

MPS COMPUTING SKILLS PROGRESSION	KS1		LKS2		UKS2	
	End of Year 1	End of Year 2	End of Year 3	End of Year 4	End of Year 5	End of Year 6
Algorithms	<i>Give simple instructions to everyday devices and make things happen.</i>	<i>Recognise what algorithms are, and that programs follow a sequence of clear instructions.</i>	<i>Use logic in order to provide an explanation for how an algorithm works</i>	<i>Detect and correct errors within algorithms/ programs. Introduction to the term 'debugging'</i>	<i>Initially, with support, begin to produce some algorithms of their own, which are logical and appropriate. Ensuring the creation of precise and accurate sequences of instructions.</i>	<i>Produce an algorithm independently, building upon knowledge from last year. This algorithm should aim to be used in connection to the organisation and recording of data.</i>
Computational Thinking	<i>Make choices in controlling simple models or simulations.</i>	<i>Write and test simple programs</i>	<i>Use sequence, selection and repetition in programs.</i>	<i>Test programs using models and simulations. Design and write programs that accomplish specific goals, working with variables for input and output.</i>	<i>Use flowcharts and/or other diagrams to demonstrate how a process works. Explore ways of organising data.</i>	<i>Create flowcharts independently to show how models and processes work.</i>
Data	<i>Explain that images give us information. Say what information the image gives them. Explore and understand simple pictograms.</i>	<i>Explain how a branching diagram works and how it can be used for classification and sorting. Place objects in a table. Sort them into groups.</i>	<i>Identify how to select information for a data table. Recognise which data is useful and relevant and which is not.</i>	<i>Design a questionnaire to collect data. Describe how to sort and organise information utilising a database. Create their own branching database to organise information they have found.</i>	<i>Learn how to check for and spot anomalies in data. Learn about formulae in spreadsheets and how these can be altered for differing purposes. Create collection forms for data collection. Make graphs from their own spreadsheets of data.</i>	<i>Explain how and why if you alter values the calculations (using formulae) change. Create independent data collection forms and enter data from these with accuracy. Make their own graphs via the sorting and filtering of key information.</i>
Digital Literacy	<i>Show an awareness of information in a variety of formats. Make decisions about whether or not statements and images are likely to be truthful.</i>	<i>Recognise the common uses of ICT beyond school. Organise, store and retrieve data from a range of digital formats.</i>	<i>Identify and select appropriate information using straightforward lines of enquiry. Use a variety of approaches to search for and retrieve digital information – search engines/browsers.</i>	<i>Evaluate the quality and success of their own solutions to ICT issues. Check the plausibility of information they find. Use and combine a variety of software and the internet to accomplish given goals including the collection and presentation of data.</i>	<i>Recognise the need for accuracy when searching for and selecting information. Use two or more sources to corroborate information that is found. Prepare and present information in a range of forms, using ICT safely and responsibly.</i>	<i>Take account of accuracy and potential bias when searching for and selecting information. Evaluate and improve presentations in light of discussion, marking and audience response. Link to peer-feedback.</i>
E-Safety	<i>Identify different devices that connect to the internet and those that do not. Understand the basic rules about e-safety and identify trusted adults for sharing concerns with.</i>	<i>Identify information that must be kept private. Learn to communicate safely with one another using ICT thinking about being kind and respectful.</i>	<i>Identify ways to keep safe when using ICT. Consider the implications of sending and posting online.</i>	<i>Recognise social networking sites and their features including age limits. Notice that social networking is also within online gaming. Make judgements about how to stay safe when communicating online.</i>	<i>Judge what sort of privacy setting might be relevant for reducing different risks. Judge when to answer a question online and when it is best not to. Learn about being a model online citizen and friend. Articulate what constitutes good behaviour online. Find and cite web addresses for any information gathered online. Learn about the term plagiarism.</i>	<i>Find "report" and "flag" buttons in commonly used sites and name sources of help (for example Childline, Cybermentors etc.)</i>
Networks	<i>Discuss how we use ICT in everyday life. Complete basic tasks on the computer/other devices following simple instructions.</i>	<i>Organise their own work into a digital folder.</i>	<i>Demonstrate a knowledge of computer systems by identifying the different parts of the computer and how they are used.</i>	<i>Demonstrate a knowledge of computer systems by describing the different parts of the computer and how they are used.</i>	<i>Select, use and combine a variety of software, including internet services explaining and exploring the use of email and online discussion as tools for collaborative communication.</i>	<i>Demonstrate knowledge and understanding of how networks work by describing the types of service offered e.g. through emails, www., ftp., and video conferencing etc. Design and create/utilise a range of programs to accomplish their own given goals.</i>
Problem Solving	<i>Solve a simple problem using ICT as an aid.</i>	<i>Predict the behaviour of a simple program.</i>	<i>Tackle a problem involving ICT by breaking it into manageable chunks.</i>	<i>Use logical reasoning to detect problems, make changes and then find out what happens as a result.</i>	<i>Use logical reasoning to solve problems and model situations and processes. Predict what might happen when various variables or rules within a set model are altered.</i>	<i>Independently solve problems and model situations by explaining how and why changing variables can alter the rules within a model.</i>