COMPUTING OVERVIEW

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
EYFS UW	• **Nursery:** Shows interest in toys with buttons, flaps and simple mechanisms and begins to learn to operate them. • **Reception:** Uses ICT Hardware to interact with age appropriate computer software.	• **Nursery:** Shows interest in toys with buttons, flaps and simple mechanisms and begins to learn to operate them. • **Reception:** Uses ICT Hardware to interact with age appropriate computer software.	• **Nursery:** • Seeks to require basic skills in turning on and operating some digital equipment. • **Reception:** Develops digital literacy skills by being able to access, understand, interact with a range of technologies.	• **Nursery:** • Plays with water to investigate "low technology" such as washing and cleaning. • **Reception:** Completes a simple programme on electronic devices.	• **Nursery:** Operates mechanical toys • Plays with water to investigate "low technology" such as washing and cleaning. • **Reception:** Uses ICT hardware to interact with age appropriate computer software. • Completes a simple program on electronic devices.	• **Nursery:** Operates mechanical toys • Plays with water to investigate "low technology" such as washing and cleaning. • **Reception:** Uses ICT hardware to interact with age appropriate computer software. • Completes a simple program on electronic devices. •
KS1 CYCLE A	Digital Painting Create, store and retrieve digital content Choose appropriate tools in a program to create art, and make comparisons with working non-digitally	Moving a Robot Create a series of instructions and plan a journey for a programmable toy Write short algorithms and programmes for floor robots and predicting program outcomes	Grouping Data Explore object labels then use them to sort and group objects by properties.	Robot Algorithms Write a simple program and test it Creating and debugging programs, and using logical reasoning to make predictions.	Pictograms Understand that programs require precise instructions Organise, retrieve and manipulate digital content Know where to go for help if concerned Collecting data in tally charts and using attributes to organise and present data on a computer.	Making Music Understand that programs require precise instructions Organise, retrieve and manipulate digital content Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.
KS1 CYCLE B	Technology around us Recognise technology in school and using it responsibly	Information Technology around us 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 Identifying IT and how its responsible use improves our world in school and beyond.	Digital Photography Understand that programs require precise instructions Organise, retrieve and manipulate digital content Know how technology is used in school and outside of school Capture and change digital photographs for different purposes.	Digital Writing Using a computer to create and format text, before comparing to writing non-digitally.	Programming Animations Create, store and retrieve digital content Designing and programming the movement of a character on screen to tell stories.	2 Programming Quizzes 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

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						Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.
LKS2 CYCLE A	Desktop publishing Create documents by modifying text, images, and page layouts for a specified purpose. 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	The Internet Recognise the internet as a network of networks including the WWW, and why we should evaluate online content. 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 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Sequencing Music Create sequences in a block-based programming language to make music 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	Repetition in Shape Use a text-based programming language to explore count-controlled loops when drawing shapes. 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	Stop-frame animation Capture and edit digital still images to produce a stop-frame animation that tells a story 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	Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output 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 CYCLE B	**Photo Editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. 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,	**Connecting Computers** Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Understand computer networks, including the internet; how they can provide multiple services,	**Events and actions** Writing algorithms and programs that use a range of events to trigger sequences of actions. Safe Use -recognise acceptable and unacceptable behaviour using technology -Know different ways to get help, if concerned Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve	**Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game. 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	**Branching databases** Building and using branching databases to group objects using yes/no questions 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	**Audio editing** Capturing and editing audio to produce a podcast, ensuring that copyright is considered. 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,

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	systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	such as the World Wide Web, and the opportunities they offer for communication and collaboration	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	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	presenting data and information	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
UKS2 CYCLE A	Selection in physical computing Develop a program that has specific variables identified 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, evaluating and presenting data and information	Selection in physical computing Use technology to control a ddevice 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, evaluating and presenting data and information	Sharing information Understand that they have to make choices when using technology and that not everything is true and/or safe 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 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,	Introduction to spreadsheets Select and use software to accomplish given goals 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	3D modelling Select and use software to accomplish goals 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	Video editing To understand how search results and selected and ranked 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

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UKS2 CYCLE B	Selection in quizzes Use technology to control and external 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, evaluating and presenting data and information	Sensing Make an accurate prediction and explain why they believe something will happen (linked to programming) 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, evaluating and presenting data and information	Internet communication Produce and upload a podcast Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 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 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	Web page creation Experiment with variables to control models 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	Vector drawing Combine sequences of instructions and procedures to turn devices on and off 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	Fact file databases Analyse and evaluate information reaching a conclusion that helps with future developments 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

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