



Concept Progression for DT Cycle B				
Key DT Concepts	EYFS	Years 1 and 2	Years 3 and 4	Years 5 and 6



<p>Appraise and Analyse</p>	<p>Diwali Ch to look at images and explore Diwali artefacts (Diya lamps). Ch to observe the use of Diyas and their purpose.</p>	<p>Pop up Christmas cards Children will explore and evaluate a collection of books and everyday products that have moving parts, including those with levers and sliders. e.g. What is it? Who is it for? What is it for?</p> <p>Structures Ch will go on a walk and/or look at photographs of the local area to explore structures such as playground equipment, street furniture, walls, towers and bridges e.g. What are the structures called and what is their purpose? Who might use them? What materials have been used? Why have these been chosen? How have the parts been joined together? How have the structures been made strong enough? How have they been made stable? Ch to draw or photograph the structures they have been exploring and label with the correct technical vocabulary in relation to the structure, materials used and shapes e.g. wall, tower, framework, base, joint, metal, wood, plastic, brick, triangle, square, rectangle, cuboid, cube.</p>	<p>Christmas decoration (electric components) Ch will look at existing products (decorations). Ch will analyse why people buy these products. Ch to look at how lights enhance the products. Ch will evaluate current products.</p> <p>Italian cuisine Ch will carry out sensory evaluations of a variety of ingredients and products. Ch will record the evaluations using e.g. tables and simple graphs.</p> <p>Sandwiches and Packaging Ch to investigate existing products and analyse how they are made. Ch to disassemble products to understand how they work. Ch to understand and apply the principles of a healthy and varied diet.</p> <p>Moving pictures Ch to investigate and analyse books and, where available, other products with lever and linkage mechanisms. Ch to discuss how the pictures move, what part of the picture moves, how it works, the effect it has and how well it works.</p>	<p>Structures Ch will investigate and evaluate a range of existing frame structures. Ch will research key events and individuals relevant to frame structures.</p> <p>More complex switches and circuits. Ch will investigate famous inventors who developed ground-breaking electrical systems and components. Ch will investigate electrical sensors such as light dependent resistors (LDRs) and a range of switches such as push-to-make switches, push-to-break switches, toggle switches, micro switches and reed switches. Ch will gain an understanding of how they are operated by the user and how they work. Ch will use each component to control a bulb in a simple circuit. Ch will learn about the dangers of mains electricity.</p> <p>Greek Food Ch will explore modern Greek food. Ch will look at seasonality and how a variety of ingredients are grown. Ch will discuss the purpose of the products that the children will be</p>
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				<p>designing, making and evaluating and who the products will be for.</p>
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<p>Technical Knowledge</p>	<p>Diwali Ch to develop the techniques used to manipulate clay (rolling into balls, squeezing clay, pulling and pinching with fingers, carving with tools and smoothing).</p> <p>Fairy Tales <i>Ch to develop skills to use simple tools and techniques competently and appropriately (cutting, shaping, attaching, joining)</i></p> <p><i>Ch to safely use and transport scissors.</i></p>	<p>Pop up christmas cards Ch will explore and use sliders and levers. Ch will understand that different mechanisms produce different types of movement. Ch will know and use technical vocabulary relevant to the project.</p> <p>Fruit salad Ch will learn the difference between fruits and vegetables by sorting them into relevant groups. Ch will learn how to prepare fruits – peel, chop, slice etc. (life skills). Ch will learn and understand that fruit is healthy for us in our day-to-day diet.</p> <p>Structures Ch will know how to make freestanding structures stronger, stiffer and more stable. Ch will know and use technical vocabulary relevant to the project.</p>	<p>Christmas decoration (electric components) Ch to understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. Ch apply their understanding of computing to program and control their products. Ch to know and use technical vocabulary relevant to the project.</p> <p>Italian cuisine Ch know how to use appropriate equipment and utensils to prepare and combine food. Ch know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Ch know and use relevant technical and sensory vocabulary appropriately</p> <p>Sandwiches and Packaging Ch to develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. Ch to develop and use knowledge of how to construct strong, stiff shell structures. Ch will know and use technical vocabulary relevant to the project. Ch to understand and apply the principles of a healthy and varied diet.</p>	<p>Structures Ch will understand how to strengthen, stiffen and reinforce 3-D frameworks. Ch will know and use technical vocabulary relevant to the project.</p> <p>More complex switches and circuits. Ch will understand and use electrical systems in their products. Ch will apply their understanding of computing to program, monitor and control their products. Ch will know and use technical vocabulary relevant to the project. Ch will know how to avoid making short circuits.</p> <p>Greek Food Ch will know how to use utensils and equipment including heat sources to prepare and cook food. Ch will understand about seasonality in relation to food products and the source of different food products. Ch will know and use relevant technical and sensory vocabulary.</p>
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			<p>Ch to discuss and follow hygiene and safety practises.</p> <p>Moving pictures Ch to use the correct vocabulary such as lever, slider, pivot, push, pull, direction, up, down, left, right. Ch will understand and use lever and linkage mechanisms. Ch will distinguish between fixed and loose pivots. Ch will know and use technical vocabulary relevant to the project.</p>	
