Crockerne Church of England Primary Non-Negotiables

Key Skills

Develop creative, technical and practical expertise to problem solve.
Design and make high quality proptotypes and products for a range of users.
Critique, evaluate and test ideas and products.

DT skills should be taught when linked to projects where possible to ensure real world application

DT

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Begin to draw a design of their own Use materials to create a picture of their design Talk about what they are doing during each stage	Use criteria to design and make purposeful, functional items Make pictures of their design saying what they want to make Create a prototype and critique and redraft product	Design and make purposeful and functional products. Use pictures and words to convey what they want to design and make. Describe and explain what they are making, how it works and what they need to do next.	Design and make purposeful, functional and appealing products. Use drawings with notes to record ideas as they are developed. Discuss their work as it progresses.	Use research to develop the design of functional and appealing products. Record plan by drawing labeled sketches or writing and discuss this while working.	Use research and develop design criteria to design functional and appealing products that are fit for purpose. Consider different ways in which they can creatively record their planning to engage an audience.	Use research and develop design criteria to design innovative, functional and appealing products that are fit for purpose and aimed at particular groups or individuals. Develop and communicate design ideas using annotated sketches, detailed plans, oral and digital presentations.	Use research and exploration to identify and understand user needs when designing a product. Develop and communicate design ideas using annotated sketches, detailed plans, oral and digital presentations and computer based tools.
Make	Use and explore a variety of materials. Use a variety of tools and techniques.	Use the correct tools for the job Know the tools they are using Use equipment safely	Name the tools you are using. Use given tools for a variety of tasks e.g. Knife, grater, chopping board, scissors, needles, pins, scissors, templates, glue, tape.	Select and name the tools needed to work the materials. E.g. spoons, cups, needles, yarn, scissors, saws, drills. Select materials from a limited range to meet design criteria.	Think ahead about the order of their work and plan tools and materials needed. E.g. Weighing scales, glue gun, ruler. Consider working characteristics of materials.	Use tools and equipment, including those needed to weigh and measure ingredients, with accuracy. Join and combine a range of materials, some with temporary, fixed or moving joints.	Select and use tools and equipment for a range of uses. E.g. cut and shape ingredients, join fabrics, cut accurately and safely, use bradawl to mark holes, hand drill and pin and tacks during textile work. Join and combine a	Select from and use specialist tools and techniques for a range of uses. E.g. Whisk, craft knife, cutting mat, safety ruler. Select from and use a wider range of materials, components and ingredients taking into account their

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			Join appropriately for different materials and situations. Explore ideas by rearranging materials e.g. paper, card, ingredients, fabrics, sequins, buttons, tubes, dowel, cotton reels, paper, card, mouldable materials.				range of materials and ingredients using appropriate methods. E.g. beating, rubbing in, drilling, glueing, sewing, screwing.	aesthetic properties.
Evaluate	Represent their own ideas through their work Talks about their creation and how they got to the finished product	Say what they like and dislike about products that are already know Begin to say how they could improve a product offering own ideas	Explore existing products. Say what they like and do not like about products they have made. Consider and explain how the finished product could be improved.	Explore and evaluate existing products. Talk about their developing designs and identify good points and areas to improve throughout the design process. Evaluate their product and its appearance against a design criteria.	Investigate and analyse a range of existing products. Identify strengths and areas to improve in their own design. Identify what does and does not work in the product.	Use investigations of existing products to inform planning of their own product. Check their work as it develops and modify approach in light of progress. Discuss how well their product meets the design criteria and the needs of the user.	Show a clear understanding of the specification and use this to inform decisions. Justify decisions about materials and methods of construction. Evaluate products and use of information sources.	Test, evaluate and refine ideas and products against a specification. Justify decisions made during the design process. Evaluate products and use of information sources throughout the process and use this to inform planning.
Technical	Build using a	Build structures	Build structures and	Build structures and	Create shell or	Prototype shell or	Build frameworks	Build complex

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knowledge	variety of materials Begin to say how they made their structure	using different materials Begin t make suggestions to make structures stronger and more stable Begin to explore mechanisms such as levers, wheels and axels	investigate how they can be made more stable. Create models with wheels and axels. Insert paper fasteners for card linkages.	investigate how they can be made stronger, stiffer and more stable. Use a range of materials to create models with wheels, axels or hinges. Investigate temporary, fixed and moving joining's.	frame structures and make structures more stable. Join and combine materials with temporary, fixed or moving joining. Incorporate a circuit with a bulb or buzzer into a model.	frame structures. Strengthen frames with diagonal struts. Use lolly sticks/card to make levers and linkages.	using a range of materials e.g. wood, corrugated card, plastic to support mechanisms. Use linkages to make movement larger or more varied. Incorporate motor and a switch into a model.	frameworks using a range of materials to support mechanisms. Use a CAM to make an up and down mechanism. Control a model using an ICT control programme.