Progression of Skills throughout Primary Design Technology – St Bede's RC Primary School

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	*Select appropriate resources.* *Use gestures, talking and arrangements of materials and components to show design.* *Use contexts set by the teacher and myself.* *Use language of designing and making (join, build, shape, longer, shorter, heavier etc.)*	**I am beginning to use my experience to generate ideas for a design or product.** I am beginning to research other similar products/designs. I am beginning to understand the development of existing products: What they are for, how they work, and the materials used. I can suggest ideas to a group or explain to a group my design and plan. I can design a product for myself, following set design criteria. **I can describe my ideas through talk, drawings, and labels/captions.** I can make templates and mock ups of my ideas in card or paper.	I can generate ideas by drawing on my own experiences and I am beginning to learn from others'. I can identify a purpose for what I intend to design and make. I am beginning to develop my ideas through observation, research, discussions, and knowledge of existing products. **I can design products for myself and others following design criteria.** **I can describe my design using pictures, words, models, diagrams, and I am beginning to use ICT.** I can explain the purpose of my product, how it will work and how it will be suitable for the user. I can choose best tools and materials from a provided selection and my explain choices.	With growing confidence, I can generate ideas for a product, considering its purpose and the user it is for. **I can identify and explain a purpose for my product design and how it meets the specific criteria for it to be successful.** I can sequence the order of the main stages of making a product in my plan. I can explain my choice of materials, components, the construction technique, its function, and aesthetics. **I know to accurately label product sketches when designing.** I can make a prototype. I have started to understand the importance of environmentally friendly approaches to designing products.	I can research other people's needs before generating ideas for a design/ product. **I am beginning to create my own design criteria to show my product is fit for purpose.** **I can confidently make labelled drawings from different views showing specific features.** I can make a product plan and suggest alternative methods if improvements are required. I can explain my choice of materials and components used in a design/ product, according to its function, the aesthetics, and the availability of resources. I am beginning to use computers to present my designs and ideas. I can make a prototype.	I can use the internet, questionnaires and surveys to research and develop design ideas. I am beginning to consider the needs/wants of individuals/groups when designing, to ensure products are fit for purpose. **I can create a design criterion for a product and draw up a specification.** **I am beginning to develop, model, communicate and refine design ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, and pattern pieces.** I can produce a logical, realistic plan and clearly explain it to others. I can consider the views of others, including intended users, to improve my work at the planning stage. I am beginning to use CAD - omputer Aided Design. I am beginning to understand how much products cost to make and how sustainable they are.	I can draw on market research or research a user's individual needs, wants and requirements, to inform a design. **I can create own design criteria and specification for a product.** I can come up with innovative design ideas. **I can independently generate, develop, model, communicate and refine my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, and pattern pieces.** I can use CAD - Computer Aided Design. I can clearly explain how parts of my design will work, and how they are fit for purpose. I can follow and refine a logical plan for the design process. I know how much products cost to make, how sustainable and innovative they are, and the environmental impact products have beyond their intended purpose.

