

## Middlefield Curriculum Progression Grids: Design and technology

Skills	Year 1	Year 2	Year 3
<b>Cooking and nutrition</b>	<p>Cut food safely</p> <p>Name a variety of foods and identify those that keep you healthy</p>	<p>Understand the need for a variety of food in a diet</p> <p>Group familiar food groups e.g. fruit and Vegetables, food that comes from animals</p> <p>Measure and weigh ingredients appropriately</p>	<p>Say what to do to be hygienic and safe</p> <p>begin to be able to read and understand food labels</p> <p>Use different techniques to prepare food, mix, knead etc.</p>
<b>Processes</b>	<p>generate ideas, recognise and discuss characteristics of familiar products</p> <p>use pictures and words to describe what he/she wants to do</p> <p>select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing choose materials and explain why they are being used</p> <p>explore and evaluate a range of existing products</p> <p>build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>use levers and sliders</p>	<p>design purposeful, functional, appealing products for himself/herself &amp; other users based on design criteria</p> <p>generate, develop, model &amp; communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>select from &amp; use a wide range of materials and components, including construction materials, textiles &amp; ingredients, according to their characteristics</p> <p>choose materials and explain why they are being used depending on their characteristics evaluate his/her ideas and products against design criteria</p> <p>join materials together as part of a moving structure</p> <p>explore &amp; use mechanisms e.g. levers, hinges, sliders, wheels and axles, in his/her products</p> <p>Cut wood / dowelling using appropriate tools safely</p>	<p>demonstrate that his/her design meets a range of requirements</p> <p>complete a plan that shows the order and also what equipment and tools he/she needs</p> <p>use equipment and tools accurately e.g. hand drill</p> <p>explain how he/she has selected appropriate materials and components to create a finished product that will be of good quality</p> <p>investigate and analyse a range of existing products</p> <p>strengthen frames using diagonal struts</p> <p>use a computer programme to create a design for packaging</p>

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Skills	Year 4	Year 5	Year 6
<b>Cooking and nutrition</b>	<p>understand what makes a healthy and balanced diet and that different foods and drinks provide different substances the body needs to be healthy and active</p> <p>understand seasonality and know how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat</p>	<p>know appropriate portion sizes and the importance of not skipping meals, including breakfast</p> <p>understand some of the basic processes to get food from farm to plate</p> <p>taste a range of ingredients and food items to develop a food vocabulary when designing</p>	<p>understand the main food groups and the different nutrients that are important for health</p> <p>use information on food labels to inform choices</p> <p>join and combine ingredients appropriately e.g. beating, rubbing in</p>
<b>Processes</b>	<p>investigate similar products to the one to be made comparing work of well known designers</p> <p>generate alternative plans &amp; expound on the good points and drawbacks of his/her original design</p> <p>select from and use a wider range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing, accurately</p> <p>explain how his/her choices of materials and components have contributed to the aesthetic qualities of his/her finished product</p> <p>consider how the finished product might be improved &amp; how well it meets the needs of the user</p> <p>join and combine materials and components accurately in temporary and permanent way</p> <p>understand &amp; use mechanical systems in his/her products e.g. gears, pulleys, cams, levers and linkages</p>	<p>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>create prototypes to show his/her ideas</p> <p>use tools and materials precisely</p> <p>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>evaluate their ideas and products against his/her own design criteria and consider the views of others to improve his/her work</p> <p>apply his/her understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>understand &amp; use electrical systems in his/her products e.g. series circuits incorporating switches, bulbs, buzzers &amp; motors</p>	<p>use market research to inform plans</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>make modifications to the original design as he/she proceeds</p> <p>cut and join with accuracy to ensure a high quality finish to his/her product</p> <p>understand how key events and individuals in design and technology have helped shape the world</p> <p>construct products using different joining techniques e.g. glue gun</p> <p>apply his/her understanding of computing to program, monitor and control his/her product (computing)</p>