



Skills and Knowledge progression Design Technology	
Digital World	

		Year 4	Year 6			
kills		Writing design criteria for a programmed timer (Micro:bit).	Writing a design brief from information submitted by a client.			
		Exploring different mindfulness strategies.	Developing design criteria to fulfil the client's request.			
	ВП	Applying the results of my research to further inform my design criteria.	Considering and suggesting additional functions for my navigation tool.			
	Desi	Developing a prototype case for my mindful moment timer.	Developing a product idea through annotated sketches.			
		Using and manipulating shapes and clipart by using computer-aided design (CAD),	Placing and manoeuvring 3D objects, using CAD.			
S			Changing the properties of, or combining one or more 3D objects, using CAD.			
		Following a list of design requirements.				
		Developing a prototype case for my mindful moment timer.	Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo).			
	ake	Creating 3D structures using modelling materials.	Explaining material choices and why they were chosen as part of a product concept.			
	Š	Programming a micro:bit in the Microsoft micro:bit editor, to time a set number of seconds/minutes upon button press.	Programming an N,E, S, W cardinal compass.			



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		Investigating and analysing a range of timers by identifying and comparing their advantages and disadvantages.	Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool.
		Evaluating my Micro:bit program against points on my design criteria and amending them to include any changes I made	Developing an awareness of sustainable design.
			Identifying key industries that utilise 3D CAD modelling and explaining why.
	te	Documenting and evaluating my project.	Describing how the product concept fits the client's request and how it will benefit the customers.
	'alua	Understanding what a logo is and why they are important in the world of design and business.	Explaining the key functions in my program, including any additions.
	Ē	Testing my program for bugs (errors in the code).	Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool.
		Finding and fixing the bugs (debug) in my code.	Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch.
		Using an exhibition to gather feedback.	
		Cathering feedback from the user to make suggested improvements to a product	Demonstrating a functional program as part of a product concept pitch.
		To understand what variables are in programming.	To know that accelerometers can detect movement.
Knowledge		To know some of the features of a Micro:bit.	To understand that sensors can be useful in products as they mean the product can function without human input.
	al	To know that an algorithm is a set of instructions to be followed by the computer.	
	Technic	To know that it is important to check my code for errors (bugs).	
		To know that a simulator can be used as a way of checking your code works before installing it onto an electronic device.	



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		To understand the terms 'ergonomic' and 'aesthetic'.	o know that designers write design briefs and develop design criteria to enable them to fulfil a client's request.
	ional	To know that a prototype is a 3D model made out of cheap materials, that allows us to test design ideas and make better decisions about size, shape and materials.	To know that 'multifunctional' means an object or product has more than one function.
	Addit	To know that an exhibition is a way for companies to showcase products, meet potential new customers and gather feedback from users.	To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.