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make	*Construct with a purpose, using a variety of resources.* *Use simple tools and techniques* *Build/construct with a wide range of objects.* *Select tools & techniques to shape, assemble and join.* *Replicate structures with materials/ components* *Discuss how to make an activity safe and hygienic.* *Record experiences by drawing, writing, voice recording.* *Understand different media can be combined for a purpose.*	**I am beginning to make my design using appropriate tools or equipment and explain my choices.** With help, I can measure, mark out, cut, and shape a range of materials. With support, I can follow a plan or basic recipe and consider what I need to do next. **I am beginning to assemble products, exploring which materials, and joining methods to use to make it stronger, stiffer, or more stable.** I am beginning to work in a safe and hygienic manner when using tools in Design Technology. I am beginning to use simple finishing techniques to improve the appearance of my product.	I can talk about what I am making and explain why it is fit for purpose. I am beginning to independently follow a plan or basic recipe and say what I need to do next. With some support, I can measure, mark out, cut, and shape a range of materials. **I am choosing which materials (based on their characteristics) and joining methods to use, to make my product fit for purpose.** **I can describe and choose which hand tools and equipment to use and explain my choices.** I can work in a safely and hygienically when using tools in Design Technology. I can use simple finishing techniques to make my product look good.	**I can select suitable equipment from a wider range of tools, explaining my choices and using them correctly.** **I am selecting which materials (based on their characteristics) and joining methods to use, to ensure my product is fit for purpose.** I can follow a plan or basic recipe in order and say what I need to do next. I can measure, mark out, cut, score, and assemble components with some accuracy. During the making process, I am beginning to think about my progress and change things, from the plan, if it helps improve my product. I can and understand the importance of working safely and hygienically when creating products in Design Technology. I am beginning to recognise and apply finishing techniques that make my design look good.	**I can select equipment from a wide range of tools, explaining my choices in relation to the required techniques.** **I can select which materials and joining techniques to use, to ensure my product is fit for purpose and explain my choices.** I can work through a plan or recipe in order. During the making process, I can evaluate my progress and change things, from the plan, if it helps improve the quality of my product. I know how to measure, mark out, cut, and shape a range of materials. I can join and combine materials and components accurately in temporary and permanent ways. I am beginning to use finishing techniques to strengthen and improve the appearance of my product, using a range of equipment including ICT.	**I can use selected tools & techniques with a good level of precision.** I can make lists of equipment and materials required during the making process. I can create a detailed step-by-step plan and follow it. **I can select and use a wider range of materials and components, according to their functionality.** I can measure and mark out, cut, and shape accurately. I can use techniques with a small number of steps. I can assemble, join, and combine materials/ components with accuracy to ensure a good-quality finish. I can use finishing techniques, and equipment including ICT, to strengthen and improve the look of my product. I am beginning to be resourceful with practical problems that occur during the making process. I can say how my product will appeal to the user.	**I can confidently select appropriate tools, materials, components, and techniques and use them precisely.** I can produce suitable lists of tools, equipment, materials needed, considering constraints. I create, follow, and adapt detailed step-by-step plans. **I can select and use a wider range of materials and components, according to their functional properties and aesthetic qualities.** I can accurately assemble, join and combine materials and components in a variety of ways. I can say how my product will appeal to the user. I can measure and mark out, cut, and shape accurately. I can accurately apply finishing techniques to make and achieve a quality product. I am confident to make modifications to solve practical problems. I can use multi-step techniques.

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate	*Adapt work if necessary.* *Dismantle, examine, talk about existing objects/ structures.* *Consider and manage some risks.* *Practise some appropriate safety measures independently.* *Talk about how things work.* *Look at similarities and differences between existing objects/materials/ tools.* *Show an interest in technological toys.* *Describe textures.*	**I can talk about my product, discussing how well it works in relation to the design criteria.** When looking at products in the world, I can talk about purpose, the materials, who uses it and where it is used. **When looking at products in the world, I can explain what I like and dislike about them and why.** I can say what is good about my product and any possible ways to make it even better.	**I can evaluate my work/product against the design criteria.** I can identify strengths in my product and any changes I would make to improve it. **I can look at a range of existing products and explain what I like and dislike about them and why.** When looking at products in the world, I can express opinion about a product's purpose, the materials, who uses it and where it is used.	I can look at the design criteria, during the planning and making stages. **I can use design criteria to evaluate my finished product, e.g., how well it meets its intended purpose.** I can say what I would change about my design/product to make it better. **I am beginning to disassemble and evaluate familiar products.** I am beginning to evaluate the key designs/products of individuals in the design and technology industry. I am beginning to understand by whom, when and where products were designed. **I can talk about at least one inventor, designer, engineer, or chef who has developed ground-breaking products.**	I can refer to the design criteria, during the planning and making stages. **I can use design criteria to evaluate my product.** I am beginning to explain how I would improve my original design. I can evaluate my product, carrying out appropriate tests. I am beginning to consider the evaluation of my product by others. **I can disassemble and evaluate familiar, existing designs and products, considering the views of others and if the product is fit for purpose.** I can discuss by whom, when and where existing products were designed. **I can talk about inventors, designers, engineers, or chefs who has developed ground-breaking products.**	I can evaluate the quality of the design during the planning and making stages. **I can evaluate my product against the specification, considering its purpose and appearance.** I can test and evaluate my final product, including evaluations from peers/supporting adults. **I can evaluate existing products considering how well they've been made, the materials used, whether they work, how they have been made and if fit for purpose.** I am beginning to evaluate how much products cost to make and how innovative they are. I can research how sustainable materials are for existing products. **I am beginning to join debates about key inventors/ designers/ engineers/ chefs/ manufacturers of prominent/ controversial designs/products.**	I can evaluate the quality of my work both during and at the end of the assignment, checking it is the best it can be. **I can evaluate my ideas and finished product against the specification.** I can carry out appropriate tests and research, to state if my product is fit for purpose. I can create an evaluation report on my product, identifying strengths, weaknesses and improvements that could be made. **I can investigate and analyse existing products in the market, considering their quality, the cost to make, innovativeness, functionality, aesthetics, and the sustainability of materials/ components.** **I can participate in a debate about key inventors, designers, engineers, or chefs of prominent or controversial designs and products.** I have ideas for my product, beyond it's intended purpose.

