

LONG TERM CURRICULUM MAP - Computing

KS2 National Curriculum – Pupils should be taught to:

- 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
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Upper KS2 Cycle A		
Autumn 1	Spring 2	Summer
Space	Titanic – Mini unit	Mexico
Computing systems and networks- Sharing information Creating media- Video editing	Programming A – Selection in physical computing Data and information- Flat-file databases	Creating media- Vector drawing Programming B- Selection in quizzes
• 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 • 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	• 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 • 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	• 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

Upper KS2 Cycle B			
Autumn	Spring 1	Summer 1	Summer 2
Darwin's Delights	Victorians	I am Wonderful	Ancient Greece
Computing systems and networks- Internet communication Creating media- Webpage creation	Programming A – Variables in games Data and information- Introduction to spreadsheets	Creating media- 3D Modelling	Programming B- Sensing
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Lower KS2 Cycle A		
Autumn 1	Autumn 2	Summer 2
Egyptians	Tremors	Potions and Urban Pioneers
Computing systems and networks- Connecting computers Creating media- Stop frame animation	Programming A – Sequencing sounds Data and information- Branching databases	Creating media- Desktop publishing Programming B- Events and actions in programs
- 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, including collecting, analysing, evaluating and presenting data and information	- 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 - 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	- 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 - 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

Lower KS2 Cycle B			
Autumn	Spring 1	Spring 2	Summer
Romans - I am Warrior	Mighty Mountains	Scrumdiddlyumptious	The Iron Man
Computing systems and networks- The internet Creating media- Audio editing	Programming A – Repetition in shapes	Data and information- Data logging	Creating media- Photo editing Programming B- Repetition in games
- 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 - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	- 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 - 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 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	- 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 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

KS1 LONG TERM CURRICULUM MAP - Computing

KS1 National Curriculum – Computing Pupils should be taught:

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.

- 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.

KS1 Cycle A

Autumn	Spring	Summer
Big Lights, Big City & Paws Claws and Whiskers	Splendid Skies & Scented Garden	Rio de Vida & Land Ahoy
Computing systems and networks- Information technology around us. Creating media- Digital photography	Programming A- Robot algorithm Data and information- Pictograms	Creating media- making music Programming B- quizzes
<u>National curriculum links</u> • Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Recognise common uses of information technology beyond school • 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>National curriculum links</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 • 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>National curriculum links</u> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • 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 Other links: Music • Play tuned and untuned instruments musically • Listen with concentration and understanding to a range of high-quality live and recorded music • Experiment with, create, select and combine sounds using the inter-related dimensions of music

KS1 Cycle B

Autumn	Spring	Summer 2
Street detectives & Superheroes	Moon Zoom & Dinosaur Planet	Towers, Tunnels and Turrets & Beachcombers
Computing systems and networks- Technology is around us Creating media- Digital painting	Programming A- Moving a robot Data and information- Grouping Data	Creating media- Digital Writing Programming B- Programming animations
• Recognise common uses of information technology beyond school	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content

• 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. • Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	• Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs • Recognise common uses of information technology beyond school • Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Use technology safely and respectfully	• Use technology safely and respectfully, keeping personal information private • 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
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