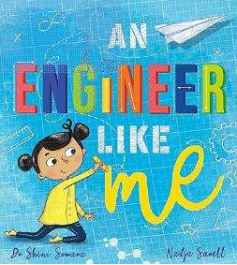
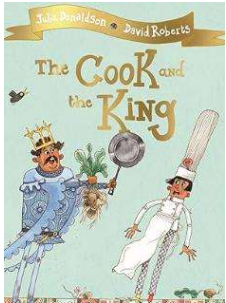
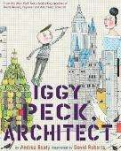



Medium Term Plan Hollinswood Primary School and Nursery D&T - Summer

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
EYFS – Technical Knowledge Design Make Evaluate	I know: what weak and strong mean what materials are weak and strong what different junk modelling materials are including plastic, wood, cardboard, paper, card. what the word structure means what some structures are called (bridges, houses etc) what a mechanism is the names of some 2D and 3D shapes what my structure will look like what materials I will use to create my structure what I can use to join my materials together what I like and dislike about my structure	I know: people make things our school is a building things that move <u>I know how to:</u> join materials create a model that moves (using Mobilo) talk about what my structure will look like and how I will build it create a structure using junk modelling materials talk about what I like and dislike about my structure	join fix weak strong materials design build models structure	Text or Designer:  <u>Resources/staff subject knowledge:</u>

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
Year 1 Technical Knowledge Design Make Evaluate	I know: where a range of fruit and vegetables come from (farmed or grown at home) which foods are healthy and unhealthy fruits and vegetables are important for a healthy diet. who I am designing a product for the wants of my user what utensils I can use what ingredients I can use what the hygiene and safety rules are what went well and what did not go well when making my product	I know: chefs are people who cook professionally <u>I know how to:</u> use my knowledge of healthy and unhealthy foods to prepare a dish that includes fruits and vegetables use correct technical vocabulary during my project taste, explore and evaluate a range of ingredients I might use find out what the user wants use my own experiences to generate ideas suggest ideas and explain what I will do communicate my ideas through talking and drawings select and use a range of utensils and equipment to make my meal (without a heat source) select from a suitable range of ingredients explain the choices I have made follow the hygiene and safety rules evaluate my ideas throughout the whole process evaluate my product against the wants and needs of the user	Healthy, unhealthy, Fruit and vegetable names, names of equipment and utensils, sensory vocabulary (e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard), flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, tasting planning, investigating, design, user, purpose, ideas, product make, user, purpose, product evaluate, user, purpose, product, like, dislike, who, how, why	Text or Designer:  <u>Resources/staff subject knowledge:</u>

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
<p>Year 2</p> <p>Technical Knowledge</p> <p>Design</p> <p>Make</p> <p>Evaluate</p>	<p>I know:</p> <p>what wheels and axels are</p> <p>different mechanisms produce different types of movement</p> <p>the difference between fixed axels and freely moving axels</p> <p>my ideas should be realistic and focus on what the user wants</p> <p>who my product is for and what it will do</p> <p>what skills and techniques I can use to create my product</p> <p>what materials I can use</p> <p>what went well and what could be better</p>	<p>I know:</p> <p>that mechanisms are a system or structure of moving parts that performs some functions particularly in a machine</p> <p><u>I know how to:</u></p> <p>explore and use wheels, axels and axel holders</p> <p>use correct technical vocabulary linked to my product</p> <p>use a simple design criteria, my own experiences and my knowledge of existing products to generate ideas.</p> <p>explore a range of existing products relating to my design criteria</p> <p>communicate my ideas through talking, drawings and mock ups where appropriate.</p> <p>suggest what I will do next while I am making</p> <p>follow my plan</p> <p>select and use appropriate tools, utensils and equipment to perform practical tasks</p> <p>choose suitable skills and techniques taught</p> <p>select from a range of materials, components, junk modelling equipment and simple construction kits to build and create my product</p> <p>confidently explain my choices</p> <p>evaluate my product based on the design criteria</p>	<p>Vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used, dowel, body, cab</p> <p>investigating, planning, design, user, purpose, ideas, design criteria, product, function</p> <p>make, user, purpose, ideas, design criteria, product, function</p> <p>evaluate, user, purpose, ideas, product, function, recycle, like, dislike, who, how, why</p>	<p>Text or Designer:</p>  <p><u>Resources/staff subject knowledge:</u></p>

