	St Peter's Church of England Primary School		
	Planning overview	**Subject Computing**	**Matters, Skills and Processes**
Key Stage 1		**Key Stage 2**	

Key Stage 1	Key Stage 2
Pupils should be taught: • **Algorithms** To understand what Algorithms are and how they are implemented as programs on digital devices • **Create Programs** To create and debug simple programs. • **Reasoning** To use logical reasoning to predict the behaviour of simple programs. • **Using Technology** To use technology purposefully to create, organise, store, manipulate and retrieve. • **IT Use Beyond School** To recognise common uses of information technology beyond school. • **Safe Use** To use technology safely keeping personal information private; identify where to go for help when concerned about content/contact on the internet.	Pupils should be taught: • **Create Programs** To design, write and debug programs that accomplish specific goals, including controlling/simulating physical systems; solve problems by decomposing them into smaller parts. • **Develop Programs** To use sequence, selection, repetition in programs; work with variables and forms of input/output. • **Reasoning** To use logical reasoning to explain how simple algorithms work and to detect and correct errors in algorithms and programs. • **Networks** To understand computer networks including the internet; how they provide multiple services such as the WWW; opportunities they offer for communication and collaboration. • **Search Engines** Use search technologies and appreciate how results are selected and ranked; be discerning in evaluating digital content. • **Using Programs** To select, use and combine a variety of software (including internet) on a range of digital devices to design/create a range of programs, systems and content to accomplish given goals. • **Safe Use** To use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify ways to report concerns about content and contact.

Key Stage 1

	Algorithms	Create Programs	Reasoning	Using Technology	Uses of IT beyond School	Safe Use
Year 1	Create a series of instructions and plan a journey for a programmable toy	Create, store and retrieve digital content		Use a website and a camera to record sound and play back	Talk about some of the IT uses in their own home	Use technology safely keep personal information private
Year 2	Understand that algorithms are used on digital devices	Write a simple program and test it	Predict what the outcome of a simple program will be (logical reasoning).	Understand that programs require precise instructions organise, retrieve and manipulate digital content	Know how technology is used in school and outside of school	Know where to go for help if concerned

		Key Stage 2					
	Create Programs	**Develop Programs**	**Reasoning**	**Networks**	**Search Engines**	**Using Programs**	**Safe Use**
Year 3	Write programs that accomplish specific goals	Design a sequence of instructions, including directional instructions	Discern when it is best to use technology and where it adds little or no value	Navigate the web to complete simple searches	Use a range of software for similar purposes Collect and present information	Understand what computer networks do and how they provide multiple services	Use technology respectfully and responsibly Know different ways they can get help if concerned
Year 4	Give an 'on-screen' robot specific instructions that takes them from A to B	Experiment with variables to control models	Make an accurate prediction and explain why they believe something will happen (linked to programming)	Know how to search for specific information and know which information is useful and which is not	Select and use software to accomplish given goals	Produce and upload a podcast	Recognise acceptable and unacceptable behaviour using technology
Year 5	Use technology to control an external device	Develop a program that has specific variables identified	Analyse and evaluate information reaching a conclusion that helps with future developments		Understand how search results are selected and ranked	Combine sequences of instructions and procedures to turn devices on and off	Understand that they have to make choices when using technology and that not everything is true and/or safe
Year 6	Write a program that combines more than one attribute	Develop a sequenced program that has repetition and variables identified	Design algorithms that use repetition and 2-way selection		Be aware that some search engines may provide misleading information	Present the data collected in a way that makes it easy for others to understand	Be increasingly aware of the potential dangers in using aspects of IT and know when to alert someone if feeling uncomfortable