Design and Technology
End of Year Expectations

Year 6	▶ Plan the sequence of work. ▶ Devise step by step plans which can be read / followed by someone else. ▶ Use exploded diagrams and cross-sectional diagrams to communicate ideas.	▶ Make prototypes. ▶ Use researched information to inform decisions. ▶ Produce detailed lists of ingredients / components / materials and tools. ▶ Refine their product – review and rework / improve.	▶ Identify the strengths and weaknesses of their design ideas. ▶ Report using correct technical vocabulary. ▶ Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. ▶ Understand how key people have influenced design in a variety of contexts. ▶ Investigate key events and individuals in design and technology.	▶ Use the correct vocabulary appropriate to the project. ▶ Join materials using appropriate methods. ▶ Create 3=-D textile products using pattern pieces. ▶ Understand pattern layout with textiles. ▶ Cut strip wood, dowel, square section wood accurately to 1mm. ▶ Build frameworks to support mechanisms. ▶ Stiffen and reinforce complex structures. ▶ Use mechanical systems such as cams, pulleys and gears. ▶ Use electrical systems such as motors and switches. ▶ Program, monitor and control using ICT.	▶ Understand and apply the principles of a healthy and varied diet. ▶ Choose ingredients to support healthy eating choices when designing their food products. ▶ Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.
Year 5	▶ Record ideas using annotated diagrams. ▶ Use models, kits and drawings to help formulate design ideas. ▶ Sketch and model alternative ideas. ▶ Decide which design idea to develop.	▶ Develop one idea in depth. ▶ Select from and use a wide range of tools. ▶ Cut accurately and safely to a marked line. ▶ Select from and use a wide range of materials.	▶ Research and evaluate existing products. ▶ Consider user and purpose. ▶ Consider and explain how the finished product could be improved related to design criteria. ▶ Investigate key events and individuals in design and technology.		▶ Join and combine a widening range of ingredients. ▶ Select and prepare foods for a particular purpose. ▶ Know where and how ingredients are grown and processed.
Year 4	▶ Record the plan by drawing using annotated sketches. ▶ Use prototypes to develop and share ideas. ▶ Consider aesthetic qualities of materials chosen. ▶ Use CAD where appropriate.	▶ Prepare pattern pieces as templates for their design. ▶ Select from techniques for different parts of the process.	▶ Draw / sketch existing products in order to analyse and understand how products are made. ▶ Identify the strengths and weaknesses of their design ideas in relation to purpose / user. ▶ Consider and explain how the finished product could be improved. ▶ Investigate key events and individuals in design and technology.	▶ Use an increasingly appropriate technical vocabulary for tools materials and their properties. ▶ Understand seam allowance. ▶ Prototype a product. ▶ Sew on buttons and make loops. ▶ Strengthen frames with diagonal struts. ▶ Measure and mark square section, strip and dowel accurately to 1cm. ▶ Incorporate a circuit into a model. ▶ Use electrical systems such as switches bulbs and buzzers. ▶ Use ICT to control products. ▶ Use linkages to make movement larger or more varied.	▶ Make healthy eating choices – use the *Eatwell plate*. ▶ Understand seasonality. ▶ Know where and how ingredients are reared and caught. ▶ Prepare and cook using different cooking techniques.

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Year 3	▶ Develop more than one design or adaptation of an initial design. ▶ Plan a sequence of actions to make a product. ▶ Think ahead about the order of their work and decide upon tools and materials. ▶ Propose realistic suggestions as to how they can achieve their design ideas.	▶ Select from a range of tools for cutting, shaping, joining and finishing. ▶ Use tools with accuracy. ▶ Select from materials according to their functional properties. ▶ Use appropriate finishing techniques.	▶ Investigate similar products to the one to be made to give starting points for a design. ▶ Research needs of user. ▶ Decide which design idea to develop. ▶ Consider and explain how the finished product could be improved. ▶ Discuss how well the finished product meets the user's design criteria. ▶ Investigate key events and individuals in design and technology.	▶ Use an increasingly appropriate technical vocabulary for tools materials and their properties. ▶ Understand seam allowance. ▶ Prototype a product. ▶ Sew on buttons and make loops. ▶ Strengthen frames with diagonal struts. ▶ Measure and mark square section, strip and dowel accurately to 1cm. ▶ Incorporate a circuit into a model. ▶ Use electrical systems such as switches bulbs and buzzers. ▶ Use ICT to control products. ▶ Use linkages to make movement larger or more varied.	▶ Follow instructions / recipes. ▶ Join and combine a range of ingredients. ▶ Begin to understand the food groups on the *Eatwell Plate*.
Year 2	▶ Propose more than one idea for their product. ▶ Use ICT to communicate ideas. ▶ Use drawings to record ideas as they are developed. ▶ Add notes to drawings to help explanations.	▶ Discuss their work as it progresses. ▶ Select and name the tools needed to work the materials. ▶ Explain which materials they are using and why.	▶ Decide how existing products do / do not achieve their purpose. ▶ Discuss how closely their finished product meets their own design criteria.	▶ Start to use technical vocabulary. ▶ Cut out shapes which have been created by drawing round a template. ▶ Join materials in a variety of ways. ▶ Decorate using a variety of techniques. ▶ Know some ways of making structures stronger. ▶ Show how to stiffen some materials. ▶ Know how to make a simple structure more stable. ▶ Attach wheels to a chassis using an axle. ▶ Know some different ways of making things move in a 2-D plane.	▶ Cut, peel, grate, chop a range of ingredients. ▶ Work safely and hygienically. ▶ Know about the *Eatwell Plate*. ▶ Understand where food comes from.
Year 1	▶ Use pictures and words to convey what they want to design / make. ▶ Explore ideas by rearranging materials. ▶ Select pictures to help develop ideas. ▶ Use mock-ups e.g. recycled material trial models to try out their ideas.	▶ Select materials from a limited range. ▶ Explain what they are making. ▶ Name the tools they are using.	▶ Explore existing products and investigate how they have been made (including teacher-made examples). ▶ Talk about their design as they develop and identify good and bad points. ▶ Say what they like and do not like about items they have made and attempt to say why.		▶ Group familiar food products e.g. fruit and vegetables. ▶ Cut and chop a range of ingredients. ▶ Work safely and hygienically. ▶ Know about the need for a variety of foods in a diet.
	Design	**Make**	**Evaluate**	**Technical Knowledge (Select as appropriate to the focus of the design and technology focuses in the year group)**	**Cooking and Nutrition**