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
<p>Year 3</p> <p>Technical Knowledge</p> <p>Design</p> <p>Make</p> <p>Evaluate</p>	<p>I know:</p> <p>what a shell structure is</p> <p>several inventors, designers, manufacturers and engineers who have been influential in the design and technology industries</p> <p>what my design criteria will be</p> <p>the names of different 3D products relevant to my project</p> <p>what innovative means</p> <p>what tools I can use</p> <p>what materials I can use</p> <p>what finishing techniques are</p> <p>the hygiene and safety rules</p> <p>what my design criteria is</p> <p>what went well and what could be better next time</p>	<p>I know:</p> <p>a structure is anything made up of parts held together in a particular way</p> <p>I know how to:</p> <p>make strong, stiff shell structures for a purpose</p> <p>use my knowledge of nets, cubes and cuboids (and where appropriate more complex 3D shapes) to help me design and develop my ideas</p> <p>use correct technical vocabulary linked to my product</p> <p>gather information about what the user wants from my product</p> <p>make my own design criteria using what I have found out</p> <p>investigate a range of 3D products relevant to my project</p> <p>generate innovative ideas using what I have found out</p> <p>use annotated sketches and diagrams to communicate my ideas</p> <p>plan my main stages of making</p> <p>use and select from a range of tools, utensils and equipment with some accuracy related to my product</p> <p>make logical changes my plan as I am making</p> <p>confidently select from a range of materials, components, junk modelling equipment and simple construction kits to build and create my product</p> <p>choose some suitable finishing techniques</p> <p>follow the hygiene and safety rules</p> <p>test my product against the design criteria</p> <p>evaluate my product against the design criteria and also including the views of others</p>	<p>shell structure, three dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision</p> <p>user, purpose, design, model, annotated sketch, innovative, investigate, label, drawing, function, planning, design criteria, appealing</p> <p>user, purpose, model, prototype, functional, innovative, function, design criteria, appealing</p> <p>user, purpose, evaluate, functional, innovative, appealing, product, recycle, sustainable, who, how, why, what, method, construct, analyse</p>	<p>Text or Designer:</p>  <p>10 Black Architects Whose Work Has Shaped America - Architizer Journal</p> <p>Resources/staff subject knowledge:</p> <p>Shell Structure (Shell structures have no joins and are typically curved, light-weight structures)</p> <ul style="list-style-type: none"> • Tunnels • Rooves • Helmet • Drink cans • Boats <p>Finishing techniques include:</p> <ul style="list-style-type: none"> • <i>Digital graphics could be combined into the final posters as the background or on the moving parts.</i> • <i>A picture can be drawn/printed on and cut out from another piece of card and glued on to the levers.</i> • <i>Windows can be cut out of the backing sheet or extra pieces added so that the picture on the output lever is hidden and then revealed.</i> • <i>The backing sheet can be cut and shaped to suit the picture.</i> • <i>Guides can be made using strips of card fixed with masking tape or sticky pads to add height.</i> • <i>Pieces of information text about recycling can be written/typed, cut out and added onto the poster.</i> • <i>Materials can be cut out of plastic, newspaper or fabric and glued onto levers.</i>

