

**Design Technology 2019-2020 Sequence Overview Year 3 – Year 6**

Year	Term	<b>We are Chefs</b> Cooking and Nutrition	<b>We are Textile Designers</b> Textiles	<b>We are Engineers</b>		
				Construction/Structures	Mechanical systems [for example, gears, pulleys, cams, levers and linkages]	Electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors]
3	AUT	<b>Nutrition - Soup Making (4hr 40)</b> Children recap science knowledge – the eat well plate. They learn how to use knives to chop safely, measure ingredients, peel, grate and follow basic recipes. Ingredients are grown in our allotment, with a focus on healthy eating and growing local seasonal produce. They learn about making a stock and seasoning with salt and pepper to add flavour. The soup is sold at the Christmas Fayre.	<b>Purse Making (6)</b> After exploring existing products, children design and make their own purse/wallet. Children will learn basic hand sewing techniques to construct and decorate their purses. For the first time, children will have the opportunity to use a sewing machine, using one to sew a straight seam.			
	SPR 1				<b>Cams Card – Easter (4hr30)</b> Pupils are introduced to cam components and construct their own cam mechanism in small groups, problem solving along the way. Focus is on creating linear movement to produce a product that moves up and down when a handle is rotated; they then design and make their own cam mechanism Easter card and finish by evaluating the functionality of the cam.	
	SPR 2 SUM 1	<b>Pizza (3hrs)</b> Pupils recap and continue to develop knife skills, learning to dice veg safely. They learn how to make dough, kneading and using a rolling pin. They explore groups of foods (eat well plate) and flavours, making decisions on combinations of toppings. Seasoning with herbs is introduced. A chef from local pizza restaurant demonstrates making dough and skills required (ACRO profile).		<b>Tower Making (5hr)</b> After analysing existing towers and the structure of these, pupils use paper straws to construct a tower with a strong base and spire on top. Different joining techniques are practised and children use a variety of these while making their structure in small groups. A competitive element is also included whereby children are challenged to create the strongest, tallest tower.		
	SUM 2				<b>Catapults (5hr30)</b> Having constructed their first 3D structure, children are further challenged to incorporate a moving element to their designs in the form of a catapult. In constructing their products, children will troubleshoot, refine and improve their designs and participate in the Plan-Do-Review process. Fixing techniques will also be developed, with the introduction of glue guns. (This unit is an introduction to levers which is a cross-curricular link to Science studied in year 5).	
4	AUT			<b>Christmas Lanterns (8hrs)</b> Having previously built a structure using paper straws, pupils now manipulate and cut willow to create a variety of 3D structures. As well as increasing the scale of their final products, children need to consider the functionality of their final design in order to make an attractive lantern. After completion, these are celebrated and enjoyed on display at the Christmas fayre.		<b>Making a torch (4hrs)</b> Applying their understanding of series circuits learnt in science, children design and make a fully functioning torch with a bulb and switch. After evaluating a range of existing products, children perform practical tasks including cutting, joining and finishing.
	SPR 1					

	<b>SPR 2 SUM 1</b>	<b>World Cuisine - Stir Fry (3hrs)</b> Thai restaurant owner demonstrates how to stir fry vegetables (ACRO profile). Children will use the knife skills learnt previously and learn to fry safely. They will also learn to boil noodles safely. A focus will be on knowledge of key spices in Thai cookery – building on their knowledge of seasoning.	<b>Draw-string bag (6hr30)</b> Having previously been introduced to machine sewing, children will now learn how to set up a sewing machine, before going on to design and create a draw-string bag. During this process, children will learn the skills of attaching multiple pieces of fabric together as part of the bag's construction.			
	<b>SUM 2</b>	<b>World Cuisine – Curry – (5hrs)</b> An Indian restaurant owner demonstrates a variety of curries allowing children to explore different spices and sauce making techniques. Children will learn about Indian spices and how to make a paste for the base of the curry. They will use the skills learnt previously to boil rice safely.				
<b>5</b>	<b>AUT</b>	<b>The Great British Menu (8hrs)</b> Children will be introduced to cooking with meat – looking at hygiene around handling, storing and cooking meat (linking to microbes in science). Children learn about traditional dishes from around Great Britain. They combine skills learnt previously to cook a stew – serving with potatoes and seasonal veg.				
	<b>SPR 1</b>		<b>Sewing Machine Skills (2hrs)</b> Children will recap previously taught machine sewing skills in order to become more independent and proficient.		<b>Science link – levers, pulleys and gears. Cams – Mechanical toys (8hrs)</b> After successfully acquiring the skills to create a simple cams mechanism in Year 3, children will recap and apply this understanding to create 3D cams toys. Emphasis will be on incorporating rotational and linear movements within a cardboard structure, which will prepare children for a project made out of wood they undertake at secondary school. Clear links are made to the forces unit studied alongside.	
	<b>SPR 2 SUM 1</b>					
	<b>SUM 2</b>		<b>Envelope Cushion (7hrs)</b> Having previously recapped the skills required, children will combine their hand sewing and machine sewing skills to design and create their own personalised envelope cushion. Children will construct the cushion using the sewing machine and use hand sewing to attach their initial to the front using embroidery thread/wool.			
<b>6</b>	<b>AUT</b>			<b>Bridges (8hrs) Brunel (2hr30)</b> Children will develop their understanding of structural engineering by examining and recreating a variety of bridges. This unit incorporates the use of forces to join elements together, as well as greater application of physical joining techniques to strengthen, stiffen and reinforce structures.  During this unit, children also undertake a residential trip to Bristol, where they visit the Clifton Suspension Bridge, as well as exploring the different original design proposals at the visitor's centre.		
	<b>SPR 1</b>					

	<b>SPR 2</b> <b>SUM 1</b>					
	<b>SUM 2</b>	<b>Ready, Steady, Cook (5hrs)</b> Children recap the main skills and knowledge learnt through the 'We are Chefs' journey. Being presented with a range of produce, they plan a healthy meal – developing a simple recipe and menu. The best dish from each class goes through to a MasterChef final.	<b>No textiles unit in year 6 due to timetable.</b>		<b>Chesswood Festival of Speed (Goblin Cars) (6)</b> Children will be taught how to assemble a variety of components to create a complex, working electric vehicle; a Goblin Car. This will involve the practical application of wiring diagrams, as well as the procedural knowledge needed to follow technical instructions. As well as the essential DT knowledge, skills, concepts and vocabulary contained within this project, the Chesswood Festival of Speed incorporates many different areas of the curriculum and has a whole school emphasis.	