

## Knowledge and Skills Overview for: Design and Technology

Year Group	Knowledge to learn	Skills to gain using knowledge
<b>Reception</b>	<ul style="list-style-type: none"> <li>• I understand that equipment and tools have to be used safely.</li> <li>• I know how to transport and store equipment safely.</li> <li>• I know names of simple tools and techniques</li> <li>• I know how to keep classroom tidy and store the equipment.</li> <li>• I understand what happens when you mix colours.</li> <li>• I understand that mixing different media will create new effects.</li> </ul>	<ul style="list-style-type: none"> <li>• I can practise some appropriate safety measures without direct supervision.</li> <li>• I can select tools and techniques needed to shape, assemble and join materials</li> <li>• I can use equipment and one-handed tools effectively, including pencil for writing.</li> <li>• I can use simple tools and techniques competently and appropriately.</li> <li>• I can explore a variety of materials, tools and techniques.</li> <li>• I can choose particular colours to use for a purpose.</li> <li>• I can experiment with colour, design, texture, form and function.</li> <li>• I can make toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images.</li> <li>• I can create simple representations of events, people and objects.</li> <li>• I can construct with a purpose in mind, using a variety of resources.</li> <li>• I can represent my own ideas, thoughts and feelings through design and technology.</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• I know the names of tools, techniques and elements I use in my work.</li> <li>• I understand where food come from.</li> <li>• I know the basic principles of a healthy and varied diet</li> <li>• I know the basic food handling, hygienic practises and personal hygiene</li> </ul>	<ul style="list-style-type: none"> <li>• I can choose appropriate resources and tools.</li> <li>• I use my own ideas and draw from my own experience to create something.</li> <li>• I can try out different materials to design and make products.</li> <li>• I can say what I like about other's people designs.</li> <li>• I can explain to someone else how I want to make my product.</li> </ul>

		<ul style="list-style-type: none"> <li>• I can make structures by joining simple objects together.</li> <li>• I can use tools e.g. scissors, a hole punch safely.</li> <li>• I can make my model stronger.</li> <li>• I can use my own ideas to make something.</li> <li>• I can describe how something works.</li> <li>• I can explain to someone else how I want to make my product.</li> <li>• I can glue, trim and shape fabrics and experiment with ways of joining them.</li> <li>• I can cut food safely.</li> <li>• I can make a simple plan before making.</li> <li>• I can make a product that moves.</li> <li>• I can measure, mark out, cut and shape range of materials.</li> <li>• I can use simple finishing techniques to improve the appearance of my product.</li> <li>• I can use mechanisms [for example, levers, sliders, wheels and axles], in my products.</li> </ul>
<p><b>Year 2</b></p>	<ul style="list-style-type: none"> <li>• I know different types of ingredients, cooking methods and kitchen utensils.</li> <li>• I understand where food comes from.</li> <li>• I know the basic principles of a healthy and varied diet.</li> <li>• I can follow safe procedures for food safety and hygiene.</li> <li>• I understand that different artistic works are made by craftsmen from different cultures and times.</li> </ul>	<ul style="list-style-type: none"> <li>• I can think of an idea and plan what to do next.</li> <li>• I can join materials and components in different ways.</li> <li>• I can explain what went well with my work.</li> <li>• I can choose the right materials to use for my design and explain why I have chosen them.</li> <li>• I can use a running and over stitch.</li> <li>• I can assemble, join and combine materials in order to make a product.</li> <li>• I can measure, cut and score materials to use in a model or structure.</li> <li>• I can cut, shape and join fabric to make a simple garment.</li> <li>• I can describe the ingredients I am using.</li> <li>• I can use hand tools safely and appropriately.</li> <li>• I can choose and use appropriate finishing technique.</li> </ul>

		<ul style="list-style-type: none"> <li>• I can give reasons for my opinion when I look at craft or design work.</li> <li>• I can select appropriate tools and materials and be able to name and describe them.</li> <li>• I can evaluate my products and identify strengths and possible changes that could be made.</li> <li>• I can experiment with basic tools on rigid and flexible materials.</li> <li>• I can develop techniques to join fabrics and apply decorations</li> </ul>
<p><b>Year 3</b></p>	<ul style="list-style-type: none"> <li>• I understand principles of a healthy and varied diet</li> <li>• I know a range of cooking techniques.</li> <li>• I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>• I can demonstrate hygienic food preparation and storage</li> <li>• I can design a product and make sure it looks attractive.</li> <li>• I can prove that my design meets some set criteria.</li> <li>• I can follow a step by step plan, choosing the right equipment and materials.</li> <li>• I can choose a material for both its suitability and appearance.</li> <li>• I can make drawings with labels when designing,</li> <li>• I can select the most appropriate tools and techniques for a given task.</li> <li>• I can make a product which uses both electrical and mechanical components.</li> <li>• I can work accurately to measure, score, make cuts and make holes.</li> <li>• I can measure, tape or pin, cut and join fabric with some accuracy.</li> <li>• I can add detail to my work using different type of stitch.</li> <li>• I can evaluate my own project.</li> <li>• I can use cross-stitch.</li> <li>• I can apply the principles of a healthy diet.</li> <li>• I can describe how food ingredients came together.</li> <li>• I can generate ideas for an item considering its purpose and its users.</li> <li>• I can plan the order of my work before starting.</li> </ul>