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
Year 4	I know:	I know:		Text or Designer:
Technical Knowledge	the difference between grown, reared and caught foods.	where food comes from	Names of products, names of equipment, utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, harvested healthy/varied diet	 D&T information sheet.docx
Design	not all processed foods are bad for me	I know how to:	design brief, design criteria, innovative, user, purpose, function, appealing, planning, annotated sketch, cross-section, diagrams	
Make	what the Eatwell plate looks like and what it means to have a varied and balanced diet.	use appropriate equipment and utensils to prepare and combine food.	user, purpose, model, prototype, functional, innovative, function, design criteria, appealing	Resources/staff subject knowledge: Finishing techniques include: <ul style="list-style-type: none"> • <i>Digital graphics could be combined into the final posters as the background or on the moving parts.</i> • <i>A picture can be drawn/printed on and cut out from another piece of card and glued on to the levers.</i> • <i>Windows can be cut out of the backing sheet or extra pieces added so that the picture on the output lever is hidden and then revealed.</i> • <i>The backing sheet can be cut and shaped to suit the picture.</i> • <i>Guides can be made using strips of card fixed with masking tape or sticky pads to add height.</i> • <i>Pieces of information text about recycling can be written/typed, cut out and added onto the poster.</i> • <i>Materials can be cut out of plastic, newspaper or fabric and glued onto levers.</i>
Evaluate	what fruits, vegetables, protein, carbohydrates, dairy, oils and spreads are.	cook using a heat source.	evaluating, design brief, design criteria, innovative, prototype, user, purpose, function, appealing, sensory evaluations, recycle, sustainable, who, how, why, what, method, construct, analyse	
	what water is a really important part of keeping healthy.	confidently discuss the differences between fresh and processed foods.		
	the correct technical vocabulary I should use.	use a mixture of ingredients in my product relating to what I have learnt.		
	several chefs who have been influential in the design and technology industry.	use the correct technical vocabulary during my project.		
	what my design criteria will be	research information about what the user/s want from my product.		
	what ingredients I can use in my product	create my own design criteria using the need and wants of my user/s		
	what annotated sketches, cross-sectional drawings and labelled diagrams are.	investigate a range of ingredients relevant to my product		
	what the hygiene and safety rules are.	generate innovative ideas using my research.		
	what tools I can use.	describe in depth the purpose of my product and what design features will meet the needs and wants of the intended user/s		
	what went well	use annotated sketches, cross-sectional drawings and labelled diagrams to communicate my ideas.		
	what I could improve	order my main stages of making.		
	what my next steps are	select and use appropriate tools to carry out a specific task with some accuracy.		
		explain why I have chosen particular ingredients for my product, thinking about how they complement each other with relation to taste and appearance.		
		use and appropriately select from a range of utensils and ingredients based on how well they will work with my product.		
		follow hygiene and safety rules.		
		test and evaluate my own products against design criteria and the intended user and purpose.		
		evaluate my ideas and products against my own design criteria and identify the strengths and areas for improvement in my work.		

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
Year 5	I know:	I know:		Text
Technical Knowledge	correct technical vocabulary I can use during my project	more complex structures that include joins	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	D&T information sheet.docx
Design	several inventors, designers, manufacturers and engineers who have been influential in the design and technology industries.	I know how to:		History of Iron Bridge English Heritage (english-heritage.org.uk)
Make	what my design criteria will be	reinforce and strengthen a 3D framework		Resources/staff subject knowledge:
Evaluate	what equipment and resources I can use in my project	use correct technical vocabulary throughout my project	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, design criteria, annotate	More complex structures including joins
	what tools and equipment I can use	research information about what the user/s want from my product through the use of surveys, interviews, questionnaires and discussion with peers.		<ul style="list-style-type: none"> Other types of bridges than beam bridge Spaghetti structures Flood-proof houses/fences Welding with chocolate Catapults
	what finishing and decorative techniques I can use	develop my own detailed design criteria using the wants and needs of my user/s and use this to inform my ideas.	design decisions, functionality, authentic, user, purpose, design brief, innovative, design criteria, mock-up, prototype	Finishing techniques include:
	what the hygiene and safety rules	investigate and evaluate a range of products including the materials, components and techniques that are used.		<ul style="list-style-type: none"> Digital graphics could be combined into the final posters as the background or on the moving parts. A picture can be drawn/printed on and cut out from another piece of card and glued on to the levers. Windows can be cut out of the backing sheet or extra pieces added so that the picture on the output lever is hidden and then revealed. The backing sheet can be cut and shaped to suit the picture. Guides can be made using strips of card fixed with masking tape or sticky pads to add height. Pieces of information text about recycling can be written/typed, cut out and added onto the poster. Materials can be cut out of plastic, newspaper or fabric and glued onto levers.
	what went well	generate innovative ideas using my research.		
	what I could improve	use cross-sectional drawings, exploded diagrams and begin to use some computer aided design programmes to communicate my ideas.	functionality, authenticity, user, design specification, design brief, innovative, evaluate, annotate, sustainability, who, how, why, what, method, construct, analyse, positive, negative	
	what my next steps are	make design decisions based on time, cost and resource constraints.		
		produce a detailed list of equipment and materials I will need for my product.		
		make a step-by-step plan including a list of resources I will need.		
		select from and use a range of appropriate tools and equipment accurately to measure and combine resources.		
		use finishing and decorative techniques suitable for the product I am making.		
		follow the hygiene and safety rules.		
		compare the final product to the original design specification and record the evaluations.		
		Test products with the intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.		
		Consider the views of others to improve my work		

