



Computing overview with links to the National Curriculum

KS1 Year One

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Technology around us	• To identify technology • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type on a computer • To use the keyboard to edit text • To create rules for using technology responsibly	Use technology safely and respectfully Recognise common uses of information technology beyond school Keeping personal information private Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
Spring Moving a robot Beebot	• To explain what a given command will do • To act out a given word • To combine forwards and backwards commands to make a sequence • To combine four direction commands to make sequences • To plan a simple program	Use technology safely and respectfully To recognise that programs execute by following precise and

	To find more than one solution to a problem	unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs
Summer Programming animations tablet	- To choose a command for a given purpose - To show that a series of commands can be joined together - To identify the effect of changing a value - To explain that each sprite has its own instructions - To design the parts of a project - To use my algorithm to create a program	Use technology safely and respectfully To understand what algorithms are To understand how algorithms are implemented as programs

KS1 Year Two

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Creating media- Digital photography	- To use a digital device to take a photograph - To make choices when taking a photograph - To describe what makes a good photograph - To decide how photographs can be improved - To use tools to change an image - To recognise that photos can be changed	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
Spring Data and information- pictograms	- To recognise that we can count and compare objects using tally charts - To recognise that objects can be represented as pictures - To create a pictogram - To select objects by attribute and make comparisons	Use logical reasoning to predict the behaviour of simple programs

	• To recognise that people can be described by attributes • To explain that we can present information using a computer	
Summer Programming A- Robot algorithms	• To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program • To explain that programming projects can have code and artwork • To design an algorithm • To create and debug a program that I have written	Understand what algorithms are, how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.

LKS2 Year Three

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Connecting computers	• To explain how digital devices function • To identify input and output devices • To recognise how digital devices can change the way we work • To explain how a computer network can be used to share information • To explore how digital devices can be connected • To recognise the physical components of a network	understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
Spring Sequencing sounds	• To explore a new programming environment • To identify that commands have an outcome	use sequence, selection, and repetition in

	• To explain that a program has a start • To recognise that a sequence of commands can have an order • To change the appearance of my project • To create a project from a task description	programs; work with variables and various forms of input and output
Summer Desktop publishing	• To recognise how text and images convey information • To recognise that text and layout can be edited • To choose appropriate page settings • To add content to a desktop publishing publication • To consider how different layouts can suit different purposes • To consider the benefits of desktop publishing	select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

LKS2 Year Four

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Computing Systems and Networks – The Internet	• To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • To outline how websites can be shared via the World Wide Web (WWW) • To describe how content can be added and accessed on the World Wide Web (WWW) • To recognise how the content of the WWW is created by people • To evaluate the consequences of unreliable content	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report

		concerns about content and contact. understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
Spring Programming A – Repetition in Shapes	• To identify that accuracy in programming is important • To create a program in a text-based language • To explain what 'repeat' means • To modify a count-controlled loop to produce a given outcome • To decompose a task into small steps • To create a program that uses count-controlled loops to produce a given outcome	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
Summer Creating Media – Photo Editing	• To explain that the composition of digital images can be changed • To explain that colours can be changed in digital images • To explain how cloning can be used in photo editing • To explain that images can be combined	select, use and combine a variety of software (including internet services) on a range of

	• To combine images for a purpose • To evaluate how changes can improve an image	digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
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UKS2 Year Five

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Systems and Searching	• To explain that computers can be connected together to form systems • To recognise the role of computer systems in our lives • To experiment with search engines • To describe how search engines select results • To explain how search results are ranked • To recognise why the order of results is important, and to whom	understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer

		for communication and collaboration
Spring Video Production	• To explain what makes a video effective • To identify digital devices that can record video • To capture video using a range of techniques • To create a storyboard • To identify that video can be improved through reshooting and editing • To consider the impact of the choices made when making and sharing a video	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Summer Selection in quizzes	• To explain how selection is used in computer programs	design, write and debug programs that

	• To relate that a conditional statement connects a condition to an outcome • To explain how selection directs the flow of a program • To design a program which uses selection • To create a program which uses selection • To evaluate my program	accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
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UKS2 Year Six

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Communication and Collaboration	• To explain the importance of internet addresses • To recognise how data is transferred across the internet • To explain how sharing information online can help people to work together • To evaluate different ways of working together online • To recognise how we communicate using technology • To evaluate different methods of online communication	understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a

		range of ways to report concerns about content and contact.
Spring Web Creation	• To review an existing website and consider its structure • To plan the features of a web page • To consider the ownership and use of images (copyright) • To recognise the need to preview pages • To outline the need for a navigation path • To recognise the implications of linking to content owned by other people	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Summer Sensing Movement	• To create a program to run on a controllable device • To explain that selection can control the flow of a program • To update a variable with a user input • To use a conditional statement to compare a variable to a value • To design a project that uses inputs and outputs on a controllable device • To develop a program to use inputs and outputs on a controllable device	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,
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