		<ul style="list-style-type: none"> <li>• I can evaluate my product against original design criteria.</li> <li>• I can experiment with different materials to create of effects and use these techniques in my finished design.</li> <li>• I can talk about some of great artists, architects and designers in history and describe their work.</li> </ul>
<p><b>Year 4</b></p>	<ul style="list-style-type: none"> <li>• I know different stitches; I learn to weave and knit</li> <li>• I understand principles of a healthy and varied diet</li> <li>• I know a range of cooking techniques.</li> <li>• I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>• I can say how I would improve my work using technical terms and giving reasons.</li> <li>• I can collect ideas and develop a plan for a completed design.</li> <li>• I can use idea from other people when I am designing.</li> <li>• I can produce a plan and explain it.</li> <li>• I can evaluate and suggest improvements for my design for both their purpose and appearance.</li> <li>• I can make labelled drawing from different views showing specific features.</li> <li>• I can explain how I have improved my original design.</li> <li>• I can describe some of the key ideas, techniques and working practices of artists, architects and designers I have studied.</li> <li>• I can develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.</li> <li>• I can think about my ideas and I can change things if this helps me improve my work.</li> <li>• I can make drawings with labels when designing.</li> <li>• I can use simple graphical communication techniques</li> <li>• I can evaluate my work both during and at the end of the assignment.</li> <li>• I can evaluate my products carrying out appropriate test.</li> <li>• I can present a product in an interesting way.</li> <li>• I can preserve and adapt my work when my original idea do not work.</li> </ul>

		<ul style="list-style-type: none"> <li>• I can use skills I have been taught to adapt and improve my work.</li> <li>• I can plan my sculpture using drawings or other preparatory work.</li> <li>• I can measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</li> <li>• I can select appropriate tools and techniques for making my product.</li> <li>• I can join and combine materials and components accurately in temporary and permanent ways.</li> <li>• I can sew using a range of different stitches, weave and knit.</li> <li>• I know how to be both hygienic and safe when using food.</li> </ul>
<p><b>Year 5</b></p>	<ul style="list-style-type: none"> <li>• I know and can apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens.</li> <li>• I understand principles of a healthy and varied diet.</li> <li>• I know a range of cooking techniques.</li> <li>• I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>• I can develop different ideas which can be used and explain my choices for the materials and techniques I have used.</li> <li>• I can come up with a range of ideas after collecting information from different sources.</li> <li>• I can talk about and evaluate my work.</li> <li>• I can explain how a product will appeal to a specific audience.</li> <li>• I can evaluate appearance and function against original criteria.</li> <li>• I can produce a detailed, step by step plan.</li> <li>• I can suggest alternative plans; outlining the positive features and drawbacks.</li> <li>• I can draw up a specification for my design</li> <li>• I can confidently and systematically investigate how to use new and unfamiliar materials and use these learnt techniques within my work.</li> <li>• I can use results of investigations, information sources, including ICT when developing design ideas.</li> </ul>

		<ul style="list-style-type: none"> <li>• I can research and discuss various architects, designers and discuss their process and explain how these were used in the finished product.</li> <li>• I can experiment with using layers and overlays to create new textures.</li> <li>• I can use a range of tools and equipment competently.</li> <li>• I show that I can be both hygienic and safe in the kitchen</li> <li>• I can use variety of techniques when I use clay, including slabs, coils and slips.</li> <li>• I can make a prototype before making a final version.</li> <li>• I can weigh and measure accurately (time, dry ingredients, liquids)</li> <li>• I can cut and join with accuracy to ensure a good-quality finish to the product</li> </ul>
<p><b>Year 6</b></p>	<ul style="list-style-type: none"> <li>• I understand principles of a healthy and varied diet.</li> <li>• I know a range of cooking techniques.</li> <li>• I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> <li>• I know how a product should be stored and give reasons for it.</li> </ul>	<ul style="list-style-type: none"> <li>• I can plan the order of my work, choosing appropriate materials, tools and techniques. I can use market research to inform my plans and ideas.</li> <li>• I can work within a budget.</li> <li>• I show that I consider culture and society in my plans and designs.</li> <li>• I can produce intricate patterns in a malleable media</li> <li>• I can follow and refine my plans.</li> <li>• I justify my plans in a convincing way.</li> <li>• I can evaluate my products identifying strengths and areas for development, and carrying out appropriate tests.</li> <li>• I can record my evaluations using drawings with labels.</li> <li>• I can explain how products should be stored and give reasons.</li> <li>• I can assemble components and make working models.</li> <li>• I can use tools safely and accurately.</li> <li>• I can construct products using permanent joining techniques.</li> </ul>

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|  |  | <ul style="list-style-type: none"><li>• I can make modifications to my design if required.</li><li>• I can pin, sew and stitch materials together create a product.</li><li>• I can enhance my work using more advanced stitching and applique techniques.</li><li>• I can develop a design specification.</li><li>• I can explore, develop and communicate aspects of my design proposals by modelling my ideas in a variety of ways.</li></ul> |
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