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<p>Practise</p>	<p>Diwali Children to explore manipulating playdough using fine motor skills and relevant tools to shape and effect changes to the malleable material in preparation for clay.</p> <p>Fairy tales <i>Ch to explore the textures, movement, feel and look of different media and materials.</i></p>	<p>Pop up cards Ch will use lever and slider books to understand how the mechanisms work. Ch have a go at making their own levers and sliders out of paper Ch will practise measure, mark, cut and fold techniques on a range of materials Ch will add pictures to their mechanisms.</p> <p>Fruit salad Ch will practice cutting fruits to an appropriate size using skills to avoid cutting them too small. Ch use skills to ensure fingers are out of the way of the knives when chopping, slicing.</p> <p>Structures Ch will fold paper or card in different ways to make freestanding structures, using masking tape where necessary to make joins. Ch will explore folding materials and how it can make them stronger, stiffer, stand up and be more stable e.g. Can they support an object on top of their structures without it falling over or breaking? Ch will practice measuring, marking out, cutting, shaping,</p>	<p>Christmas decoration (electric components) Ch to discuss what a prototype is and why they are used in design. Ch to create prototype to ensure their product will stand. Ch to experiment with how to change the colour of the lights. Ch to practise attaching bulbs to structures.</p> <p>Italian cuisine</p> <p>Sandwiches and Packaging Ch to develop prototypes. Ch to create nets. Ch to select from and use a range of tools and equipment to perform practical tasks [cutting, shaping, joining] accurately. Ch to select from and use components from construction materials according to their functional properties. Ch to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Ch to investigate how to make structures more stable.</p> <p>Moving pictures Ch to make and assemble a prototype slider, lever and wheel mechanism.</p>	<p>Structures Ch will practise accurately joining framework materials together mounting their joints onto card for future reference.</p> <p>More complex switches and circuits. Ch will investigate electrical sensors such as light dependent resistors (LDRs) and a range of switches such as push-to-make switches, push-to-break switches, toggle switches, micro switches and reed switches. To gain an understanding of how they are operated by the user and how they work, ask the children to use each component to control a bulb in a simple circuit.</p> <p>Greek Food Ch will practise how to measure out, cut, shape and combine ingredients. Ch will practice how to use appropriate utensils and equipment that the children may use safely and hygienically. Ch will consider appearance of products, discussing which shape/presentation is most appealing and why?</p>
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		<p>joining and finishing techniques with a range of tools and new and reclaimed materials that children are likely to use to make their structures. Ch will discuss the suitability of materials for their products according to their characteristics. Ch to build and explore a variety of freestanding structures using construction kits, such as wooden blocks, interconnecting plastic bricks and those that make frameworks e.g. How can you stop your structures from falling over? How they can be made stronger and stiffer in order to carry a load? <i>Children could make models of the structures they have seen in school and the local area</i></p>		
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<p>Generate Ideas & Design</p>	<p>Fairy Tales <i>Ch will construct with a purpose in mind using a variety of resources.</i></p> <p>Superheroes <i>Ch will construct with a purpose in mind using a variety of resources.</i></p>	<p>Pop up christmas cards Ch will generate ideas based on simple design criteria and their own experiences, explaining what they could make. Ch will develop, model and communicate their ideas through drawings and mock-ups with card and paper.</p> <p>Fruit salad Ch will plan a fruit snack – a fruit kebab or a fruit salad in a bowl. Ch will draw their design and label it.</p> <p>Structures CH will generate ideas based on simple design criteria and their own experiences, explaining what they could make. Ch will develop, model and communicate their ideas through talking, mock-ups and drawings.</p>	<p>Christmas decoration (electric components) Ch to use their prototype to inform their design. Ch to create an annotated design individually. Ch to identify materials needed to create their final product.</p> <p>Italian cuisine Ch to generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Ch will use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.</p> <p>Sandwiches and Packaging Ch to plan a sequence of actions to make product. Ch to generate annotated plans and sketches; CAD where appropriate. Ch to evaluate and refine product. Ch to improve on existing designs, giving reasons for choices.</p> <p>Moving pictures Ch will design purposeful, functional and appealing products for themselves and other users based on design criteria in the</p>	<p>Structures Ch will carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. Ch will develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. Ch will generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.</p> <p>More complex switches and circuits. Ch will use research to develop a design specification for a functional product that responds automatically to changes in the environment. Take account of constraints including time, resources and cost. Ch will generate and develop innovative ideas and share and clarify these through discussion. Ch will communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.</p> <p>Greek Food Ch will generate innovative ideas through research and discussion</p>
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			<p>context of designing an appealing moving picture. Ch will generate, develop, model and communicate their ideas through talking and drawing an annotated sketch to show their ideas about a moving picture.</p>	<p>with peers and adults to develop a design brief and criteria for a design specification. Ch will explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Ch will use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. Ch will develop a design brief and simple design specification with the children within a context that is authentic and meaningful including design criteria relating to nutrition and healthy eating.</p>
