Mablethorpe Primary Academy Design and Technology Progression of Skills KS1-KS2.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	➢ Discuss product purpose and audience. ➢ Discuss detailed design ideas. ➢ Create drawings of ideas and template.	➢ Use design criteria to develop ideas. ➢ Make prototypes of design and evaluate. ➢ Research and generate ideas from own experiences. ➢ Use IT to aid design process.	➢ Discuss and refine ideas. ➢ Annotated sketches record ideas. ➢ Generate realistic designs with project, purpose and audience in mind. ➢ Describe, in detail, the functions of their project.	➢ Create proto-types and pattern pieces. ➢ Develop design criteria. ➢ Consider user interest in design. ➢ Account for resources when generating ideas. ➢ Cross-sectional drawings and exploded diagrams record ideas.	➢ Begin to use CAD in design process. ➢ Generate innovative designs from research. ➢ Carry out questionnaires and web research. ➢ Consider specific preferences of audience.	➢ Use CAD in design process. ➢ Make informed decisions (account of time, resources and cost). ➢ Carry out survey and interview research. ➢ Develop design specification.
Making	➢ Follow hygiene and safety procedures. ➢ Measure, mark-out, cut and shape. ➢ Assemble, join and combine. ➢ Select tools and materials with reason.	➢ Use construction materials, textiles, food and mechanical components. ➢ Use finishing techniques (learned in A&D). ➢ Plan by suggesting what to do next.	➢ Order main stages of making. ➢ Measure, cut and mark out; assemble, join and combine with accuracy. ➢ Follow hygiene and safety practices.	➢ Apply a range of finishing techniques. ➢ Widen experience of tools and materials. ➢ Reason explicitly choice of materials and tools.	➢ Select tools and materials for specific properties and aesthetics. ➢ Produce tool, equipment and material lists. ➢ Form step-by-step plan.	➢ Explain in detail decisions made in selecting tools and materials. ➢ Demonstrate practical skills and techniques with increasing accuracy. ➢ Form detailed step-by-step plan.
Evaluating	➢ Discuss design ideas making judgements relating to design criteria. ➢ Explore existing products.	➢ Suggest improvements. ➢ Explore existing products. ➢ Discuss design ideas in process.	➢ Identify strengths and AfD. ➢ Explore key persons of D & T.	➢ Investigate and analyse existing products. ➢ Refer to design criteria in making and evaluating.	➢ Consider views of others. ➢ Critically evaluate.	➢ Evaluate ideas against initial specifications.

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Technical Knowledge	➢ Understand characteristics of materials and components. ➢ Explore levers, sliders, wheels and axels. ➢ Experiment with making freestanding structures stiffer, stronger and stable. ➢ Create 3D textile product from a 2D shape. ➢ Combining ingredients taking account of sensory characteristics. ➢ Using correct vocabulary.	➢ Explore mechanical systems to create movement. ➢ Experiment with simple electrical circuits for functional products. ➢ Programme computers to control products. ➢ Make strong, stiff shell structures. ➢ Use fabric shapes to make a 3D product. ➢ Experiment with fresh, pre-cooked and processed foods.	➢ Explore mechanical systems. ➢ Experiment with complex electrical circuits to create functional products. ➢ Programme computers to monitor changes and control products. ➢ Reinforce and strengthen frameworks. ➢ Use fabric shapes to create a 3D product. Adapt recipes making substitutions and changes.
Cooking and Nutrition	➢ Name and sort foods into the 5 groups. ➢ Understand 5-a-day recommendations. ➢ Prepare dishes safely and hygienically without heat source. ➢ Use techniques including: cutting, peeling and grating. ➢ Recognise that food comes from plants or animals. ➢ Understand how food is sourced (farming or grown in garden etc).	➢ Know that food is grown, reared or caught in the UK and across the world. ➢ Understand what makes a healthy diet (balance). Refer to the Eatwell Guide. ➢ Understand how to keep healthy and active (food and drink provide energy). ➢ Prepare and cook a variety of dishes safely and hygienically and on a heat source. ➢ Use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	➢ Demonstrate refined use of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. ➢ Understand how recipes can be adapted to alter the taste, appearance, texture and aroma. ➢ Recognise that food and drink include different substances. ➢ Explore how seasons affect availability of foods.