

DESIGN & TECHNOLOGY LEARNER PROFILE

		W	YEAR 1	YEAR 2	YEARS 3 & 4	YEARS 5 & 6	CHALLENGE
To design, make, evaluate and improve (DMEI)	Food	a. I can name different types of food e.g. apple, peas, sausages.	a. I can identify whether a food is a meat product or from a plant.	a. I understand where food comes from.	a. I know where a range of ingredients are grown, reared, caught or processed.	a. I understand seasonality and can identify different foods produced in each season.	a. I can research products to a given criteria e.g. which biscuits are healthiest, dietary needs.
		b. I can explore items of food from a food wheel.	b. I can select items from a food wheel to plan and prepare dishes.	b. I can use the basic principles of a healthy and varied diet to plan and prepare dishes.	b. I can plan and prepare a variety of healthy dishes (predominantly savoury) using a range of cooking techniques and ingredients.	b. I understand that cooking alters the flavour & texture of foods & use this knowledge in my designs.	b. I understand the importance of nutrition, a balanced diet and about the characteristics of a broad range of ingredients in choosing and preparing food.
		c. I can contribute to decisions about what to make and how.	c. I can add my own design ideas to a given design.	c. I can design purposeful, functional, appealing products based on given design criteria.	c. I can use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose.	c. I can incorporate the views of intended users & for the intended purpose.	c. I can design innovative products showing an awareness of commercial appeal.
	Other areas		d. I can generate ideas for purposeful designs.	d. I can generate ideas based on my investigations of products.	d. I can recognise that my designs have to meet a range of different needs and users.	d. I can generate ideas by collecting and using information.	
		d. I can explain what I am making and which tools I am using.	e. I can use models, pictures and words to describe what I want to do.	e. I can use models, pictures and words to describe my designs.	e. I can use words, labelled sketches and models to communicate the details of my designs and can clarify when asked.	e. I can communicate alternative ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, pattern pieces and prototypes, showing that I am aware of constraints.	d. I can use prototypes, pattern pieces, cross-sectional diagrams and computer aided designs to represent designs.
			f. I can talk about my own work and describe how my product works.	f. I can recognise what I have done well and suggest things I could do better in the future.	f. I can reflect on the design and make process and my end products and identify some improvements.	f. I can reflect on my designs as they develop, drawing on previous experience.	e. I can check my work as it develops, solve technical problems and show some creativity as I modify my approach.
To master practical skills: FOOD (F)	a. I can wash my hands using the correct hand washing technique.	a. I know that I have to wash my hands & keep work surfaces clean when preparing food.	a. I can prepare food safely & hygienically & can describe what this means.	a. I can work in a safe & hygienic way e.g. tying hair back, wiping work surfaces, not mixing up utensils.	a. I can apply the rules for basic food hygiene & other safe practices e.g. oven safety, food storage.	a. I can use my knowledge of micro-organisms to prepare & store food properly.	
		b. I have experienced using a simple recipe to make a food product.	b. I can use simple recipes and can measure and weigh using measuring cups or electronic scales.	b. I can weigh & measure my ingredients accurately.	b. I can measure accurately and calculate ratios of ingredients to scale up or down from a recipe.	b. I can modify recipes for a purpose e.g. quantities.	
	b. I can mix and prepare simple cooked & uncooked foods from a limited choice.	c. I can use a mixing bowl to prepare a mixture.	c. I can use simple tools e.g. whisk, rolling pin etc.	c. I can select and am beginning to use the appropriate equipment to prepare foods in a variety of ways eg. sieve, grater, knife, potato peeler, whisk, juicer.	c. I can prepare foods in a variety of ways e.g. chopping, peeling, grating, coring, sieving etc.	c. I can prepare one item of food using a variety of techniques e.g. a tomato can be sliced, peeled, pureed, stuffed, cut as a decorative garnish.	
	c. I can use simple equipment e.g. spoons, cutters, bowls	d. I can use knives safely to cut food (with help).		d. I understand that some foods may not be eaten raw as it is unsafe.			
		e. I can assemble or cook ingredients.	d. I know a range of cooking techniques e.g. baking, steaming, roasting, boiling.	e. I can change the nature of the raw ingredients by cooking or chilling.	d. I can demonstrate a range of baking and cooking techniques (controlling the temperature of the oven or hob).	d. I can create and refine recipes including ingredients, methods, cooking times and temperatures.	
			e. I can describe the properties of food by taste, smell, texture & consistency.	f. I can present my food product to impress the consumer.	e. I can use a selection of ingredients to meet an identified need e.g. lunchtime snack, healthy sandwich, low gluten.		