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge	***Structures*** *Begin to build structures from a range of materials.* ***Mechanisms*** *Recognise that wheels need to turn.* ***Textiles*** *Explore the properties of different fabrics using all their senses.*	Structures **I am beginning to build simple structures, exploring how they can be made stronger, stiffer, and more stable.** I can describe the properties of different materials. Mechanisms **I can explore and use products with mechanisms such as flaps, hinges, and wheels.** Textiles I am beginning to measure, cut, and join different fabrics. I can choose suitable textiles for my product.	Structures **I can independently, build simple structures, exploring how they can be made with greater stability.** I can use joining, rolling, folding techniques to make my product stronger. Mechanisms **I can create products using mechanisms such as levers, sliders.** **I am exploring products with axles and wheels.** Textiles I can carefully measure, cut, and join different fabrics to make a simple product. I understand how simple 3-D textile products are made, using a template to create two identical fabric shapes.	Structures I am beginning to choose materials based on their functional properties. **I am beginning to apply my understanding of strengthening, stiffening and reinforcing techniques to make strong structures.** I can work accurately to make cuts and holes. Mechanisms **With help, I can use systems such as levers and linkages create movement.** I am exploring and recognising a range of mechanisms in existing products. Textiles I can choose a fabric based on its appearance and functionality. I can join textiles in different ways. I am beginning to use single fabric shapes to make a 3D textiles product. Electrical Systems **With support, I can make and represent simple electrical circuits, such as a series and parallel, and use them to create functional products.** **I have learnt about how to program a computer to control products.**	Structures I can choose materials based on their functional properties. **I can apply my understanding of strengthening, stiffening and reinforcing techniques to make strong structures.** Mechanisms **I can explain how mechanical systems such as levers and linkages create movement.** I am beginning to use pneumatics to create movement. Textiles I think about the user and functionality when selecting a fabric for my product. I am beginning to design and draw templates. I can explain how to join fabrics in different ways. I know how to use single fabric shapes to make a 3D textiles product. Electrical Systems **I can make and represent simple electrical circuits, such as a series and parallel, and with more than one component, and use them to create functional products.** **I can program a computer to control product.**	Structures I can select materials for my product based on functional properties and aesthetic traits. **I am beginning to apply my understanding of strengthening, stiffening and reinforcing techniques to build a more complex 3D frame.** Mechanisms **I can explore how mechanical systems such as cams, pulleys, or gears to create movement.** I am exploring more complex mechanical systems. Textiles I consider the user, functionality and aesthetics of my product when picking the fabric. I can draw my own templates. I choose the most appropriate way to join fabrics based on the product's specification. I know that a 3D textiles product can be made from a combination of fabric shapes. Electrical Systems **I can incorporate a switch into an electrical circuit in my product.** **I can use number of components in a circuit.** **I am beginning to program a computer to monitor and control my product.**	Structures I can choose a variety of materials for my product and justify choices based on functional properties and aesthetic traits. **I can apply my understanding of strengthening, stiffening and reinforcing techniques to build a more complex 3D frame.** Mechanisms I can explore hydraulics and pneumatics in products and use it as inspiration for a design. **I can use cams, pulleys, and gears to create movement.** Textiles I think about the user's wants and needs when selecting a fabric for my product. I can draw my own templates and make prototypes. I use a range of appropriate joining techniques. I know that a 3D textiles product can be made from a combination of fabric shapes. Electrical Systems **I can use the most appropriate circuit in my product and design ways in which adding a circuit would improve it.** **I can program a computer to monitor and control my product.**

