



KS1	Year 1	Year 2
<p><b>Developing, planning and communicating ideas</b></p>	<p>Think of some ideas of their own                      Explain what they want to do                      Use pictures and words to plan  <b>Challenge:</b> Come up with a range of possible solutions to a problem</p>	<p>Think of ideas and plan what to do next                      Choose the best tools and materials Give a reason why these are best                      Describe their design by using pictures, diagrams, models and words  <b>Challenge:</b> Explain why they disregarded some tools/materials</p>
<p><b>Working with tools, equipment, materials &amp; components to make quality products</b></p>	<p>Explain what they are making                      Explain which tools are they using  <b>Challenge:</b> Name tools and their uses</p>	<p>Join things (materials/ components) together in different ways  <b>Challenge:</b> Use a variety of appropriate joins successfully</p>
<p><b>Evaluating processes and products</b></p>	<p>Describe how something works                      Talk about their own work and things that other people have done  <b>Challenge:</b> Suggest an alternative design/process to improve their work</p>	<p>Explain what went well with their work                      If they did it again, explain what would they want to improve  <b>Challenge:</b> How did they adapt their design as they worked?</p>
<p><b>Cooking and nutrition</b></p>	<p>Cut food safely                      Describe the texture of foods                      Wash their hands and make sure that surfaces are clean                      Think of interesting ways of decorating food they have made, eg, cakes</p>	<p>Explain what it means to be hygienic                      Be hygienic in the kitchen                      Know where food comes from</p>
<p><b>Textiles</b></p>	<p>Describe how different textiles feel                      Make a product from textile by gluing</p>	<p>Measure textile                      Join textiles together to make something cut textiles                      Explain why they chose a certain textile</p>
<p><b>Mechanisms</b></p>	<p>Make a product which moves                      Cut materials using scissors                      Describe the materials using different words                      Say why they have chosen moving parts</p>	<p>Join materials together as part of a moving product                      Add some kind of design to their product</p>
<p><b>Use of materials</b></p>	<p>Make a structure/model using different materials                      Work tidily                      Make their model stronger if it needs to be</p>	<p>Measure materials to use in a model or structure                      Join material in different ways                      Use joining, folding or rolling to make it stronger</p>
<p><b>Construction</b></p>	<p>Talk with others about how they want to construct their product                      Select appropriate resources and tools for their building projects                      Make simple plans before making objects, e.g. drawings, arranging pieces of construction before building</p>	<p>Make sensible choices as to which material to use for their constructions                      Develop their own ideas from initial starting points                      Incorporate some type of movement into models                      Consider how to improve their construction</p>



LKS2	Year 3	Year 4
<b>Developing, planning and communicating ideas</b>	<p>Show that the design meets a range of requirements                      Put together a step-by-step plan which shows the order and also what equipment and tools are needed                      Describe their design using an accurately labelled sketch and words                      Be realistic with their plan  <b>Challenge:</b> Prioritise their design requirements</p>	<p>How to check if their design is successful                      Begin to explain how they can improve their original design                      Evaluate their product, thinking of both appearance and the way it works                      Consider how they could have made their idea better  <b>Challenge:</b> Suggest alternative designs and evaluate them</p>
<b>Working with tools, equipment, materials &amp; components to make quality products</b>	<p>Use equipment and tools accurately  <b>Challenge:</b> Measure accurately and avoid wasting materials</p>	<p>Tell if their finished product is going to be good quality                      Be aware of the need to produce something that will be liked by others                      Show a good level of expertise when using a range of tools and equipment                      Work at their product even though their original idea might not have worked  <b>Challenge:</b> Evaluate their design from another person's point of view</p>
<b>Evaluating processes and products</b>	<p>Explain what was changed which made the design even better  <b>Challenge:</b> Suggest further changes to improve appearance</p>	<p>How to check if their design is successful                      Begin to explain how they can improve their original design                      Evaluate their product, thinking of both appearance and the way it works                      Consider how they could have made their idea better  <b>Challenge:</b> Check and adapt their work as they go along</p>
<b>Cooking and nutrition</b>	<p>Choose the right ingredients for a product                      Use equipment safely                      Make sure that the product looks attractive                      Describe how combined ingredients come together                      Set out to grow plants such as cress and herbs from seed with the intention of using them for the food product</p>	<p>Be hygienic and safe                      Present their product in an interesting way</p>
<b>Textiles</b>	<p>Join textiles of different types in different ways                      Choose textiles both for their appearance and also qualities</p>	<p>Consider what the user would want when choosing textiles                      How to make their product strong                      Devise a template                      Explain how to join things in a different way</p>
<b>Electrical and Mechanical Components</b>	<p>Select the most appropriate tools and techniques to use                      Make a product which uses both electrical and mechanical components                      Use a simple circuit</p>	<p>Add things to their circuits                      Alter their product after checking it                      Be confident about trying out new and different ideas</p>
<b>Stiff and flexible sheet materials</b>	<p>Do they use the most appropriate materials                      Work accurately to make cuts and holes                      Join materials</p>	<p>Measure carefully to ensure there are no mistakes                      Make their product strong</p>
<b>Mouldable materials</b>	<p>Select the most appropriate materials                      Use a range of techniques to shape and mould                      Use finishing techniques</p>	<p>Use a range of advanced techniques to shape and mould                      Use finishing techniques, showing an awareness of audience</p>



