Computing Medium Term Plan

	Autumn 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Computing Systems + Networks: Improving mouse skills** Information Technology Recognise common uses of information technology beyond school. Digital Literacy Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, 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.	**Online Safety** Information Technology Recognise common uses of information technology beyond school. Digital Literacy Use technology safely and respectfully, 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.	**Programming 1: Algorithms Unplugged** Computer Science Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. Create and debug simple programs.	**Skills Showcase: Rocket to the Moon** Digital Literacy Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Programming 2: Bee Bot** Computer Science Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	**Creating Media: Digital Imagery** Computer Science Use logical reasoning to predict the behaviour of simple programs. Digital Literacy Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Information Technology Use technology safely and respectfully, 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. Recognise common uses of information technology beyond school.	**Data Handling: Introduction to Data** Digital Literacy Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Information Technology Recognise common uses of information technology beyond school.

Year 2	**Computer Systems 1: What is a Computer?** <u>Computer Systems</u> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. <u>Information Technology</u> Recognise common uses of information technology beyond school.	**Online Safety** <u>Digital Literacy</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, 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. <u>Information Technology</u> Recognise common uses of information technology beyond school.	**Computer Systems 2: Word Processing** <u>Digital Literacy</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, 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.	**Programming 1: Algorithms + Debugging** <u>Computer Systems</u> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	**Programming 2: Scratch Jr** <u>Computer Systems</u> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. <u>Digital Literacy</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Creating Media: Stop Motion** <u>Digital Literacy</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. <u>Information Technology</u> Recognise common uses of information technology beyond school.	**Data Handling: International Space Station** <u>Computer Systems</u> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. <u>Digital Literacy</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Year 3	**Computing Systems + Networks 1: Networks** <u>Digital Literacy and Information Technology</u> 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. <u>Digital Literacy</u> 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.	**Online Safety** <u>Digital Literacy and Information Technology</u> 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. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Programming: Scratch** <u>Computer Systems</u> 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. <u>Digital Literacy and Information Technology</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. <u>Computer Systems and Information Technology</u> 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.	**Emailing: Google** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Journey Inside a Computer** <u>Computer Systems</u> 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. <u>Digital Literacy and Information Technology</u> 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.	**Creating Media** <u>Digital Literacy and Information Technology</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. <u>Computer Systems and Information Technology</u> 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 Handling: Comparison Cards Databases** <u>Computer Systems and Information Technology</u> 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.

Year 4	**Systems and Networks: Collaborative learning** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Online Safety** <u>Digital Literacy and Information Technology</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Programming: Coding with Scratch** <u>Computer Systems</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Creating Media: Website Design** <u>Digital Literacy and Information Technology</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. <u>Computer Systems and Information Technology</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. <u>Computer Systems and Information Technology</u> 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.	**Skills Showcase: HTML** <u>Computer Systems</u> 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. <u>Computer Systems and Information Technology</u> 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. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of	**Data Handling: Investigating Weather** <u>Computer Systems</u> Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. <u>Computer Systems and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Programming 2: Computational Thinking** <u>Computer Systems</u> 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. <u>Computer Systems and Information Technology</u> 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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Year 5	**Data Handling: Mars River 1** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Online Safety** <u>Digital Literacy and Information Technology</u> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. <u>Computer Systems and Information Technology</u> 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. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Skills Showcase: Mars Rover 2** <u>Computer Systems and Information Technology</u> 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.	**Programming 1: Music** <u>Computer Systems</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Programming 2: Micro:bit** <u>Computer Systems and Information Technology</u> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <u>Computer Systems</u> 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. 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. <u>Digital Literacy and Information Technology</u> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and	**Creating Media: Stop motion animation** <u>Computer Systems</u> 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.	**Systems and Networks: Search Engines** <u>Digital Literacy and Information Technology</u> 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. <u>Digital Literacy</u> 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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Year 6	**Creating Media: History of Computers** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Online Safety** <u>Digital Literacy and Information Technology</u> 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. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Programming: Introduction to Python** <u>Computer Systems</u> 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. <u>Computer Systems and Information Technology</u> 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.	**Systems and Networks: Bletchley Park** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> 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. <u>Digital Literacy</u>	**Data handling: Big Data 1** <u>Digital Literacy and Information Technology</u> 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. <u>Computer Systems and Information Technology</u> 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. <u>Digital Literacy</u> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Data Handling: Big Data 2** n/a	**Skills Showcase: Inventing a product** <u>Computer Systems</u> 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. <u>Digital Literacy and Information Technology</u> 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

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