

DT: Practical Knowledge

Year Five: I know how to...		Autumn	Spring	Summer
 <p>Design</p>	Design a stable frame structure that is able to support weight (focus on triangulation)			
	Create a product which uses a mixture of structures and mechanisms			
	Name each mechanism, input and output accurately			
	Identify factors that could be changed on existing products and explain how these would alter the form and function of the product			
	Develop design criteria based on findings from researching/ investigating existing products for a user's needs			
	Develop design criteria that clarifies the target user			
	Adapt traditional recipes, understanding the nutritional value of a recipe alters if you remove, substitute or add additional ingredients			
	Generate multiple ideas			
 <p>Make</p>	Use CAD (pros and cons/ placing and manoeuvring/ changing properties/ combining)			
	Follow a design brief with a focus on accuracy			
	Make mechanisms and/ or structures using: sliders, pivots and folds to produce movement			
	Use layers and spacers to hide the workings of mechanical parts			
	Alter a product's form and function by tinkering with its configuration			
	Make a functioning series circuit, incorporating a motor			
	Construct a product with consideration for the design criteria			
	Cut and prepare ingredients safely			
	Use equipment safely, including: knives, hot pans and hobs			
	Know how to avoid cross-contamination			
	Follow a step-by-step method carefully to make a recipe			
	Understand the functional and aesthetic properties of materials			
 <p>Evaluate</p>	Include programming and coding in a design.			
	Adapt and improve products by identifying points of weakness and reinforcing them as necessary			
	Suggest points for improvements in own products and those designed by others			
	Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses			
	Determine which parts of a product affect its function and which parts affect its form			
 <p>Technical Knowledge</p>	Analyse whether changes in configuration positively or negatively affect an existing product			
	Suggest how to make sustainable choices			
	Know different ways to reinforce structures, including the use of triangles			
	Know why material selection is important based on properties			
	Understand the material (functional and aesthetic) properties of wood			
	Know that mechanisms control movement and can be used to change one kind of motion into another			
	Know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin			
Know that a 'device' means equipment created for a certain purpose or job				
 <p>Cooking and Nutrition</p>	Know that a sensor is designed to monitor, detect and respond to changes			
	Know that recipes can be adapted to suit nutritional needs and dietary requirements			
	Understand that 'cross-contamination' means bacteria and germs have been passed into ready-to-eat foods and it happens when food mix with raw meat or unclean objects			
	Know that coloured chopping boards can prevent cross-contamination			
	Know that I can use a nutritional calculator to see how healthy a food option is			
Know that nutritional information is found on food packaging				

