







Essential Knowledge

Computing

Key Concepts	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
 Programming	<p>Create a map</p> <p>Following a map, left and right, Introduction to Beebots, giving instructions</p>	<p>Understand an algorithm is a set of instructions to achieve a specific purpose.</p> <p>Understand that we control computers by giving them instructions.</p> <p>Know a series of commands can be joined together.</p> <p>Understand that the order of instructions in an algorithm is important.</p> <p>Understand that we control computers by giving them instructions.</p>	<p>Know that a sequence of commands has an outcome.</p> <p>Understand that computers have no intelligence and we have to program them to do things.</p> <p>Understand that instructions in an algorithm need to be in order, clear and unambiguous.</p>	<p>Know block language.</p> <p>Know how to debug a sequence.</p> <p>Know that different sequences can achieve the same outcome.</p>	<p>Know how to identify patterns (repetition) in a sequence.</p> <p>Know how to Identify a loop in a program.</p> <p>Know the importance in instruction order in a loop.</p>	<p>Know a loop can stop when a condition is met (number of times or event.)</p> <p>Know that a that program flow can branch according to a condition.</p>	<p>Know that a variable has a name and a value.</p>
 Digital Research				<p>Understand that search engines select pages according to keywords found in the content.</p>	<p>Understand that search engines rank pages according to relevance.</p>	<p>Understand that search engines use a cached copy of the crawled web to select and rank results.</p>	<p>Understand that search engines rank pages based on the number and quality of inbound links.</p>

 <p>Creating Media</p>	<p>Using classroom based equipment IWB, laptop, listening to stories and music on CD player</p>	<p>Know how to use a key board.</p> <p>Know why tools were chosen and used to edit a drawing.</p>	<p>Know how to type capital letters.</p> <p>Know that font can be changed .</p> <p>Know that images can be uploaded and edited.</p> <p>Begin to justify why tools were chosen and used.</p>	<p>Consider how different layouts can suit different purposes.</p> <p>Recognise a document can be formatted with placeholders.</p> <p>Understand animation is a sequence of drawings or photographs.</p> <p>Relate animated movement with a sequence of images.</p>	<p>Recognise images can be changed for different purposes.</p> <p>Consider the impact of changes made on the quality of the image.</p> <p>Recognise recorded audio is stored as a file.</p> <p>Consider the results of editing choices made.</p>	<p>Recognise an image is comprised of separate objects.</p> <p>Recognise that objects can be modified in groups.</p> <p>Recognise a video can be improved through editing.</p> <p>Consider the impact of changes made on the quality of the video.</p>	<p>Recognise components of a webpage layout.</p> <p>Understand the need for a navigation path.</p>
 <p>Data</p>		<p>Know that objects can be counted.</p> <p>Understand that objects can be describes in different ways.</p>	<p>Know that objects can be counted and compared using tally charts.</p>	<p>Identify object attributes needed to collect relevant data.</p> <p>Know that data can be used to answer questions.</p>	<p>Recognise that a sensor can be used as an input device for data collection.</p>	<p>Know what a database is.</p> <p>Know which tools to select and analyse data to answer questions.</p> <p>Select an appropriate graph to visually compare data.</p>	<p>Identify questions that can be answered using data.</p> <p>Recognise data can be calculated using different operations.</p> <p>Know the most suitable ways to presents data.</p>

 <p>Computer systems and networks</p>	<p>Children recognise that technology is used for particular purposes.</p>	<p>Be able to identify technology at home and in school.</p> <p>Identify a computer and it's main parts.</p> <p>Know what a mouse does.</p>	<p>Know some onformation technology in the home.</p> <p>Know how information technology benefits us.</p> <p>Knows the uses and features of information technology.</p>	<p>Explain how a computer network can be used to share information.</p> <p>Explain how digital devices function.</p> <p>Identify input and output devices.</p>	<p>Know how networks physically connect to other networks.</p> <p>Recognise how networked devices make up the internet.</p> <p>Recognise how the content of the WWW is created and shared by people.</p> <p>Know the current limitations of World Wide Web media.</p>	<p>Know that computers can be connected together to form systems.</p> <p>Recognise the role of computer systems in our lives.</p> <p>Recognise how information is transferred over the internet.</p> <p>Explain how sharing information online lets people in different places work together.</p>	
 <p>Safety</p>	<p>To know who to ask for help.</p>	<p>To know what the internet is and how we can use this safely.</p> <p>To understand we need to be careful about what we share.</p>	<p>To know how to keep things private online.</p> <p>To know who to ask before sharing information.</p> <p>To learn some stratagies to decide of something is real or not.</p>	<p>To understand the effects that some internet use can have on our feelings and emotional wellbeing.</p> <p>To understand the ways personal information can be shared on the internet.</p> <p>To understand the rules for social media platforms.</p>	<p>To describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy.</p> <p>To explain that technology can be designed to act like or impersonate living things.</p>	<p>To understand how apps can access our personal information and how to alter the permissions.</p> <p>To be aware of the positive and negative aspects of online communication.</p> <p>To discover ways to overcome bullying.</p>	<p>To describe issues online that give us negative feelings and know ways to get help.</p> <p>To think about the impact and consequences of sharing online.</p> <p>To be able to describe how to capture bullying content as evidence.</p> <p>To manage personal passwords effectively.</p>