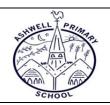
Ashwell Primary School Design & Technology Curriculum Skills & Knowledge Organiser – Digital World



Digital World – Key Stage 2			
		Year 3 – Electronic Charm	Year 5 – Monitoring Devices
Skills	Design	 Problem solving by suggesting potential features on a Micro: bit and justifying my ideas Developing design ideas for a technology pouch Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge 	 Researching (books, internet) for a particular (user's) animal's needs 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 combine one or more 3D objects, using CAD
	Make	 Using a template when cutting and assembling the pouch Following a list of design requirements Selecting and using the appropriate tools and equipment for cutting, joining, shaping and decorating a foam pouch Applying function features such as using foam to create soft button 	 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	 Analysing and evaluating an existing product Identifying the key features of a pouch 	 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
Knowledge	Technical	 To understand that in programming a 'loop' is code that repeats something again and again until stopped To know that a Micro:bit is a pocket-sized, codeable computer Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm 	 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 conditional statements (and, or, if booleans) in programming are a set of rules which are followed if certain conditions are met
	Additional	 To know what the 'Digital Revolution' is and features of some of the products that have evolved as a result To know that in Design and technology the term 'smart' means a programmed product To know the difference between analogue and digital technologies To understand what is meant by 'point of sale display' To know that CAD stands for Computer-aided design 	 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