

Computing						
	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algorithms	Give simple instructions to everyday devices to make things happen	Recognise what algorithms are, how they are implemented as programs on digital devices and that programs execute by following a sequence of instructions	Use logical reasoning to explain how a simple algorithm works	Detect and correct errors in algorithms and programs (debug)	With support begin to produce algorithms by using logical and appropriate structures to organise data and create precise and accurate sequences of instructions	Produce algorithms independently using logical and appropriate structures to organise and record data
Computational thinking	Make choices to control simple models or simulations	Write and test simple programs	Use sequence, selection and repetition in programs	Test programs using models and simulations. Design and write programs that accomplish specific goals, working with variables for input and output	Use flowcharts and other diagrams to follow how a process or model works	Create flowcharts and other diagrams to explain how a process or model works
Problem solving	Solve a problem using ICT	Use logical reasoning to predict the behaviour of simple programs	Analyse and tackle problems by decomposing into smaller parts	Use logical reasoning to detect problems make changes and find out what happens as a result	Use logical reasoning to solve problems and model situations and processes Predict what will happen when variables and rules within a model are changed	Independently problem solve and model situations and processes by understanding and explaining the impact of changing variables and rules within a model
Networks- Knowledge and understanding	Discuss and share how and when they use ICT in everyday life	Explain why digital folders are used	Demonstrate a knowledge of computer systems and hardware by describing input and output devices used in everyday life	Demonstrate knowledge and understanding of computer hardware including input , output and storage	Demonstrate knowledge and understanding of computer systems and hardware by identifying and defining the functions of the processor, memory backing	Demonstrate knowledge and understanding of how networks work by describing the types of service offered e.g. through email, www, ftp and video conferencing

					storage and peripherals in a typical desktop computer	
Networks- using and applying	Complete simple tasks on a computer by following instructions	Organise work into digital folders	Use software or search engines effectively	Create programs to control physical systems. Discuss opportunities for online communication and collaboration.	Select, use and combine a variety of software including internet services on a range of digital devices explaining how email and online discussion areas are used for communication and collaboration	Design and create/use a range of programs to accomplish given goals
Digital Literacy- knowledge and understanding	Show an awareness of information in different formats	Recognise common uses of ICT beyond school	Become discerning in evaluating digital content	Evaluate the quality and success of their solutions. Check the plausibility and usefulness of information they find.	Recognise the need for accuracy when searching for and selecting information Use different sources to double check information found	Take account of accuracy and potential bias when searching for and selecting information
Digital Literacy- using and applying	Make decisions about whether or not statements or images found on line are likely to be true	Organise, store, manipulate and retrieve data in a range of digital formats	Identify and select appropriate information using straightforward lines of enquiry. Use different approaches to search and retrieve digital information including the browser address bar and shortcuts	Use and combine a variety of software and internet services on a range of digital devices to accomplish given goals including collecting, analysing, evaluating and presenting data and information	Prepare and present information in a range of forms, using ICT safely and responsibly	Evaluate and improve presentations in the light of discussion, marking and audience response
E-Safety- Personal knowledge and understanding	Identify different devices that can go online and separate those that do not	Identify obviously false information in a variety of contexts. Identify personal information that should be kept private	Identify ways to keep safe when using ICT. Think before sending and suggest consequences of sending /posting	Recognise social networking sites and social networking features, built into other things such as online games and handheld games consoles. Make judgements in order	Judge what sort of privacy settings might be relevant for reducing different risks Judge when to answer a question online and when not to	Find, report and flag buttons in commonly used sites and name sources of help e.g. ChildLine and cyber mentors Find a Click CEOP button and explain to parents what it is for

				to stay safe whilst communicating with others online		
E-safety-responsibilities	Understand rules around e-safety and know who to tell if something concerns them online	Communicate safely, respecting and considering other people's feelings online	Recognise online behaviours that would be unfair. Show respect for individuals and intellectual property	Know who to tell if anything worries them online. Identify potential risks when presented with scenarios, including social networking profiles. Use ICT responsibly, securely and safely	Be a good online citizen and friend. Articulate what constitutes good behaviour online. Find and cite the web address for any information or resource found online	Discuss scenarios involving online risk. State the source of information found online. Act as a role model for younger children
Data-Knowledge and understanding	Explain that images give information. Say what a pictogram is showing them	Explain how a branching diagram or tree works	Identify how to select information to put into a data table. Recognise which information is suitable for their topic	Describe how to sort and organise information to use in a database	Describe how to check for and spot inaccurate data. Know which formulas to use to change a spreadsheet model	Explain that changing the numerical data affects a calculation
Data- using and applying	Put data into a program (pictogram)> Sort objects and pictures in lists or simple tables	Place objects and pictures in a list or a simple table. Make a simple Yes/No tree diagram or sort information	Design a questionnaire to collect information	Create a branching database from information they have collected and sorted	Create data collection forms and enter data from these accurately. Make graphs from the calculations on their own spreadsheet	Create data collection forms and enter data from these accurately. Make graphs from the calculations on their spreadsheet. Sort and filter information.