

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Programming – Computer Science: algorithms, data representation, logic and abstraction	P1a to explain what a given command will do P1b to combine four direction commands to make sequences P1c to plan a simple program P1d to show a series of commands can be joined together P1e to explain that each sprite has its own instructions P1f to use my algorithm to create a given program	P2a to describe a series of instructions as a sequence P2b to use logical reasoning to predict the outcome of a program P2c to design an algorithm P2d to explain that a sequence of commands has an outcome P2e to create a program using a given design P2f to decide how my project can be improved	P3a to create a program to move a sprite in four directions P3b to develop my program by adding features P3c to identify and fix bugs in a program	P4a to explain that in programming there are infinite loops and count controlled loops P4b to develop a design that includes two or more loops which run at the same time P4c to create a project that includes repetition	P5a to explain how selection is used in computer programs P5b to create a program which uses selection P5c to evaluate my program	P6a to explain that selection can control the flow of a project P6b to use a conditional statement to compare a variable to a value P6c to develop a program to use inputs and outputs on a controllable device
	Expectations at the end of units		Expectations at the end of units			
	Moving a Robot Writing short algorithms and programs for floor robots and predicting program outcomes Programming Animations Designing and programming the movement of a character on a screen to tell stories	Robot Algorithms Creating and debugging programmes, and using logical reasoning to make predictions Programming Quizzes Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions	Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	Selection in quizzes Exploring selection in programming to design and code an interactive quiz.	Sensing movement Designing and coding a project that captures inputs from physical devices.

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Computing Systems and Networks – Computer Science:- principles of information and computation, how digital systems work Digital Literacy	CSN1a to identify technology CSN1b to identify and use the main parts of a computer (mouse pad and keyboard) CSN1c to create rules for using technology responsibly	CSN2a to recognise the uses and features of information technology CSN2b to identify technology in, and beyond, school CSN2c to explain how to use information technology safely	CSN3a to explain how digital devices function CSN3b to identify input and output devices CSN3c to explain how the physical components of a network work together	CSN4a to describe how networks physically connect to other networks CSN4b to outline how websites can be shared via the World Wide Web (WWW) CSN4c to recognise that the content of the WWW is created by people and how it is accessed	CSN5a to explain that computers can be connected together to form systems CSN5b to describe how search engines select results CSN5c to explain how search results are ranked and to whom it is important	CSN6a to explain the importance of internet addresses CSN6b to explain how sharing information online can help people to work together CSN6c to recognise how we communicate using technology
	Expectations at the end of units		Expectations at the end of units			
	Technology Around Us – Recognising technology in school and using it responsibly	Information Around Us – Identifying IT and how its responsible use improves our world in school and beyond	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks	The internet Recognising that the internet is a network of networks including the WWW, and why we should evaluate online content.	Systems and searching Recognising IT systems in the world and how some can enable searching on the internet.	Communication and collaboration Exploring how data is transferred by working collaboratively online.

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Creating Media – Information and Communication Technology: to create a range of content	CM1a to make careful choices when painting a digital picture CM1b to use a computer on my own to create a digital picture CM1c to compare painting a picture on a computer and on paper CM1d to add and remove text on a computer CM1e to make careful choices when changing text CM1f to explain why I used the tools I chose	CM2a to use a digital device to take a photograph CM2b to decide how photos can be improved CM2c to recognise that photos can be changed CM2d to say how music can make us feel CM2e to identify that there are patterns in music CM2f to create music for a purpose	CM3a to recognise how text and images convey information CM3b to recognise that text and layout can be edited CM3c to consider how different layouts can suit different purposes	CM4a to explain that the composition and colours of a digital image can be changed CM4b to explain how cloning can be used in photo editing CM4c to combine images for a purpose	CM5a to explain what makes an effective video CM5b to capture video using a range of techniques from a storyboard CM5c identify that video can be improved through reshooting and editing	CM6a to review and existing website and consider its structure CM6b to consider the ownership and use of images (copyright) CM6c to outline the need for a navigation path
	Expectations at the end of units		Expectations at the end of units			
	Digital Painting choosing appropriate tools in a program to create art, and making comparisons with working non-digitally Digital Writing Using a computer to create and format text before comparing to writing non-digitally	Digital Photography Capturing and changing digital photographs for different purposes Digital Music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition	Desktop publishing Creating documents and modifying text, images and page layouts for a specific purpose	Photo editing Manipulating digital images, and reflecting on the impact of the changes and whether the required purpose is fulfilled,	Video production Planning, capturing, and editing video to produce a short film.	Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics and navigation.

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Data and Information – Computer Science: algorithms, data representation, logic, abstraction	D1a to label and count objects D1b to compare and describe objects D1c to answer questions about groups of objects	D2a to present data in different formats – tally chart, pictogram, pictures D2b to select objects by attribute and make comparisons D2c to explain that we can present information using a computer	D3a to create questions with yes/no answers D3b to create and use a branching database D3c to compare information shown in a pictogram to a branching database	D4a to use a digital device to collect data D4b to recognise how a computer can help us analyse data D4c to identify the data needed to answer questions	D5a to compare paper and computer-based data bases D5b to outline how you can answer questions by grouping then sorting data D5c to explain that computer programs can be used to compare data visually	D6a to create and build a data set in a spreadsheet D6b to explain that formulas can be used to produce calculated data D6c to create a spreadsheet to plan an event
	Expectations at the end of units			Expectations at the end of units		
	Grouping Data Exploring object labels, then using them to sort and group objects by properties	Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer	Branching databases Building and using branching databases to group objects using yes/no questions.	Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation,	Flat-file databases Using a database to order data and create charts to answer questions	Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.