

Yr	Design	Make	Evaluate	Technical Knowledge (Select as appropriate to the focus of the design and technology focuses in the year group)
1	<ul style="list-style-type: none"> <li>▶ Use pictures and words to convey what they want to design / make.</li> <li>▶ Explore ideas by rearranging materials.</li> <li>▶ Select pictures to help develop ideas.</li> <li>▶ Use mock-ups e.g. recycled material trial models to try out their ideas.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Select materials from a limited range.</li> <li>▶ Explain what they are making.</li> <li>▶ Name the tools they are using.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Explore existing products and investigate how they have been made (including teacher-made examples).</li> <li>▶ Talk about their design as they develop and identify good and bad points.</li> <li>▶ Say what they like and do not like about items they have made and attempt to say why.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Start to use technical vocabulary.</li> <li>▶ Cut out shapes which have been created by drawing round a template.</li> <li>▶ Join materials in a variety of ways.</li> <li>▶ Decorate using a variety of techniques.</li> <li>▶ Know some ways of making structures stronger.</li> <li>▶ Show how to stiffen some materials.</li> <li>▶ Know how to make a simple structure more stable.</li> <li>▶ Attach wheels to a chassis using an axle.</li> <li>▶ Know some different ways of making things move in a 2-D plane.</li> <li>▶ Start to use technical vocabulary.</li> </ul>
2	<ul style="list-style-type: none"> <li>▶ Propose more than one idea for their product.</li> <li>▶ Use ICT to communicate ideas.</li> <li>▶ Use drawings to record ideas as they are developed.</li> <li>▶ Add notes to drawings to help explanations.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Discuss their work as it progresses.</li> <li>▶ Select and name the tools needed to work the materials.</li> <li>▶ Explain which materials they are using and why.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Decide how existing products do / do not achieve their purpose.</li> <li>▶ Discuss how closely their finished product meets their own design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Start to use technical vocabulary.</li> <li>▶ Cut out shapes which have been created by drawing round a template.</li> <li>▶ Join materials in a variety of ways.</li> <li>▶ Decorate using a variety of techniques.</li> <li>▶ Know some ways of making structures stronger.</li> <li>▶ Show how to stiffen some materials.</li> <li>▶ Know how to make a simple structure more stable.</li> <li>▶ Attach wheels to a chassis using an axle.</li> <li>▶ Know some different ways of making things move in a 2-D plane.</li> <li>▶ Start to use technical vocabulary.</li> </ul>
3	<ul style="list-style-type: none"> <li>▶ Develop more than one design or adaptation of an initial design.</li> <li>▶ Plan a sequence of actions to make a product.</li> <li>▶ Think ahead about the order of their work and decide upon tools and materials.</li> <li>▶ Propose realistic suggestions as to how they can achieve their design ideas.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Select from a range of tools for cutting, shaping, joining and finishing.</li> <li>▶ Use tools with accuracy.</li> <li>▶ Select from materials according to their functional properties.</li> <li>▶ Use appropriate finishing techniques.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Investigate similar products to the one to be made to give starting points for a design.</li> <li>▶ Research needs of user.</li> <li>▶ Decide which design idea to develop.</li> <li>▶ Consider and explain how the finished product could be improved.</li> <li>▶ Discuss how well the finished product meets the user's design criteria.</li> <li>▶ Investigate key events and individuals in design and technology.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>▶ Understand seam allowance.</li> <li>▶ Prototype a product.</li> <li>▶ Sew on buttons and make loops.</li> <li>▶ Strengthen frames with diagonal struts.</li> <li>▶ Measure and mark square section, strip and dowel accurately to 1cm.</li> <li>▶ Incorporate a circuit into a model.</li> <li>▶ Use electrical systems such as switches bulbs and buzzers.</li> <li>▶ Use ICT to control products.</li> <li>▶ Use linkages to make movement larger or more varied.</li> </ul>
4	<ul style="list-style-type: none"> <li>▶ Record the plan by drawing using annotated sketches.</li> <li>▶ Use prototypes to develop and share ideas.</li> <li>▶ Consider aesthetic qualities of materials chosen.</li> <li>▶ Use CAD where appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Prepare pattern pieces as templates for their design.</li> <li>▶ Select from techniques for different parts of the process.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Draw / sketch existing products in order to analyse and understand how products are made.</li> <li>▶ Identify the strengths and weaknesses of their design ideas in relation to purpose / user.</li> <li>▶ Consider and explain how the finished product could be improved.</li> <li>▶ Investigate key events and individuals in design and technology.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>▶ Understand seam allowance.</li> <li>▶ Prototype a product.</li> <li>▶ Sew on buttons and make loops.</li> <li>▶ Strengthen frames with diagonal struts.</li> <li>▶ Measure and mark square section, strip and dowel accurately to 1cm.</li> <li>▶ Incorporate a circuit into a model.</li> <li>▶ Use electrical systems such as switches bulbs and buzzers.</li> <li>▶ Use ICT to control products.</li> <li>▶ Use linkages to make movement larger or more varied.</li> </ul>
5	<ul style="list-style-type: none"> <li>▶ Record ideas using annotated diagrams.</li> <li>▶ Use models, kits and drawings to help formulate design ideas.</li> <li>▶ Sketch and model alternative ideas.</li> <li>▶ Decide which design idea to develop.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Develop one idea in depth.</li> <li>▶ Select from and use a wide range of tools.</li> <li>▶ Cut accurately and safely to a marked line.</li> <li>▶ Select and use a wide range of materials.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Research and evaluate existing products.</li> <li>▶ Consider user and purpose.</li> <li>▶ Consider and explain how the finished product could be improved related to design criteria.</li> <li>▶ Investigate key events and individuals in design and technology.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use the correct vocabulary appropriate to the project.</li> <li>▶ Join materials using appropriate methods.</li> <li>▶ Create 3=-D textile products using pattern pieces.</li> <li>▶ Understand pattern layout with textiles.</li> <li>▶ Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>▶ Build frameworks to support mechanisms.</li> <li>▶ Stiffen and reinforce complex structures.</li> <li>▶ Use mechanical systems such as cams, pulleys and gears.</li> <li>▶ Use electrical systems such as motors and switches.</li> <li>▶ Program, monitor and control using ICT.</li> </ul>
6	<ul style="list-style-type: none"> <li>▶ Plan the sequence of work.</li> <li>▶ Devise step by step plans which can be read / followed by someone else.</li> <li>▶ Use exploded diagrams and cross-sectional diagrams to communicate ideas.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Make prototypes.</li> <li>▶ Use researched information to inform decisions.</li> <li>▶ Produce detailed lists of ingredients / components / materials and tools.</li> <li>▶ Refine their product – review and improve.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Identify the strengths and weaknesses of their design ideas.</li> <li>▶ Report using correct technical vocabulary.</li> <li>▶ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user.</li> <li>▶ Understand how key people have influenced design in a variety of contexts.</li> <li>▶ Investigate key events and individuals in design and technology.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use the correct vocabulary appropriate to the project.</li> <li>▶ Join materials using appropriate methods.</li> <li>▶ Create 3=-D textile products using pattern pieces.</li> <li>▶ Understand pattern layout with textiles.</li> <li>▶ Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>▶ Build frameworks to support mechanisms.</li> <li>▶ Stiffen and reinforce complex structures.</li> <li>▶ Use mechanical systems such as pulleys and gears.</li> <li>▶ Use electrical systems such as motors and switches.</li> <li>▶ Program, monitor and control using ICT.</li> </ul>