Design Technology – Knowledge Progression Document

Design – Developing, Planning and Communicating Ideas						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Understand 'why' questions. Understand a question or instruction that has two parts. Ask questions to find out more and to check they understand what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Engage in conversations about books, beginning to learn new vocabulary.	Draw on their own experience to help generate ideas. Suggest ideas and explain what they are going to do. Identify a target group for what they intend to design and make. Model their ideas in card and paper. Develop their design ideas applying findings from their earlier research.	Generate ideas by drawing on their own and other people's experiences. Develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Identify simple design criteria. Make simple drawings and label parts.	Generate ideas for an item, considering its purpose and the user/s. Identify a purpose and establish criteria for a successful product. Plan the order of their work before starting. Explore, develop and communicate design proposals by modelling ideas. Make drawings with labels when designing. Use computer- aided design to generate ideas.	Generate ideas, considering the purposes for which they are designing. Make labelled diagrams including cross- sectional views showing specific features. Plan how to use materials, equipment and processes. Evaluate products and identify criteria that can be used for their own designs. Use computer- aided design to generate ideas.	Generate ideas through mind mapping and identify a purpose for their product. Draw up a specification for their design including exploded diagrams. Plan how to use materials, equipment and processes. Use results of investigations, information sources when developing design ideas. Use computer- aided design to generate some realistic ideas, starting to focus on the needs of the user.	Communicate their ideas through detailed labelled drawings. Develop a design specification. Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. Plan the order of their work, choosing appropriate materials, tools and technique. Use computer- aided design to generate realistic ideas, focussing on the needs of the user.
Age-Appropriate Vocabulary						
Move, Up, Down, Top, Bottom, Sideways, Turn, Build, Shape, Tall, Short, Bigger, Smaller, Long, Thin, Wide, Strong, First, Then, Push, Pull	Plan, Ideas, Design, Make, Connect, Product, Tools (specific to project), Safe, Clean, Strengths, Changes	Use, Draw, Label, Model, Join, Measure, Materials, Shape, Evaluate, Improve	Purpose, Suitable, User, Research, Annotate, Techniques, Combine, Construct, Structure, Mould, Develop, Food Hygiene, Equipment (specific to project), Computer-aided design (CAD)	Design brief, Assemble / Disassemble, Cross- sectional views, Attach, Process, Mechanisms (specific to project), Electrical systems, Input process and outputs, Accuracy	Intent, Specification, Communicate (in terms of ideas), Exploded diagrams, Hazards, Mark out, Finish (in terms of the appearance rather than completion), Quality Analysis	Criteria, Propose, Innovate, Components (specific to project), Record, Test, Modify

Make – Working with Tools, Equipment, Materials and Components to make Quality Products (including Food)						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively sharing ideas, resources and skills. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it. Compare length, weight and capacity. Talk about the differences between materials and changes they notice. Talk about the differences between materials and changes they notice. Describe what they see, hear and feel whilst outside. Explore and talk about different forces they can feel.	Make their design using appropriate techniques. With help, measure, mark out, cut and shape a range of materials. Use tools for example, scissors and a holepunch safely. Assemble, join and combine materials and components together using a variety of temporary methods for example, glues or masking tape. Explore simple mechanical systems like levers and sliders. Select and use appropriate fruits and vegetables, processes and tools. Use basic food handling and hygienic practices. Use simple finishing techniques to improve the appearance of their product.	Begin to select tools and materials; use vocabulary to name and describe them. Measure, cut and score with some accuracy. Use hand tools safely and appropriately. Assemble, join and combine materials in order to make a product. Cut, shape and join fabric to make a simple garment. Use basic sewing techniques. Explore simple mechanical systems like levers and sliders. Follow safe procedures for food safety and hygiene. Choose and use appropriate finishing techniques.	Select tools and techniques for making their product. Measure, mark out, cut, score and assemble components with more accuracy. Work safely and accurately with a range of simple tools. Think about their ideas as they make progress and be willing to change things if this helps them improve their work. Measure, tape or pin, cut and join fabric with some accuracy. Demonstrate hygienic food preparation and storage. Understand how mechanical systems like cams, pulleys or gears create movement. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. Understand and use electrical systems for example, series circuits incorporating switches, bulbs, buzzers and motors.	Select appropriate tools and techniques for making their product. Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. Join and combine materials and components accurately in temporary and permanent ways. Sew using a range of different stitches, weave and knit. Measure, tape or pin, cut and join fabric with some accuracy. Understand how mechanical systems like cams, pulleys or gears create movement. Understand and use electrical systems for example, series circuits incorporating switches, bulbs, buzzers and motors.	Select appropriate materials, tools and techniques. Measure and mark out accurately. Develop skills and use different tools and equipment safely and accurately. Weigh and measure accurately (time, dry ingredients, liquids). Apply the rules for basic food hygiene and other safe practices, for example, hazards relating to the use of ovens. Cut and join with accuracy to ensure a good-quality finish to the product. Understand and use mechanical systems like cams, pulleys or gears. Understand and use electrical systems in their products for example, series circuits incorporating switches, bulbs, buzzers and motors.	Select appropriate tools, materials, components and techniques. Assemble components make working models. Use tools safely and accurately. Construct products using permanent joining techniques. Make modifications as they go along. Pin, sew and stitch materials together to create a product. Achieve a quality product. Understand and use mechanical systems like cams, pulleys or gears. Understand and use electrical systems in their products for example, series circuits incorporating switches, bulbs, buzzers and motors.

Evaluate – Evaluating Processes and Products						
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Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail (Developed from Communication and Language). Talk about and use a wider range of new vocabulary in context, through exploring and noticing changes.	Evaluate their product by discussing how well it works in relation to the purpose. Evaluate their products as they are developed, identifying strengths and possible changes they might make. Evaluate their product by asking questions about what they have made and how they have gone about it.	Evaluate against their design criteria. Evaluate their products as they are developed, identifying strengths and possible changes they might make. Talk about their ideas, saying what they like and dislike about them.	Evaluate their product against original design criteria for example, how well it meets its intended purpose. Analyse and evaluate familiar products.	Evaluate their work both during and at the end of the assignment. Evaluate their products carrying out appropriate tests.	Evaluate a product against the original design specification. Evaluate it personally and seek evaluation from others.	Evaluate their products, identifying strengths and areas for development, and carry out appropriate tests. Record their evaluations using drawings with labels. Evaluate against their original criteria and suggest ways that their product could be improved.