrition</b>	<ul style="list-style-type: none"> <li>• Understand the principles of a healthy and varied diet.</li> <li>• Understand the source, seasonality and characteristics of a broad range of ingredients.</li> <li>• Understand the name and uses of utensils and electrical equipment.</li> <li>• Understand the heating and cooking processes and the scientific reasoning behind the changes where applicable.</li> </ul>	<ul style="list-style-type: none"> <li>• 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> </ul>
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