Being a Design Technologist at Wickhambreaux CEP School Primary School I can…

	A Year 1 & 2 (Cycle A) Design Technologist	A Year 1& 2 (Cycle B) Design Technologist	A Year 3 & 4 (Cycle A) Design Technologist	A Year 3 & 4 (Cycle B) Design Technologist	A Year 5 & 6 (Cycle A) Design Technologist	A Year 5 & 6 (Cycle B) Design Technologist
Structures		Temporary Structure	Earthquake Resistant Buildings	Roman Shields		Bird Houses
Design		I understand the importance of clear design criteria I can remember that shelters are structures and need to be strong, stiff and stable I know that the shelter I design for the explorer needs to provided shelter	I can follow design criteria to create a structure that can withstand an earthquake. I can generate and develop ideas, considering strength and stability in my design. I can create a labelled diagram or model to	I can follow design criteria to create a Roman shield for defence. I can research and generate ideas, considering historical accuracy and function in my design. I can create a labelled diagram or use CAD		I can follow design criteria to create a bird hide for an ornithologist to observe native UK birds. I can research and generate ideas, considering the needs of an ornithologist and the birds' natural habitat.

		from the weather	show my design plan.	(Computer-Aided Design) to model different Roman shield formations.		I can sketch or use CAD (Computer-Aided Design) to model my bird hide design and features, such as viewing windows or camouflage. I can choose appropriate materials to ensure the bird hide blends into the environment while providing comfort and functionality for the ornithologist.
Make		I understand what stable means and can ensure my structure has this property I can cut and assemble my shelter correctly	I can use given materials to build a strong and stable structure. I can use tools and techniques safely and accurately to	I can use given materials to construct a Roman shield. I can use tools and techniques safely and accurately to create my design.		I can use given materials to construct a functional bird hide. I can use tools and techniques safely and accurately to build my design.

		I can test the strength of my structure I know how to create joints and structures from paper/card and tape I know how to create joints and structures	construct my design. I can reinforce my structure to improve its strength and stability.	I can add reinforcement and decoration to my shield to improve strength and authenticity.		I can incorporate practical features, such as ventilation, stability, and ease of access for the ornithologist. I can ensure my bird hide provides the right level of camouflage while being weather-resistant.
Evaluate		I can evaluate my shelter according to the design criteria I can test whether my structure is strong and stable and reinforce it if necessary	I can test my structure to see how well it withstands an earthquake. I can evaluate the successfulness of my structure, explaining what worked well and what I would improve. I can compare my design to the	I can test my shield in a defensive formation to see how well it functions. I can evaluate the effectiveness of my shield and formations, explaining what worked well and what I would improve.		I can test my bird hide in an outdoor environment to see how well it functions for an ornithologist. I can evaluate how comfortable, effective, and camouflaged my bird hide is, suggesting improvements.

			original criteria and suggest improvements.	I can compare my design to the original criteria and suggest improvements.		I can compare my design to the original criteria and reflect on what works well and what could be improved. I can gather feedback from others on the effectiveness of my bird hide for observing native birds.
Technical Knowledge		I know that that the shape of materials can be changed to improve the strength and stiffness of structures I can identify natural and man -made structures I understand what is meant by stability and can identify	I can explain how earthquakes affect buildings and why strong structures are needed. I can describe the properties of materials used and explain why they are suitable for my structure. I can identify key features of earthquake-	I can explain how Roman soldiers used shields and formations for defence. I can describe different Roman formations (e.g., testudo/tortoise) and explain how they provided protection. I can identify the key features of a Roman shield		I can explain why ornithologists need a bird hide to observe birds without disturbing them. I can describe key features of a good bird hide, such as camouflage, viewing angles, and weather protection.

		when a structure is more or less stable than another I know that shapes and structures with wide, flat bases or legs are the most stable I know the meaning of the words strength, stiffness and stability	resistant buildings and explain how they work.	and explain why they were designed that way.		I can identify different types of native UK birds and their habitats, and consider how the bird hide can blend into these environments.
Mechanisms	Christmas Card/Victorian Toys		Ancient Egyptian Inspired Traps		Nepal Tomato Challenge	
Design	I can design and label a working toy I can communicate my ideas to someone else I can select appropriate materials for my toy		I can design an appropriate lever or slider mechanism. I can I can communicate my ideas in an annotated plan.		I can follow design criteria to design a "basket" to transport tomatoes via a pulley system from the "top of a mountain" to the "bottom of a mountain". I can generate and develop	

