



## Year 5 Design and Technology Knowledge, Skills and Vocabulary Progression

| Structures - Frame Structures (Autumn 2)<br>Knowledge  | Food - Celebrating culture and seasonality (Spring 2)<br>Knowledge  | Electrical Systems - More complex switches (Summer 2) Knowledge   |
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| Structures - Frame Structures (Autumn 2)<br>Skills   | Food - Celebrating culture and seasonality (Spring 2)<br>Skills   | Electrical Systems - More complex switches (Summer 2) Skills  |
| <p>I understand how to strengthen, stiffen and reinforce 3-D frameworks.</p> <p>I know and can use technical vocabulary relevant to the project.</p>   | <p>I know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>I understand about seasonality in relation to food products and the source of different food products.</p> <p>I know and can use relevant technical and sensory vocabulary.</p>   | <p>I understand and use electrical systems in their products.</p> <p>I know and can use technical vocabulary relevant to the project.</p>   |
| <p><b>Designing</b></p> <p>I can carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources.</p> <p>I can develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost.</p> <p>I can generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.</p> <p><b>Making</b></p> <p>I can formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.</p> <p>I can competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.</p> <p>I can use finishing and decorative techniques suitable for the product they are designing and making.</p> <p><b>Evaluating</b></p> <p>I can investigate and evaluate a range of existing frame structures.</p> <p>I can critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>I can research key events and individuals relevant to frame structures.</p> | <p><b>Designing</b></p> <p>I can generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.</p> <p>I can explore a range of initial ideas and make design decisions to develop a final product linked to user and purpose.</p> <p>I can use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.</p> <p><b>Making</b></p> <p>I can write a step-by-step recipe, including a list of ingredients, equipment and utensils</p> <p>I can select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</p> <p>I can make, decorate and present the food product appropriately for the intended user and purpose.</p> <p><b>Evaluating</b></p> <p>I can carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams.</p> <p>I can evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</p> <p>I can understand how key chefs have influenced eating habits to promote varied and healthy diets.</p> | <p><b>Designing</b></p> <p>I can 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.</p> <p>I can generate and develop innovative ideas and share and clarify these through discussion.</p> <p>I can communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.</p> <p><b>Making</b></p> <p>I can formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.</p> <p>I can competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.</p> <p>I can create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.</p> <p><b>Evaluating</b></p> <p>I can continually evaluate and modify the working features of the product to match the initial design specification.</p> <p>I can test the system to demonstrate its effectiveness for the intended user and purpose.</p> <p>I can investigate famous inventors who developed ground-breaking electrical systems and components.</p> |

| <u>Structures - Frame Structures (Autumn 2)</u><br><u>Vocabulary</u>   | <u>Food - Celebrating culture and seasonality (Spring 2)</u><br><u>Vocabulary</u>   | <u>Electrical Systems - More complex switches (Summer 2)</u><br><u>Vocabulary</u>  |
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| frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional | ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, design specification, innovative, research, evaluate, design brief | series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart, function, innovative, design specification, design brief, user, purpose |