To master practical skills: TEXTILES (T)	a. I can pull a thread through a sewing card.	a. I can use pre-prepared patterns and templates.	a. I can measure, mark out and cut fabric.	a. I can use patterns either self-generated or templates.	a. I can mark out using my own patterns & templates.	
			b. I can use scissors precisely when cutting out.	b. I can use sharp scissors accurately to cut textiles.		
	b. I can join fabrics using glue.		c. I can join textiles using glue, staples, tying & a simple stitch.	c. I can join fabrics using running stitch, back stitch and over stitch.	b. I can use different ways to join materials e.g. glue, pins, press-studs, velcro, various stitches, buttons.	a. I can use embroidery & other stitches to join and finish fabric work.
		b. I have made a product from textiles and made sure my work is neat & tidy.	d. I know that textiles have different properties: touch, insulation, texture & waterproof.	d. I can make a textile product using appropriate materials, that has a good finish & can do the job it was made for.	c. I can use my art textile skills such as stitching to create a product that is sturdy & fit for purpose.	b. I can experiment with a range of materials until I find the right mix of affordability, appeal & appropriateness for the job.
To master practical skills: STRUCTURES (S)		a. I can describe the materials I have used to make my structure.	a. I am beginning to use a range of materials to make products e.g. wood, plastic, metal, clay, card, paper.	a. I can use the most appropriate mouldable material suitable for the purpose of my product.		I can measure & select materials with cost & workability in mind.
	a. I have explored using tools with support.	b. I have explored using a range of tools and know what they are called and used for.	b. I am beginning to use tools to drill, screw, glue, cut and nail materials to make products.	b. I can make holes with a punch/drill accurately and safely.	a. I can cut accurately and safely using tools e.g. craft knife, saw.	I can use a range of tools accurately and safely to drill, screw, glue, cut and nail.
	b. I am beginning to mark out materials to cut.	c. I can mark out materials to cut and fold.	c. I can measure & mark out materials accurately.	c. I can measure using cm to cut, score and fold.	b. I can measure using mm to cut, score and fold with precision.	I can make very careful & precise measurements so that joins, holes & openings are in exactly the right place.
			d. I can demonstrate a range of cutting and shaping techniques e.g. tearing, cutting, folding and curling.	d. I can use scoring & folding to shape materials accurately.	c. I can use my hands & other tools to mould materials into accurate shapes that will do the intended job well.	I can hide some joints for aesthetic effect.
			e. I can demonstrate a range of joining techniques such as gluing, hinges or combining materials to strengthen.	e. I can use cutting and shaping techniques within the perimeter of the material such as slots and cut-outs.	d. I can select appropriate joining techniques.	I can make joins that are flexible to allow for dismantling or folding.
	c. I can use construction kits to make a structure e.g. lego, mobilo, polydron, knex.	d. I can make box models, puppets, cards & masks.	f. I know how to make my structures stronger by folding, joining or by its shape.	f. I can make my structures stronger by folding, joining or by its shape.	e. I can use techniques for reinforcing & strengthening structures.	
			g. I can finish off my work so that it looks neat & tidy.	g. I can apply a high quality finish e.g. carving, paint, glaze, varnish or other finishes.	f. I ensure that edges are finished by sometimes adding other materials e.g. edging strips.	My product is carefully finished & is well received by the intended user.
To master practical skills: MECHANICS (M)	a. I can use construction kits to make a vehicle that moves.	a. I can use a construction kit to make a model that moves using a mechanism e.g. wheels, lever, hinge.	a. I have explored how levers, sliders, wheels, axles and winding mechanisms work.	a. I can make a product using levers, sliders, wheels, axles and winding mechanisms.	a. I can use simple mechanisms e.g. cogs, cams, pulleys, levers & cranks.	a. I can use cogs & gears to change direction & speed (construction kits).
	b. I can identify how toys can be made to move.	b. I have explored how moving objects work.	b. I can use construction kits for problem solving and to investigate simple mechanisms.	b. I have explored the use of pneumatics and hydraulics.	b. I can begin to use pneumatics & hydraulics.	b. I can select the most appropriate mechanism to make my product.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">To master practical skills: ELECTRICALS and ELECTRONICS (E)</p>	<p>a. I have used battery operated devices.</p>	<p>a. I can diagnose faults in battery operated devices such as low battery, water damage or battery terminal damage.</p>	<p>a.I can explore batteries, bulbs and simple switches to achieve a functional result.</p>	<p>a. I have made a product that uses electrical components e.g. switches, bulbs & motors.</p>	<p>a. I have made a product that uses electrical circuits.</p>	<p>a. I can create circuits using electronics kits that employ a number of components such as LEDs, resistors, transistors and chips.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">To master practical skills: COMPUTING (C)</p>			<p>a. I can model designs using software.</p>	<p>a. I can control and monitor models using software designed for this purpose</p>	<p>a.I can write code to control and monitor models or products.</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">To take inspiration from design throughout history (I)</p>	<p>a. I know that a chef cooks and prepares food.</p>	<p>a. I can identify the work of famous chefs.</p>	<p>a. I can identify the tools used by famous chefs.</p>	<p>a. I can name some great/famous chefs and generate ideas from their cooking/recipes.</p>	<p>b. I can improve my own cooking technique by watching famous chefs.</p>	<p>a. I can use the work of a famous chef and reproduce/modify the recipe.</p>
	<p>b. I can explore objects and describe them using my senses.</p>	<p>b. I can say what I like and dislike about a product or design.</p>	<p>b. I can suggest improvements to existing products and designs.</p>	<p>b. I can identify some of the great designers in all of the areas of study to generate ideas for designs.</p>	<p>c. I can combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p>	<p>b. I can analyse the work of others, including iconic designs, to inform work.</p>
		<p>c. I can explore how products have been created.</p>	<p>c. I can disassemble products to understand how they work.</p>	<p>d. I understand how key events and individuals in history (in design and technology) have helped shape the world.</p>	<p>c. I understand developments in design and technology and the responsibilities of designers, including environmental responsibilities.</p>	