					ideas for my design, considering the purpose and the user's needs	
Make	I know that materials can be selected according to their characteristics I can create moving models that use sliders I can build a stable structure I can test elements of my design I can adapt my design as necessary I know how to make the wheel rotate		I can use scissors and glue gun safely. I can measure, mark out, cut and shape materials and components with some accuracy. I can select appropriate joining methods and products, e.g. glue, staples, split pins, tape etc.		I can use given materials to make a tomato basket. I can use tools and equipment safely and accurately to construct my design.	
Evaluate	I can evaluate how functional my toy is and		I can identify the strengths and areas for		I can test and adapt my basket until it is ready	

	whether it meets the Design Criteria		development in my ideas and products. I can consider the views of others, including intended users, to improve my work. I can use their design criteria to evaluate my completed product.		to transport tomatoes. I can evaluate the successfulness of my basket and pulley system, commenting on changes made and explaining why. I can compare my design to the original criteria and suggest improvements.	
Technical Knowledge	I know how axles and wheels work I know have levers work		I can select the equipment I will need and why, e.g. scissors – to cut paper/card, pens/paint to colour the trap to blend in with its surroundings.		I can explain how a pulley system works and why it is useful for transporting goods in mountainous areas. I can describe the properties of materials used and explain why	

					they are suitable for my design.	
Textiles		Monarch Clothing		The Grinch Christmas Stocking		'Make do and Mend'
Design		I can design an item of clothing suitable for a monarch I can build my design on a template		I can follow design criteria to create a Christmas stocking inspired by The Grinch. I can research and generate ideas, considering key elements Whoville, such as colour, texture, and patterns, to inspire my design. I can sketch my design and decide on the shapes, sizes, and features for my stocking. I can choose suitable fabrics and materials		I can follow design criteria to create fashion items inspired by the "make-do and mend" efforts during WWII. I can research and generate ideas based on the historical context of WWII, considering the limitations and creativity required during that time. I can sketch my design ideas, considering how to reuse, repair, or upcycle materials for my project.

				based on their texture, durability, and suitability for my design.		I can choose fabrics and materials that reflect the wartime era and are suitable for upcycling or reusing.
Make		I can join fabrics together I can align two pieces of fabric I know how to use a template I can use joining methods to decorate my item of clothing		I can use basic sewing techniques to make a Christmas stocking. I can cut, sew, and join fabrics safely and accurately to create my stocking. I can use decorative stitches or embellishments (e.g., Grinch-inspired motifs) to personalize my stocking. I can use appropriate		I can use sewing techniques to make fashion items inspired by WWII “make-do and mend” efforts. I can safely and accurately use tools and techniques to alter or repair materials to create my design. I can combine different materials to create a functional and stylish fashion item while keeping with the

				tools and equipment for sewing and handle them safely. I can apply finishing techniques, such as hemming or attaching a hanging loop, to complete my stocking.		wartime theme of resourcefulness. I can apply finishing techniques, such as hemming, patching, or embellishing, to complete my design.
Evaluate		I can evaluate mine and others' work		I can test my Christmas stocking to ensure it holds its shape and is functional. I can evaluate how well my stocking matches the Grinch theme and suggest improvements to the design or sewing techniques.		I can test the functionality of my fashion item to ensure it is practical and wearable. I can evaluate how well my design reflects the "make-do and mend" style, explaining the challenges and choices I made during the project.

				I can compare my finished stocking to the original design criteria and reflect on what worked well and what I could change. I can gather feedback from others on the appearance and practicality of my stocking.		I can compare my finished fashion item to the original design criteria and suggest improvements or modifications. I can gather feedback from others on the design and functionality of my item.
Technical Knowledge		I can remember that different techniques may be used to join fabrics for different purposes I know how to join fabric by pinning, stapling or gluing		I can explain the main features of The Grinch and how they influence my design choices for the stocking. I can describe the sewing techniques I have used and why they are appropriate for my project.		I can explain the historical context of the “make-do and mend” efforts during WWII and why they were important. I can describe the techniques used during WWII to repair and reuse materials in clothing.

