

| Computing Knowledge Progression Grid | | | | |
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| | EYFS | Years 1 & 2 | Years 3 & 4 | Years 5 & 6 |
| I.T (information technology) | <p>Early Learning Goal</p> <p>Recognise that a range of technology is used in places such as homes and schools.</p> <p>They select and use technology for particular purposes.</p> | <p>To understand how to create digital art using an online paint tool.</p> <p>To identify where digital content can have its advantages over paper when storing and manipulating data.</p> <p>To recognise common uses of information technology, including beyond school.</p> <p>To recognise uses of technology beyond school.</p> <p>To know how computers are used in the wider world.</p> | <p>To understand that software can be used collaboratively online to work as a team.</p> <p>To know how to use search engines effectively to find information, focussing on key word searches and evaluating search returns.</p> <p>To understand how data is collected.</p> <p>To understand the vocabulary associated with databases: field, record and data.</p> <p>To know about the pros and cons of digital versus paper databases.</p> | <p>To know what a search engine is. To understand how a search engine works.</p> <p>To know about the Internet of Things and how it has led to 'big data'.</p> <p>To know how 'big data' can be used to solve a problem or improve efficiency.</p> |
| Digital Literacy | | <p>To understand the importance of a password.</p> <p>To understand how to stay safe when talking to people online, not sharing personal information and what to do if they see or hear something online that makes them feel upset or uncomfortable.</p> | <p>To know to be a responsible digital citizen; understanding their responsibilities to treat others respectfully and recognising when digital behaviour is unkind.</p> <p>To know about cyberbullying.</p> <p>To know what appropriate behaviour is when collaborating with others online.</p> <p>To know that information on the internet might not be true or correct and that some sources are more trustworthy than others.</p> | <p>To know how to use an online community safely.</p> <p>To recognise that all information on the internet might not be true or correct and learning ways of checking validity.</p> <p>To know how to use online communication safely.</p> <p>To understand the importance of secure passwords and how to create them.</p> <p>To know that updated software can help prevent data corruption and hacking.</p> |
| Computer Science | | <p>To know how to explore and tinker with hardware to find out how it works.</p> <p>To know where keys are located on the keyboard.</p> <p>To know what a computer is and that it is made of different components.</p> <p>To know buttons cause effect and that technology follows instructions</p> | <p>To understand what the different components of a computer do and how they work together.</p> <p>To know what a server does.</p> <p>To know about the purpose of routers.</p> <p>To know what a network is and its purpose.</p> <p>To recognise links between networks and the internet.</p> <p>To know how data is transferred.</p> | <p>To know external devices can be programmed by a separate computer.</p> <p>To know the difference between RAM and ROM.</p> <p>To know how the size of RAM affects the processing of data.</p> <p>To understand the fetch, decode, execute cycle.</p> <p>To know the history of computers and how they evolve over time.</p> |

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| | | <p>To know how to operate a camera.</p> <p>To know that decomposition means breaking down a problem and solving it.</p> <p>To know an algorithm is step by step instructions used to carry out a task or a specific order.</p> <p>To know to debug instructions when going wrong.</p> <p>To know what abstraction is.</p> <p>To know there are different levels of abstraction.</p> <p>To know that computers use algorithms to make predictions.</p> <p>To know that programs execute by following precise instructions.</p> <p>To know what loops are.</p> | <p>To understand that websites and videos are files that are shared from one computer.</p> <p>To know about the role of packets.</p> <p>To understand that computer networks provide multiple services, such as the World Wide Web and opportunities for communication and collaboration.</p> <p>To know computers follow instructions.</p> <p>To know the purpose of an algorithm.</p> <p>To understand websites can be altered by exploring the code.</p> | <p>To know how barcodes, QR codes and RFID work.</p> <p>To know some of the methods of data corruption.</p> <p>To know the vocabulary associated with data: data and transmit.</p> <p>To know how the data for digital images can be compressed.</p> <p>To recognise that computers transfer data in binary.</p> <p>To know messages can be sent by binary code.</p> <p>To understand how bit patterns represent images as pixels.</p> <p>To understand that computer networks provide multiple services.</p> |
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