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food & Nutrition	*Begin to understand some food preparation tools, techniques, and processes.* *Practise stirring, mixing, pouring, blending.* *Discuss how to make an activity safe and hygienic.* *Discuss use of senses.* *Understand need for variety in food.* *Begin to understand that eating well contributes to good health.*	**I can explore where food comes from and know most food is either animal or plant based.** With support, I am beginning to understand need to eat a variety of food from each food group on the 'The Eat well plate'. I am beginning to understand which foods are healthy and that everyone should eat at least five portions of fruit and vegetables every day. **I can say how to prepare simple dishes safely and hygienically, prepping and cleaning cooking area and myself.** With support, I can use techniques such as cutting, peeling, and grating. I can stir, mix, pour and blend.	**I am beginning to say if the food we eat is farmed, home-grown or caught.** I can group food on the 'The Eat well plate'. I understand which foods are healthy and can discuss the phrase "5-a-day". **I understand why hygiene is important when cooking food and say what we need to do to prepare simple dishes safely and hygienically.** I can explain why we need to eat a variety of foods in our diet. I know how to use techniques such as cutting, peeling, and grating. I can stir, mix, pour and blend.	I am beginning to understand which foods come from the UK, Europe, and the wider world. **I am beginning to explore seasonality of food.** **With support, I am beginning to prepare and cook a variety of predominantly savoury dishes safely and hygienically.** I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading, and baking safely and with growing confidence. **Start to reflect on how a healthy diet is made up from a variety and balance of different foods and drink, as depicted in 'The Eat well plate'.** I am beginning to understand that to be active and healthy, food and drink are needed to provide energy for the body.	I know foods come from the UK, Europe, and the wider world. **I understand food can be seasonal.** **I know if the food we eat is reared, farmed, or caught.** I can explain the importance of working hygienically and safely when preparing and cooking food. **I can prepare and cook a variety of predominantly savoury dishes safely and hygienically.** I am exploring the differences between fresh, pre-cooked, or processed foods/ingredients. I can confidently use some of these techniques peeling, chopping, slicing, grating, mixing, spreading, kneading, and baking safely. **I can describe 'The Eat well plate' and how a healthy diet is made up from a variety and balance of different foods and drink.** I understand that to be active and healthy, food and drink are needed to provide energy for the body.	**I know food is caught, reared, or cultivated (grown) in the UK, Europe, and the wider world and we have access to certain food all year round due to imports from other countries.** I can explain the importance of working hygienically and safely and can follow guidelines. **I can prepare and cook a variety of dishes safely and hygienically.** I am beginning to adapt recipes and explore different flavour/ texture/ aroma/ appearance combinations. I can confidently use a range of food preparation techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading, and baking safely. **I understand the principles of a healthy and varied diet and can talk about what each food group on the Eat Well plate provides the body.** I am beginning to explore substances in food and drink that help our bodies stay active and healthy. I am beginning to consider the presentation of the food I cook to appeal to the diner.	**I can name foods that are caught, reared, or cultivated (grown) in the UK, Europe, and the wider world and seasonality of them and how supermarkets deal with this.** **I can prepare and cook a variety of dishes safely and hygienically, where appropriate using a heat source.** I can adapt recipes, adding or substituting ingredients to achieve innovative flavours or meet the specification of the design. I can confidently use a range of food preparation techniques that I have practised across YR-Y5 I know there are a variety of food processing methods. **I ca explain and apply the principles of a healthy and varied diet in both presentations and in a meal/menu design.** I can describe some different substances in food and drink and how it affects our bodies. I have a plan of how I want my meal to be presented, to appeal to the diner.