Design and Technology – Year 5 – Medium Term Plan
Autumn Term, Digital world: Monitoring devices

Where before:					
Where next:	Cooking and nutrition: Developing a recipe				
Outcome	Key Skills	Key Facts	Key Vocabulary	Learning Objectives	Educational visits/ Visitors
	Design Developing design criteria based on research. Generating multiple housing ideas using building bricks. Understanding what a virtual model is and the pros and cons of traditional and CAD modelling. Placing and manoeuvring 3D objects, using CAD. Changing the properties of, or combining one or more 3D objects, using CAD. **Make** Understanding the functional and aesthetic properties of plastics. Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range. **Evaluate** Stating an event or fact from the last 100 years of plastic history. Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices. Explaining key functions in my program (audible alert, visuals). Explaining how my product would be useful for an animal carer including programmed features.	To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record. To know that a sensor is a tool or device that is designed to monitor, detect and respond to changes for a purpose. To understand that conditional statements (and, or, if booleans) in programming are a set of rules which are followed if certain conditions are met. To understand key developments in thermometer history. To know events or facts that took place over the last 100 years in the history of plastic, and how this is changing our outlook on the future. To know the 6Rs of sustainability. To understand what a virtual model is and the pros and cons of traditional vs CAD modelling.	alert ambient boolean CAD design brief design criteria device electronic group loop model monitor monitoring device plastic plastic pollution programming comment sensor sustainability synthetic thermometer Tinkercad ungroup value variable versatile workplane	To carry research to develop design criteria To write a program to monitor the ambient temperature, including an alert To generate creative and unique Micro:bit case, stand or housing ideas To learn about and practise 3D CAD skills	

Design and Technology – Year 5 – Medium Term Plan
Spring Term, Cooking and nutrition: Developing a recipe

Where before:	Digital world: Monitoring devices				
Where next:					
Outcome	Key Skills	Key Facts	Key Vocabulary	Learning Objectives	Educational visits/ Visitors
	Design Researching existing recipes. Suggesting alternative ingredients. Designing a jar label. **Make** Writing an alternative recipe. Understanding cross-contamination. Using preparation skills. Making a developed recipe. **Evaluate** Explaining the farm to fork process. Analysing nutritional content.	To know that beef comes from cows reared on farms. To know that recipes can be adapted to suit nutritional needs and dietary requirements. To know that nutritional information is found on food packaging. To know that coloured chopping boards can prevent cross-contamination. To know that food packaging serves many purposes.	abattoir adaptation balanced beef brand cook cross-contamination cut design enhance equipment evaluate farm grate hygiene ingredients label measure nutrient nutrition nutritional value preference press process recipe safety	To understand how ingredients are reared and processed To make adaptations to design a recipe To evaluate nutritional content To practise food preparation skills To design a product label To follow and make an adapted recipe	