	Substantive knowledge – the stuff of D&T	Disciplinary knowledge – how D&T it is studied	Vocabulary	Big Question and Linked Text
<p>Year 6</p> <p>Technical Knowledge</p> <p>Design</p> <p>Make</p> <p>Evaluate</p>	<p>I know:</p> <p>when and how to strengthen, stiffen and reinforce fabrics.</p> <p>several designers and manufacturers who have been influential in the design and technology industries.</p> <p>what my design criteria is</p> <p>what resources and equipment are available to me</p> <p>that cost is a part of decisions made in design and technology</p> <p>what went well</p> <p>what could be improved</p> <p>what my next steps are</p> <p>that design is about processes</p>	<p>I know:</p> <p>that textiles is linked to fabrics and materials</p> <p>I know how to:</p> <p>produce a 3D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</p> <p>use correct technical vocabulary during my project.</p> <p>research information about what the user/s want from my product through the use of surveys, interviews, questionnaires and web-based resources.</p> <p>develop my own design criteria using the wants and needs of my user/s and use this to inform my ideas.</p> <p>investigate and analyse products linked to my final product.</p> <p>generate innovative ideas using my research.</p> <p>identify and solve my own design problems.</p> <p>use cross-sectional drawings, exploded diagrams and some computer aided design programmes to communicate my ideas.</p> <p>make design decisions based on time, cost and resource constraints.</p> <p>create a step-by-step plan including a list of tools, materials and components I will need.</p> <p>critically evaluate and modify the working features of my product to match my initial design specification.</p> <p>critically evaluate my products against my design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>Test the system to demonstrate its effectiveness for the intended user and purpose</p>	<p>seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, tacking, applique, pinking shears, clasp, hem, tie dye, renewable, authentic, chain stitch</p> <p>function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up</p> <p>Evaluate, function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, sustainability, who, how, why, what, method, influence, positive, negative</p>	<p>Text</p> <p>D&T information sheet.docx</p> <p><u>Resources/staff subject knowledge:</u></p> <p><u>Refer to Art progression grid during this topic</u></p> <p><u>Finishing techniques include:</u></p> <ul style="list-style-type: none"> • <i>Digital graphics could be combined into the final posters as the background or on the moving parts.</i> • <i>A picture can be drawn/printed on and cut out from another piece of card and glued on to the levers.</i> • <i>Windows can be cut out of the backing sheet or extra pieces added so that the picture on the output lever is hidden and then revealed.</i> • <i>The backing sheet can be cut and shaped to suit the picture.</i> • <i>Guides can be made using strips of card fixed with masking tape or sticky pads to add height.</i> • <i>Pieces of information text about recycling can be written/typed, cut out and added onto the poster.</i> • <i>Materials can be cut out of plastic, newspaper or fabric and glued onto levers.</i>

