Computing KS1 National Curriculum

Pupils should be taught to:

- 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 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.

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.

Details of coverage from September 2019

Computing Skills and Knowledge	route A or B	Term and Theme
C1/1.1 understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Route A Route B	Lego builders, Maze Explorers, Coding Coding
C1/1.2 create and debug simple programs	Route A Route B	Maze Explorers, Coding Coding
C1/1.3 use logical reasoning to predict the behaviour of simple programs	Route A Route B	Maze Explorers, Coding Coding
C1/1.4 use technology purposefully to create, organise, store, manipulate and retrieve digital content	Route A Route B	Grouping and sorting, Pictograms, Animated Stories, Coding, Spreadsheets Spreadsheets, Questioning, Effective Searching, Creating Pictures, Making Music, Presenting Ideas
C1/1.5 recognise common uses of information technology beyond school	Route A Route B	Technology Outside of School Effective searching
C1/1.6 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.	Route A Route B	Online safety Online Safety
C2/1.1 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Route A Route A Route B	Y5/6- Game Creator, Coding Y3/4- 3.1 Coding Y3/4- 4.1 Coding; 4.5 Logo
C2/1.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output	Route A Route A Route B Route B	Y5/6 Coding Y3/4- 3.1 Coding Year 5/6 Text Adventures Y3/4- 4.1 Coding; 4.5 Logo

C2/1.3 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Route A Route A Route B	Coding Y3/4- 3.1 Coding Y3/4- 4.1 Coding
C2/1.4 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	Route A/B Route A Route B Route B	Y3/4/5/6 Online Safety every lesson Y3/4- 3.5 Email; Year 5/6- Blogging, Networks Y3/4- 4.7 Effective Searching;4.8 Hardware Investigation
C2/1.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	Route A/B Route B	Y3/4/5/6 Online Safety every lesson Y3/4- 4.7 Effective searching
C2/1.6 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	Route A Route A Route B Route B	Coding, Spreadsheets, Game Generator, 3D Modelling Y3/4- 3.5 Email; 3.7 Simulations Adventure Stories, Quizzing Y3/4- 4.1 Coding; 4.6 Animation
C2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Route A/B	Y3/4/5/6 Online Safety every lesson