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<p>Develop & Make</p>	<p>Diwali Ch to explore, use and refine a variety of artistic effects to express their ideas and feelings. (Clay techniques)</p> <p>Fairy Tales <i>Ch to respond to a range of media and materials developing an understanding that they manipulate and create effects with these. Ch will use different media and materials to express their own ideas. (junk modelling materials)</i></p> <p>Superheroes</p>	<p>Pop up Christmas cards Ch will plan by suggesting what to do next. Ch will select and use tools, explaining their choices, to cut, shape and join paper and card. Ch will use simple finishing techniques suitable for the product they are creating.</p> <p>Fruit salad Ch to create their kebab/salad following their plan. Ch to follow good hygiene practises when preparing their product.</p> <p>Structures Ch will plan by suggesting what to do next. Ch will select and use tools, skills and techniques, explaining their choices. Ch select new and reclaimed materials and construction kits to build their structures. Ch will use simple finishing techniques suitable for the structure they are creating.</p>	<p>Christmas decoration (electric components) Ch to use prototypes to aid the creation of the stand. Ch to adapt the stand to make it more aesthetically pleasing. Ch to construct their template using prototype and design. Ch to add stand, electricity element.</p> <p>Italian cuisine Ch to plan the main stages of a recipe, listing ingredients, utensils and equipment. Ch to select and use appropriate utensils and equipment to prepare and combine ingredients. Ch to select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.</p> <p>Sandwiches and Packaging Ch to cut accurately and safely using correct tools. Ch will measure and mark out accurately. Ch will cut slots and internal shapes. Ch to measure and mark out to nearest mm. Ch to improve on existing designs, giving reasons for choices.</p>	<p>Structures Ch will formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. Ch will competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. Ch will use finishing and decorative techniques suitable for the product they are designing and making</p> <p>More complex switches and circuits. Ch will formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. Ch will competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. Ch will create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.</p> <p>Greek Food Ch will write a step-by-step recipe, including a list of ingredients, equipment and utensils.</p>
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			<p>Moving pictures</p> <p>Ch will use mechanisms to make a product. Ch to explore and use mechanisms (for example, levers, sliders, wheels and axles) in the product of making a moving picture.</p> <p>Ch to select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</p> <p>Ch to select from and use finishing techniques suitable for the product they are creating.</p>	<p>Ch will select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. Ch will make, decorate and present the food product appropriately for the intended user and purpose.</p> <p>.</p>
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<p>Evaluate</p>	<p>Diwali Ch will refine their product through painting and adding embellishments.</p> <p>Fairy Tales <i>Ch to select appropriate resources for a product and adapt their work where necessary.</i></p> <p>Superheroes</p>	<p>Pop up Christmas card Ch will use a walking gallery to view each other's products. Ch will say what they liked about their own work and what they might improve. Ch will evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria.</p> <p>Fruit salad Ch will identify which fruits they like and those which they don't like. Ch will explain why they like/dislike them. Ch will discuss how they might improve their product.</p> <p>Structures Ch will Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. Ch will evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.</p>	<p>Christmas decoration (electric components) Ch to evaluate throughout the project. Ch to evaluate and analyse current products. Ch to evaluate their prototype, annotated design, design template and final product. Ch will use a walking gallery to evaluate their own product and those of their peers. Ch will evaluate two products together and decide which one would be the most effective as a final product. Ch to decide what went well and what could be better next time. Ch to be critical of my own work when evaluating.</p> <p>Italian cuisine Ch to carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. Ch will evaluate the ongoing work and the final product with reference to the design criteria and the views of others.</p> <p>Sandwiches and Packaging Ch to be able to evaluate their ideas and products against their own design criteria and consider</p>	<p>Structures Ch will investigate and evaluate a range of existing frame structures. Ch will critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. Ch will research key events and individuals relevant to frame structures.</p> <p>More complex switches and circuits. Ch will continually evaluate and modify the working features of the product to match the initial design specification. Ch will test the system to demonstrate its effectiveness for the intended user and purpose. Ch will investigate famous inventors who developed ground-breaking electrical systems and components.</p> <p>Greek Food Ch will evaluate the work as it progresses and the final product against the intended purpose and user reflecting on the design specification previously agreed. Ch will carry out sensory evaluations of a range of relevant products and</p>
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			<p>the views of others to improve their work. Ch to evaluate and refine product. Ch to improve on existing designs, giving reasons for choices.</p> <p>Moving pictures Ch to evaluate their own products and ideas against criteria and user needs, as they design and make.</p>	<p>ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Ch will evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. Ch will look at how key chefs have influenced eating habits to promote varied and healthy diets.</p>
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- Appraising & Analyse – Children will appraise and analyse good examples of modern-day products and designs linked to their project.
- Technical Knowledge – Children will analyse the knowledge and skills needed from modern day products and designs to gain an understanding of the project's requirements.
- Practise – Children will use their knowledge of the skills to practise their newly taught skills to create a prototype.
- Generate Ideas & Design – Children will generate ideas and design their project outcome based on a brief.
- Develop and Make – Children will develop and make their project outcome following their project design. They will have opportunities to further develop their designs at this point if they need to.
- Evaluate – Children will evaluate their product with reference to their original design and a design brief.