

Long Marston School



DT Curriculum Map – Knowledge, Skills and Vocabulary

Progression of skills

Class 4 Year A

	Autumn Textiles: fastenings	Spring Mechanical systems: Pop-up book (Y5)	Summer Food: What could be healthier? (Y5)	Additional unit Structures: Bridges (Y5)
Skills design	Writing design criteria for a product, articulating decisions made Designing a personalised book sleeve	Designing a pop-up book which uses a mixture of structures and mechanisms Naming each mechanism, input and output accurately Storyboarding ideas for a book	Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe	Designing a stable structure that is able to support weight Creating frame structure with focus on triangulation
Skills make	Making and testing a paper template with accuracy and in keeping with the design criteria Measuring, marking and cutting fabric using a paper template Selecting a stitch style to join fabric, working neatly sewing small neat stitches Incorporating fastening to a design	Following a design brief to make a pop up book, neatly and with focus on accuracy Making mechanisms and/or structures using sliders, pivots and folds to produce movement Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result	Cutting and preparing vegetables 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	Making a range of different shaped beam bridges Using triangles to create truss bridges that span a given distance and supports a load Building a wooden bridge structure Independently measuring and marking wood accurately Selecting appropriate tools and equipment for particular tasks Using the correct techniques to saws safely Identifying where a structure needs reinforcement and using card corners for support Explaining why selecting appropriating materials is an important part of the design process Understanding basic wood functional properties
Skills evaluate	Testing and evaluating an end product against the original design criteria Deciding how many of the criteria should be met for the product to be considered successful Suggesting modifications for improvement Articulating the advantages and disadvantages of different fastening types	Evaluating the work of others and receiving feedback on own work Suggesting points for improvement	Identifying the nutritional differences between different products and recipes Identifying and describing healthy benefits of food groups	Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own bridges and those designed by others

Knowledge	<p>To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro</p> <p>To know that different fastening types are useful for different purposes</p> <p>To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions</p>	<p>Technical:</p> <p>To know that mechanisms control movement</p> <p>To understand that mechanisms that can be used to change one kind of motion into another</p> <p>To understand how to use sliders, pivots and folds to create paper-based mechanisms</p> <p>Additional:</p> <p>To know that a design brief is a description of what I am going to design and make</p> <p>To know that designers often want to hide mechanisms to make a product more aesthetically pleasing</p>	<p>Cooking and nutrition:</p> <p>To understand where meat comes from - learning that beef is from cattle and how beef is 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 know that I can use a nutritional calculator to see how healthy a food option is</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>	<p>Technical:</p> <p>To understand some different ways to reinforce structures</p> <p>To understand how triangles can be used to reinforce bridges</p> <p>To know that properties are words that describe the form and function of materials</p> <p>To understand why material selection is important based on their properties</p> <p>To understand the material (functional and aesthetic) properties of wood</p> <p>Additional:</p> <p>To understand the difference between arch, beam, truss and suspension bridges</p> <p>To understand how to carry and use a saw safely</p>
Vocabulary	<p>Criteria, fabric, fastening, fix, mock-up, Stitch, template</p>	<p>Design, input, motion, mechanism, criteria, research, reinforce, model</p>	<p>Beef, reared, processed, ethical, diet, ingredients, supermarket, farm, balanced</p>	<p>beam bridge, arch bridge, truss bridge, strength, technique, corrugation, lamination, stiffness, rigid, factors, stability, visual appeal, aesthetics, joints, mark out, hardwood, softwood wood file/rasp, sandpaper/glasspaper bench hook/vice, tenon saw/coping saw, assemble, material, properties, reinforce, wood sourcing, evaluate, quality of finish, accuracy</p>