



Milestones for Progression Design and Technology

Milestones for Years 1 and 2

Key concepts	Milestones for Years 1 and 2	
Skills	Design	<ul style="list-style-type: none"> • Learning the importance of a clear design criteria • Generating and communicating ideas using sketching and modelling • Including individual preferences and requirements in a design
	Make	<ul style="list-style-type: none"> • Making a product according to design criteria • Selecting materials/ingredients according to their characteristics • Cutting and assembling components neatly • Making linkages using card for levers and split pins for pivots
	Evaluate	<ul style="list-style-type: none"> • Evaluating own designs against design criteria • I recognise what I have done well in my work and I suggest things I could do in the future
Knowledge	Technical	<ul style="list-style-type: none"> • To understand that the shape of a structure affects its strength • To know that materials can be manipulated to improve strength and stiffness • To know that different materials have different properties and are therefore suitable for different uses • To understand that axles are used in structures and mechanisms to make parts turn in a circle • To know that a structure is something that has been made and put together • To know that mechanisms are a collection of moving parts that work together as a machine to produce movement • Understanding the difference between fruits and vegetables • To know that cooking instructions are known as a 'recipe' • To know that 'joining technique' means connecting two pieces of material together

Milestones for Years 3 and 4

Key concepts		Milestones for Years 3 & 4	
Skills	Design	<ul style="list-style-type: none"> • Designing a product with key features to appeal to a specific person/purpose • I think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques • Personalising a design 	
	Make	<ul style="list-style-type: none"> • Selecting and using the appropriate tools and equipment for cutting, joining, shaping • Measuring, marking, cutting and assembling with increasing accuracy • Constructing a range of 3D geometric shapes using nets • Creating a range of different shaped frame structures • Making a product with a working electrical circuit and switch • Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination 	
	Evaluate	<ul style="list-style-type: none"> • Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design • I identify where my evaluations have led to improvements in my products 	
Knowledge	Technical	<ul style="list-style-type: none"> • To understand the importance of strength and stiffness in structures • To understand what a frame structure is • To understand that kinetic energy is the energy that something (object/person) has by being in motion • To know that air resistance is the level of drag on an object as it is forced through the air • To understand that electrical conductors are materials which electricity can pass through • To understand that electrical insulators are materials which electricity cannot pass through • To know that not all fruits and vegetables can be grown in the UK • To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre 	

Milestones for Years 5 and 6

Key concepts		Milestones for Years 5 & 6	
Skills	Design	<ul style="list-style-type: none"> I work from my own detailed plans, modifying them where appropriate I clarify my ideas through discussion, drawing and modelling Creating a design which uses a mixture of structures and mechanisms 	
	Make	<ul style="list-style-type: none"> Measuring, marking and cutting wood to create a range of structures Using a range of materials to reinforce and add decoration to structures 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 Making a functional series circuit, incorporating a motor Cutting and preparing vegetables safely Using equipment safely, including knives, hot pans and hobs Sewing a strong running stitch, making small, neat stitches and following the edge 	
	Evaluate	<ul style="list-style-type: none"> I test and evaluate my products, showing that I understand the situations my products will have to work I am aware that resources may be limited (budget, time, availability) 	
Knowledge	Technical	<ul style="list-style-type: none"> To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed, including key welfare issues To know that I can adapt a recipe to make it healthier by substituting ingredients To understand the importance of consistently sized stitches To know that series circuits only have one direction for the electricity to flow To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin To understand that mechanisms can be used to change one kind of motion into another To know that structures can be strengthened by manipulating materials and shapes 	