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.

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Rec	➢ Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary ➢ Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate ➢ Be confident to try new activities and show independence, resilience and perseverance in the face of challenge; ➢ Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. ➢ Use a range of small tools, including scissors, paint brushes and cutlery ➢ Begin to show accuracy and care when drawing ➢ Talk about the lives of the people around them and their roles in society ➢ Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps ➢ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function ➢ Share their creations, explaining the process they have used

	Design	Make	Evaluate	Technical Knowledge (Select as appropriate to the focus of the design and technology focuses in the year group)	Cooking and Nutrition