

# Sandon Primary Academy Design and Technology Overview

	Autumn		Spring		Summer	
		Project	Skills	Project	Skills	Project
Year 1	<p><b>Design</b> Designing for others</p> <p><b>Make</b> Chopping fruit and vegetables Making a smoothie</p> <p><b>Evaluate</b> Evaluating and adapting Designs</p> <p><b>Technical Knowledge</b> Describing and grouping fruits by texture and taste Understanding the difference between fruit and vegetables</p>	Food: Fruit Smoothies	<p><b>Design</b> Designing for others</p> <p><b>Make</b> Selecting suitable equipment Sequencing steps for construction</p> <p><b>Evaluate</b> Reflecting on their finished product</p> <p><b>Technical Knowledge</b> Knowing the different ways fabric can be joined Understanding how to prepare fabric for joining</p>	Textiles: Puppets	<p><b>Design</b> Designing for others</p> <p><b>Make</b> Assembling different components to work together to create motion Assembling accurately Cutting neatly</p> <p><b>Evaluate</b> Testing a finished product</p> <p><b>Technical Knowledge</b> Developing awareness of different structures for different purposes Understanding how to turn 2D nets into 3D structures Understanding what mechanisms are</p>	Structures: Windmills
Year 2	<p><b>Design</b> Designing for others, using criteria and applying their knowledge of structures</p>	Structures: Baby Bear's Chair	<p><b>Design</b> Designing packaging for their smoothie</p> <p><b>Make</b> Preparing food safely and hygienically</p>	Food: Wraps (balanced diet)	<p><b>Design</b> Designing mechanisms</p> <p><b>Make</b> Measuring and cutting accurately, working to scale and following a design brief</p>	Mechanisms: Fairground wheels

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	<p><b>Make</b> Cutting and assembling accurately</p> <p><b>Evaluate</b> Examples of natural &amp; manmade structures Testing and evaluating</p> <p><b>Technical Knowledge</b> Understanding the definition and importance of strength, stability and stiffness Knowing that different shapes can strengthen or weaken structures and that materials can be manipulated to improve strength and stiffness</p>		<p>Chopping safely using the bridge grip</p> <p><b>Evaluate</b> Conducting product research Evaluating a design</p> <p><b>Technical Knowledge</b> Understanding how fruit and vegetables grow Knowing the food groups Understanding what makes a balanced diet</p>		<p><b>Evaluate</b> Testing and adapting mechanisms Researching mechanisms</p> <p><b>Technical Knowledge</b> Understanding how an axle works Know materials commonly used for wheels</p>	
Year 3	<p><b>Design</b> Designing for a purpose</p> <p><b>Make</b> Sewing cross stitch and using applique</p> <p><b>Evaluate</b> Compare to designs</p>	Textiles: Cushions	<p><b>Design</b> Planning for manufacture Establishing and using a design criteria to help focus and evaluate their work</p>	Structures: Constructing a castle	<p><b>Design</b> Designing to criteria</p> <p><b>Make</b> Safely preparing fruit and vegetables Following a recipe</p> <p><b>Evaluate</b></p>	Food: Eating seasonally

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	<p><b>Technical Knowledge</b> Construction of cushions Understanding that fabrics can be layered for effect Knowing different stitch types</p>		<p><b>Make</b> Using more demanding practical skills (paper engineering/paper folding techniques)</p> <p><b>Evaluate</b> Evaluating as they work Evaluating their own and other's final product</p> <p><b>Technical Knowledge</b> Application of prior knowledge and increasing knowledge of nets</p>		<p>Tasting and evaluating their dessert</p> <p><b>Technical Knowledge</b> Knowing what foods are in season and when Understanding the benefits of foods by their colour Knowing how climate alters the sweetness of food</p>	
Year 4	<p><b>Design</b> Developing designs using the views of others to improve them Using nets and tabs to design and make the car body</p> <p><b>Make</b> Measuring, marking, cutting and assembling accurately</p>	Mechanical systems: Making a slingshot car	<p><b>Design</b> Working within a design brief</p> <p><b>Make</b> Following but adapting a recipe Preparing food hygienically</p> <p><b>Evaluate</b> Discuss flavours identified</p>	Food: Adapting a recipe	<p><b>Design</b> Exploring and designing within a given context/theme</p> <p><b>Make</b> Using a range of materials and equipment to create frame structures</p> <p><b>Evaluate</b> Discuss existing pavilions</p> <p><b>Technical Knowledge</b></p>	Structures: Pavilions

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	<p><b>Evaluate</b> Testing products in time trials</p> <p><b>Technical Knowledge</b> Component names (chassis, axle etc.) Car body shape can impact speed (air resistance)</p>		<p><b>Technical Knowledge</b> Understanding the costs behind professional food preparation Understanding the factors that contribute to product design</p>		<p>Knowing what a pavilion is Building on prior knowledge of net structures and broadening knowledge of frame structures Knowing that architects consider light, shadow and patterns when designing</p>	
Year 5	<p><b>Design</b> Designing for a purpose</p> <p><b>Make</b> Accurately cutting and joining</p> <p><b>Evaluate</b> Comparing 3D object to 2D design</p> <p><b>Technical Knowledge</b> Understand constructions methods for 3D shapes Knowing how to create a hidden seam</p>	Textiles: Stuffed toys	<p><b>Design</b> Planning using storyboards and designs, communicating through words and illustrations</p> <p><b>Make</b> Making functional components Using layers and spacers to construct pages Cutting and assembling with accuracy</p> <p><b>Evaluate</b> Constantly evaluating progress against design</p> <p><b>Technical Knowledge</b> Understand sliders, levers and linkages</p>	Mechanical systems: Making a pop up book	<p><b>Design</b> Adapting a recipe</p> <p><b>Make</b> Cutting and preparing vegetables hygienically Cooking meat safely</p> <p><b>Evaluate</b> Tasting and adapting the dish during cooking process</p> <p><b>Technical Knowledge</b> Know where meat comes from and understand ethical issues around beef Know nutritional values of packaged food</p>	Food: What could be healthier?

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			Understand structures and mechanisms			
Year 6	<p><b>Design</b> Using recipe books/websites</p> <p><b>Make</b> Working with food hygienically and safely Working to a timescale</p> <p><b>Evaluate</b> Tasting and evaluating their own food</p> <p><b>Technical Knowledge</b> Understanding the risks of meat or fish when not cooked or stored properly Understanding safe storage of meat/fish</p>	Food: Come dine with me	<p><b>Design</b> Designing for a process</p> <p><b>Make</b> Accurate cutting and joining, using running stitch Creating something in a given style</p> <p><b>Evaluate</b> Evaluating work continually</p> <p><b>Technical Knowledge</b> Knowing how to create hidden seams</p>	Textiles: Waistcoats	<p><b>Design</b> Experimenting with cams to make suitable design decisions</p> <p><b>Make</b> Measuring, marking and cutting woodwork accurately Selecting appropriate equipment Assembling components accurately</p> <p><b>Evaluate</b> Checking accuracy of work</p> <p><b>Technical Knowledge</b> Naming types of cam Knowing how cams impacts follower movements</p>	Mechanical systems: Automata toys