Whole School Curriculum Design: Computing Sequence of Learning & Progression of Skills

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Although the 'Technology' strand has been removed from 'Understanding the World' in the new EYFS curriculum 2021, the children in the Early Years will continue to their build confidence when using technology purposefully through cross curricular links, such as communication and language, mathematics, physical development and the characteristics of effective learning.**					
YEAR 1	**Logging on (to the network)** **Knowledge: What is a computer and its peripherals** **Concepts: Information Technology and Digital Literacy** **Skills: Logging onto school network with personal login** **National Curriculum** Use technology safely and respectfully, keeping personal information private; identify where to go for support when they have concerns about content or contact on the internet or online technologies. (D)	**Walking with Dinosaurs** **Knowledge: To understand the word 'algorithm'** **Concepts: Computer Science** **Skills: Instructions need to be given in a correct order** **National Curriculum** Understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. (C) Create and debug simple programs (C)	**Pictures Tell a Thousand Words** **Knowledge: How to use photography functions on an iPad** **Concepts: Digital literacy** **Skills: Taking different types of shots** **National Curriculum** I can identify where to go for help and support when I have concerns about things online. (D) I am able to keep my personal information safe. (D)	**Crazy Creatures** **Knowledge: Understanding control, directional language and programming** **Concepts: Computer Science** **Skills: Programming a Beebot** **National Curriculum** Understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. (C) Create and debug simple programs. (C) Use logical reasoning to predict the behaviours of simple programs. (C)	**Young Investigators** **Knowledge: How to search the internet** **Concepts: Information Technology and Digital Literacy** **Skills: Creating a poster or PowerPoint** **National Curriculum** Use technology safely and respectfully, keeping personal information private; identify where to go for support when they have concerns about content or contact on the internet or online technologies. (D) Use technology purposefully to create. Organise, store, manipulate and retrieve digital content. (I)	**We Are All Connected** **Knowledge: How the web works** **Concepts: Computer Science and Digital Literacy** **Skills: Creating an eBook** **National Curriculum** Recognise common uses of information technology beyond school. (D) Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (I)

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	Logging onto School 360	You've got mail	Whatever the weather	Code-tastic	Young Author	Let's Fix IT
YEAR 2	**Knowledge: Learning about and using the functions on a keyboard** **Concepts: Information Technology and Digital Literacy** **Skills: Logging onto School 360** **National Curriculum** Use technology purposefully to create, organise, store, manipulate and retrieve digital content (I) Use technology safely and respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact. (D)	**Knowledge: Sending responsible emails** **Concepts: Information Technology and Digital Literacy** **Skills: Sending an email** **National Curriculum** Recognise common uses of information technology beyond the school. (D) Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (I)	**Knowledge: how data can be presented and interpreted** **Concepts: Information Technology** **Skills: Using an appropriate method to display the data captured** **National Curriculum** Use technology purposefully to create, organise, store, manipulate and retrieve digital content (I)	**Knowledge: How computer programs run** **Concepts: Computer science** **Skills: Learning about and applying code** **National Curriculum** Understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. (C) Create and debug simple programs. (C) Use logical reasoning to predict the behaviours of simple programs. (C)	**Knowledge: How technology has advanced** **Concepts: Information Technology and Digital Literacy** **Skills: Creating an eBook** **National Curriculum** Use technology safely and respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact. (D) Use search technologies effectively. (I) 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. (I)	**Knowledge: To analyse simple computer programs, identifying any errors within the code and finding a solution.** **Concepts: Computer science** **Skills: Using SCRATCH** **National Curriculum** Create and debug simple programs. (C) Use logical reasoning to predict the behaviours of simple programs. (C)

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	We are Publishers	Big Robots	Get Blogging	Class democracy	My First Program	Events and Actions
YEAR 3	**Knowledge: How to create an eBook** **Concepts: Information Technology and Digital Literacy** **Skills: Using Book creator** **National Curriculum** 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 (I) Use technology safely, respectfully and responsibly; recognize acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact. (D)	**Knowledge: Reinforce programming and directional language** **Concepts: Computer Science** **Skills: Writing an algorithm** **National Curriculum** Understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. (C) Create and debug simple programs. (C) Use logical reasoning to predict the behaviours of simple programs. (C)	**Knowledge: How to wiki's work** **Concepts: Information Technology and Digital Literacy** **Skills: Creating a blog** **National Curriculum** 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 (I) Understand the opportunities (networks) offer for communication and collaboration. (D) Be discerning in evaluating digital content. (D)	**Knowledge: Creating a bill for proposed legislation** **Concepts: Information Technology and Digital Literacy** **Skills: Creating animation** **National Curriculum** Use search technologies effectively. (I) 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 (I) Use technology safely, respectfully and responsibly; recognize acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact. (D)	**Knowledge: Creating a program** **Concepts: Information Technology and Computer Science** **Skills: Using SCRATCH** **National Curriculum** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts. (C) Use sequence, selection, and repetition in programs, work with variables and various forms of input and output. (C) 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 (I)	**(Teach Computing)** **Knowledge: Creating and developing a program** **Concepts: Information Technology and Computer Science** **Skills: Using SCRATCH** **National Curriculum** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. (C) Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (C) Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (C) 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. (I)

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	Final Score	Back to the Future	Making Games	Hurray for Hollywood	Interface Designer	We Built This City
YEAR 4	**Knowledge: To be discerning when evaluating digital content** **Concepts: Information Technology and Digital Literacy** **Skills: Creating a poster with bias** **National Curriculum** Use search technologies effectively (I) Be discerning evaluating digital content (D) Use technology safely, respectfully and responsibly; recognize acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact (D)	**Knowledge: Researching different technologies, inventors and computer components** **Concepts: Computer Science and Information Technology** **Skills: Creating a blog** **National Curriculum** Appreciate how [search] results are selected and ranked (C) Use search technologies effectively (I) 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. (I)	**Knowledge: Creating a computer game** **Concepts: Computer Science and Information Technology** **Skills: Using SCRATCH** **National Curriculum** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts. (C) Use sequence, selection and repetition in programs, work with variables and various forms of input and output. (C) 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 (I)	**Knowledge: Creating a film with a plot, characters and storyboard** **Concepts: Digital Literacy** **Skills: Filming and editing footage using an appropriate app or program** **National Curriculum** Understand the opportunities (networks) offer for communication and collaboration. (D) Be discerning in evaluating digital content (D) Use technology safely, respectfully and responsibly; recognize acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact (D)	**Knowledge: How to create a web page** **Concepts: Computer Science and Information Technology** **Skills: Building a basic web page using tags and elements to change the design and the colour of the web page** **National Curriculum** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts. (C) Use sequence, selection and repetition in programs, work with variables and various forms of input and output. (C) 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 (I)	**Knowledge: How to create a 3D world** **Concepts: Computer Science and Digital Literacy** **Skills: Creating a 3D world using an appropriate app or program** **National Curriculum** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts (C) Use sequence, selection and repetition in programs, work with variables and various forms of input and output. (C) Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs (C) Use technology safely, respectfully and responsibly; recognize acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact (D)

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