				I can identify different types of fabrics and explain why I chose specific materials for my stocking.		I can identify different types of materials that were commonly reused or upcycled during wartime fashion.
Cooking and nutrition	African Inspired Food (Breads)	Healthy Snack for Sports day		Rainforest Inspired Dessert	Coastal Cooking (foraging)	Mayan Inspired Cooking (Tacos)
Design	I can choose correct ingredients for bread	I can suggest what fruits and/or vegetables are in a healthy snack		I can choose produce from the rainforest to make a healthy and appealing dessert for a restaurant		Design, make and evaluate Mayan farming methods and create a Mayan-inspired taco.
Make	I know the basic rules of food contamination I can follow a recipe to make a simple bread mixture	I know how to prepare fruit and vegetables I can use a knife to cut safely		I can use cooking equipment safely I know how to prepare myself in order to start cooking I know the basic rules of food contamination I can use, store and clean a knife safely		I can use equipment safely, including knives, hot pans and stove I know how to avoid cross - contamination I can carefully follow a method to make a recipe I know how to chop an onion

				I can follow a recipe to make a dessert		
Evaluate	I can say how the finished product tastes	I can say why the snack is a healthy choice		I can evaluate a product and consider: Taste, smell, texture appearance target audience		I can evaluate the taco by appearance, texture and taste.
Technical Knowledge	I know that there are different breads, some needing yeast	I can name a number of fruits and vegetables I know how to determine if something is a fruit I understand that some foods we call vegetables are actually fruits can remember how to determine if a food is a fruit or a vegetable. I know that fruits and vegetables grow		I know that not all fruits and vegetables can be grown in the UK I know that each country has its own climate I understand that these climates enable different fruits and vegetables to grow I can consider hygiene when preparing food I know that imported food will have		I can research Mayan farming to understand what products they were able to grow and how this has influenced Mexican cuisine

		in one of three places: on trees or vines above the ground below the ground I can taste fruits and vegetables and describe their: appearance/feel smell taste		travelled from far away and has an impact on the environment I know that vegetables and fruit grow in certain seasons and that in the UK we often import food from other countries when it is not in season I am aware that each fruit and vegetable gives us nutritional benefits		
Electrical Systems			Lighthouse		Renewable Power Sources	
Design			I can follow design criteria to create a local lighthouse and a new lighthouse design using electrical circuits and microbits.		I can follow design criteria to create an alternative power system using renewable energy to help with climate change.	

			I can research and generate ideas for my lighthouse, considering its purpose, location, and functionality. I can sketch my lighthouse design, incorporating electrical circuits for the light or a simple flashing program using a microbit. I can decide on the materials needed for both the structure and the electrical components of the lighthouse.		I can research and generate ideas for different renewable energy sources, such as solar, wind, or hydro power, and how to use them effectively. I can sketch and plan a system that harnesses renewable energy, considering its efficiency, sustainability, and impact on the environment. I can choose materials that are sustainable and suitable for creating circuits powered by renewable energy sources.	

Make			I can construct a model of a local lighthouse using materials such as cardboard, plastic, or wood. I can set up electrical circuits and/or integrate a microbit to control the lighthouse light. I can use simple programming to control the light function in my lighthouse, ensuring it works as planned. I can apply construction techniques to ensure my lighthouse is stable and safe, and the electrical circuit is functional.		I can build a model or system that harnesses renewable energy to power a simple circuit. I can create a circuit that uses renewable energy sources (e.g., solar panel, wind turbine) to generate electricity. I can use tools and techniques safely to assemble the circuit, ensuring that the energy source is connected correctly. I can integrate renewable energy components into my design, ensuring they	

					function as intended to power the circuit or device.	
Evaluate			I can test my lighthouse to see if the light functions properly and the circuit works as intended. I can evaluate my lighthouse design, considering how well the electrical components work and how realistic the model is. I can compare my design to the original criteria and suggest improvements or modifications based on the testing.		I can test the performance of my renewable energy-powered circuit to ensure it works efficiently. I can evaluate how well my renewable energy system works, considering how much power it generates and how effective it is in helping reduce climate change. I can compare my design to the original criteria and suggest improvements to make it more efficient or sustainable.	

			I can gather feedback from others on how effective the light is and how well the design communicates the lighthouse's function.		I can gather feedback from others on the practicality and environmental impact of my renewable energy-powered system.	
Technical Knowledge			I can explain how lighthouses work and why they are important for guiding ships safely. I can describe how electrical circuits and microbits can be used to control lights and other functions. I can identify different types of lighthouses and the materials used in their construction.		I can explain how different renewable energy sources (e.g., solar, wind, hydro) work and their benefits in reducing climate change. I can describe how to create electrical circuits and how renewable energy can be used to power these circuits. I can identify the environmental benefits of using renewable	

					energy and how it can help reduce carbon emissions and dependence on fossil fuels.	