
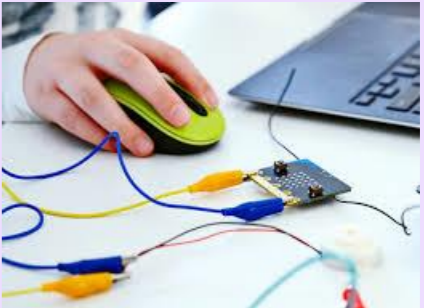




**Castle Hills Primary Academy**

**Progression of Learning**

**Design and Technology Summer Cycle B**

Design and Technology		
Cooking and nutrition (smoothies)		
KS1	<b>Design Cycle</b>	<b>Sticky Knowledge</b>
	<b>Research</b>	Can children identify a variety of different types of fruits? Can children identify the importance of fruit within a diet? To know the implications of a healthy diet. Can children identify how to make a smoothie? Evaluate existing products? Can children identify how fruit is grown and how? To identify the differences between fruit and veg
	<b>Design</b>	Can children design a smoothie with all the key ingredients? Can children design packaging for their products?
	<b>Make</b>	Can children understand food prep skills? Can children peel/chop/grate food needed in a smoothie? Can children make their design product correctly?
	<b>Evaluate</b>	Can children identify a finished product by identifying what went well? Can children identify a finished product by identifying what could be improved? Can children identify ways in which they could improve their work with DT in the future?
	<b>Prior Learning</b>	<b>Vocabulary</b>
Healthy plate Identifying a healthy meal Food groups Cleaning teeth	Fruit Vegetables Smoothie Healthy diet Ingredients Metabolism Disease Hygiene Modelling Techniques Success criteria Explaining and improving Safety	Children will be able to explain what is needed for a healthy diet Children will categorise fruit and veg Children will be able to state which part of the plant fruit has come from (root/stem) Children will understand key aspects of a healthy diet Children will begin to understand the reasons for not having a healthy diet (money/time) Children will explore existing products Children to design a package for their own design. Children will be able to design a healthy smoothie Children will be able to make a smoothie based on a design Children will be able to evaluate a finished product
		
Digital world (wearable technology)		
LKS2	<b>Design Cycle</b>	<b>Sticky Knowledge</b>
	<b>Research</b>	Can children identify the main features of wearable technology? Can children explain how wearable technology works? Are children able to explain how wearable technology works and match it to its purpose? Research existing wearable technology
	<b>Design</b>	Can children create a simple circuit? Do children know that a variety of metal components conduct electricity Can children design a light up wearable? Can children design and describe wearable technology? Can children generate ideas for their design? Can children design wearable technology idea from what has been learnt, ensuring that it meets a specific design criteria.
	<b>Make</b>	Can children follow a design to create wearable technology? Can children work accurately with a range of materials and components? Can children use computer aided design to enhance their idea
	<b>Evaluate</b>	Can children explain how their completed wearable technology works? Can children evaluate their product against a design criteria? Can children explain what has been successful and why? Can children explain what they would do differently if they were to make the product again?
	<b>Prior Learning</b>	<b>Vocabulary</b>
Threading and fine motor Making an appealing product Joining together The DT cycle Bbots Scratch programming Ways of carrying out shared responsibilities	Wearable technology Component Micro bit Electronics Devices Materials Computer aided design Forms Accessory Smart Body	Children will identify the features of wearable technology and investigate their uses Children will investigate how to make an electrical circuit using different materials for switches. Children will investigate light up wearable technology. Children will design some wearable technology for a particular purpose Children will practice using Miro-bit Children will program wearable devices using Micro bit Children will make some wearable technology to meet the design criteria To evaluate the finished product
		

			Digital world (monitoring devices)		
	<b>Design Cycle</b>	<b>Sticky Knowledge</b>			
	<b>Research</b>	Can children identify the main features of a monitoring device? Children to understand monitoring devices and provide examples. Can children explain how monitoring device works? Are children able to explain how a monitoring device matches its purpose? Children to research MicroBit Identify errors (bugs) in the code and find ways to fix (debug) them.			
	<b>Design</b>	Can children create a simple circuit? Can children design a monitoring device? Can children design and describe what their monitoring device will look like? Can children generate ideas for their monitoring device? Can children design a monitoring device using what they have learnt, ensuring that it meets a specific design criteria.			
	<b>Make</b>	Can children follow a design to create a monitoring device? Can children work accurately with a range of materials and components			
	<b>Evaluate</b>	Can children explain how their monitoring devices works? Can children evaluate their product against a design criteria? Can children explain what has been successful and why? Can children explain what they would do differently if they were to make a monitoring again?			
UKS2	<b>Prior Learning</b>	<b>Vocabulary</b>	<b>Technical Skills and Knowledge</b>		
	Describe the advantages and disadvantages of timers To discuss times when you have found something challenging Create a design logo.	Assemble Electronics Criteria MicroBit Ambient temp Alerts Specified Digital Thermometers Thermo scope Virtual modelling CAD Code Debug Bug Construct Base Research Test Component Conductor Insulator	Children will carry out research to develop a design criteria. Children will be able to identify bug within the code and ways to fix and debug. Children will research the development and history of plastic and how it is impacting the Earth Children will be able to write a program to monitor the ambient temp including an alert Children will generate creative and unique Micro: Bit case, stand, or housing ideas Children will be able to explain the key pros and cons of virtual modelling. Children will learn about and practice 3D CAD skills. Children will share and discuss their ideas with peers. Children will assemble electronics and complete their game. Children will evaluate their product against the criteria.		

