

Yr 5	Mechanisms CAMs, making toys	Electrical Systems Monitoring Devices- 3D CAD	Food What could be healthier? Farm to Fork
D&T Skills	<p><u>Design</u> To use research to develop design criteria centred in the design brief. Create a detailed design with at least two moving parts. Create an exploded diagram to show my design clearly.</p> <p><u>Make</u> Cut materials with precision to the nearest mm and refine the finish with appropriate tools (such as sanding wood after cutting). Make a model which is accurate, functions well and is a quality finish.</p> <p><u>Evaluate</u> Continually evaluate their work as it develops and at the end against design criteria and the design brief.</p>	<p><u>Design</u> Designing a monitoring device on CAD software. Identifying and naming the components required. Generating ideas through sketching and discussion. Modelling ideas through prototypes (virtual or real).</p> <p><u>Make</u> Accurately cutting, folding and assembling a net. Making and testing a circuit. Incorporating a circuit into a product.</p> <p><u>Evaluate</u> Testing own and others finished products, identifying what went well and making suggestions for improvements.</p>	<p><u>Design</u> Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. Write an amended method for a recipe to incorporate the relevant changes to ingredients. Designing appealing packaging to reflect a recipe.</p> <p><u>Make</u> Cutting and preparing recipes safely. Using equipment safely, including knives, hot pans and hobs. Knowing how to avoid cross-contamination. Following a step-by-step method carefully to make a recipe.</p> <p><u>Evaluate</u> Continually evaluate their work as it develops and at the end against design criteria and the design brief.</p>
Context and User	<p>Smith's Toy Store Children are in need of some interactive, moving toys that take them away from screens. They need to be made from wood so they are more sustainable.</p>	<p>RSPCA The charity have so many animals to care for and need your help to program a smart thermometer that will support animal care and alert their owners when the temperature is not optimal.</p>	<p>Dolmio UK Dolmio have recently been told that they need to create healthier bolognese recipes that still appeal to children.</p>
D&T Sticky Knowledge	<p>To know that a cam mechanism has two main parts:</p>	<p>To know that a 'device' means equipment created for a certain purpose or job and that monitoring</p>	<p>To understand where meat comes from – learning that beef is from cattle and how beef is</p>

	<ul style="list-style-type: none"> - a cam - attached to a crankshaft, which rotates - a follower - touches the cam and follows the shape, moving up and down <p>To know that Cams can be produced in any shape, but the most common shapes are, pear, snail and circular.</p>	<p>devices observe and record.</p> <p>To know that a sensor is a tool or device that is designed to monitor, detect and respond to changes for a purpose.</p> <p>To understand that conditional statements in programming are a set of rules which are followed if certain conditions are met.</p>	<p>reared and processed, including key welfare issues.</p> <p>To know that I can adapt a recipe to make it healthier by substituting ingredients.</p> <p>To understand that 'cross-contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.</p>
Key Vocabulary	<p>Accurate, assembly-diagram, automata, axle, bench hook, cam, clamp, component, diagram, dowel, drill bits, exploded-diagram, finish, frame, function, hand drill, linkage, mark out, measure, mechanism, model, research, right-angle, set square, tenon saw</p>	<p>monitoring device, electronic sensor, thermometer, research, design brief, design criteria, development, programming loop, programming comment, alert, ambient, duplicate, copy, value, variable, model, sustainability, man-made, synthetic</p>	<p>Beef, reared, processed, ethical, diet, ingredients, supermarket, farm, balanced</p>
Aspirations	<p>Designer Engineer Mechanic</p>	<p>Electrician Engineer Designer</p>	<p>Chef TV Chef Social Media Chef Nutritionist Dietician Food Scientist</p>