

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



**Digital World – Key Stage 2**

		Year 3 – Electronic Charm	Year 5 – Monitoring Devices
<b>Skills</b>	<b>Design</b>	<ul style="list-style-type: none"> <li>Problem solving by suggesting potential features on a Micro: bit and justifying my ideas</li> <li>Developing design ideas for a technology pouch</li> <li>Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge</li> </ul>	<ul style="list-style-type: none"> <li>Researching (books, internet) for a particular (user's) animal's needs</li> <li>Developing design criteria based on research</li> <li>Generating multiple housing ideas using building bricks</li> <li>Understanding what a virtual model is and the pros and cons of traditional and CAD modelling</li> <li>Placing and manoeuvring 3D objects, using CAD</li> <li>Changing the properties of, or combine one or more 3D objects, using CAD</li> </ul>
	<b>Make</b>	<ul style="list-style-type: none"> <li>Using a template when cutting and assembling the pouch</li> <li>Following a list of design requirements</li> <li>Selecting and using the appropriate tools and equipment for cutting, joining, shaping and decorating a foam pouch</li> <li>Applying function features such as using foam to create soft button</li> </ul>	<ul style="list-style-type: none"> <li>Understanding the functional and aesthetic properties of plastics</li> <li>Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range</li> </ul>
	<b>Evaluate</b>	<ul style="list-style-type: none"> <li>Analysing and evaluating an existing product</li> <li>Identifying the key features of a pouch</li> </ul>	<ul style="list-style-type: none"> <li>Stating an event or fact from the last 100 years of plastic history</li> <li>Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices</li> <li>Explaining key functions in my program (audible alert, visuals)</li> <li>Explaining how my product would be useful for an animal carer including programmed features</li> </ul>
<b>Knowledge</b>	<b>Technical</b>	<ul style="list-style-type: none"> <li>To understand that in programming a 'loop' is code that repeats something again and again until stopped</li> <li>To know that a Micro:bit is a pocket-sized, codeable computer</li> <li>Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm</li> </ul>	<ul style="list-style-type: none"> <li>To know that a 'device' means equipment created for a certain purpose or job and that monitoring devices observe and record</li> <li>To know that a sensor is a tool or device that is designed to monitor, detect and respond to changes for a purpose</li> <li>To understand conditional statements (and, or, if booleans) in programming are a set of rules which are followed if certain conditions are met</li> </ul>
	<b>Additional</b>	<ul style="list-style-type: none"> <li>To know what the 'Digital Revolution' is and features of some of the products that have evolved as a result</li> <li>To know that in Design and technology the term 'smart' means a programmed product</li> <li>To know the difference between analogue and digital technologies</li> <li>To understand what is meant by 'point of sale display'</li> <li>To know that CAD stands for Computer-aided design</li> </ul>	<ul style="list-style-type: none"> <li>To understand key developments in thermometer history</li> <li>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</li> <li>To know the 6Rs of sustainability</li> <li>To understand what a virtual model is and the pros and cons of traditional vs CAD modelling</li> </ul>