UKS2	Year 5	Year 6
<p><b>Developing, planning and communicating ideas</b></p>	<p>Come up with a range of ideas after collecting information                      Take a user’s view into account when designing                      Produce a detailed step-by-step plan                      Suggest some alternative plans and say what the good points and drawbacks are about each  <b>Challenge:</b> Draw their plan to scale</p>	<p>Use a range of information to inform their design                      Use market research to inform plans                      Work within constraints                      Follow and refine their plan if necessary                      Justify their plan to someone else                      Consider culture and society in their designs  <b>Challenge:</b> Present/advertise/promote their idea to ‘sell’ it to a company/buyer</p>
<p><b>Working with tools, equipment, materials and components to make quality products</b></p>	<p>Explain why their finished product is going to be of good quality                      Explain how their product will appeal to the audience                      Use a range of tools and equipment expertly                      Persevere through different stages of the making process  <b>Challenge:</b> Predict the risks involved in using different tools</p>	<p>Use tools and materials precisely                      Change the way they are working if needed  <b>Challenge:</b> Train others to use tools and materials precisely</p>
<p><b>Evaluating processes and products</b></p>	<p>Check that their design is the best it can be                      Check whether anything could be improved                      Evaluate appearance and function against the original criteria  <b>Challenge:</b> Identify the successes and if it is fit for purpose</p>	<p>Test and evaluate their final product                      Ensure their product is fit for purpose                      Identify what would improve their product                      Evaluate if different resources would have improved their product                      Evaluate if more or different information would make it even better                      Check their product meet all design criteria                      Consider the use of the product when selecting materials  <b>Challenge:</b> Research and compare similar products on the market and identify how theirs compare</p>
<p><b>Cooking and nutrition</b></p>	<p>Describe what they do to be both hygienic and safe                      Present their product well</p>	<p>Explain how their product should be stored with reasons                      Set out to grow their own products with a view to making a salad, taking account of time required to grow different foods</p>
<p><b>Textiles</b></p>	<p>Think what the user would want when choosing textiles                      Make their product attractive and strong                      Make up a prototype first                      Use a range of joining techniques</p>	<p>Consider about how their product could be sold                      What would improve their product even more</p>
<p><b>Electrical and Mechanical Components</b></p>	<p>Incorporate a switch into their product                      Refine their product after testing it                      Incorporate hydraulics and pneumatics</p>	<p>Use different kinds of circuit in their product                      Identify ways in which adding a circuit would improve their product</p>
<p><b>Stiff and flexible sheet materials</b></p>	<p>Accurate measurements to ensure that everything is precise                      Ensure their product is strong and fit for purpose</p>	<p>Justify why they selected specific materials                      Ensure their work is precise and accurate                      Hide joints so as to improve the look of their product</p>
<p><b>Mouldable materials</b></p>	<p>Be motivated to refine and further improve their product using mouldable materials</p>	<p>Refine and further improve their product using mouldable materials                      Justify why the chosen material was the best for the task                      Justify design in relation to the audience</p>

