Christopher Pickering Primary School

Be the Best you can Be!

Christopher Pickering Computing Long Term Plan 2021-2022

Computing

The intention for our young digital learners
The computing curriculum will: ● equip pupils to use computational thinking and creativity to understand and change the world. ● make deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. ● teach the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. ● build on this knowledge and understanding to ensure pupils are equipped to use information technology to create programs, systems and a range of content. ● enable pupils to become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

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Programme of Study
Key Stage 1

The national curriculum for computing aims to ensure that all pupils can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Pupils should be aiming to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. They will be able to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. Pupils are aiming to be responsible, competent, confident and creative users of information and communication technology.

Pupils should be taught to:

- (C1) Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- (C2) Create and debug simple programs
- (C3) Use logical reasoning to predict the behaviour of simple programs
- (C4) Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- (C5) Recognise common uses of information technology beyond school
- (C6) 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.

Predominant Area of Computing
*Most units will include aspects of all strands

Computer Science	Information technology	Digital Literacy

KS1	Autumn	Spring	Summer

2

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Year 1	**Poles Apart** C6 - Unit 1.1 - Online Safety and Exploring Purple Mash C4 - Unit 1.2 - Grouping and sorting C4 - Unit 1.3 – Pictograms Online Safety Coverage throughout the term: Privacy and Security and Online Bullying (See Online Safety LTP)	**Enchanted Woodland** C1 - Unit 1.4 - Lego Builders C1, C2, C3 - Unit 1.5 - Maze Explorers C4 - Unit 1.6 - Animated Story Books Online Safety Coverage throughout the term: Online Relationships & Reputation and Self-Image and Identity & Managing Online Information (See Online Safety LTP)	**The British Coastline** C1, C2, C3, C4 - Unit1.7 – Coding C4 - Unit 1.8 – Spreadsheets C5 - Unit 1.9 – Technology outside school Online Safety Coverage throughout the term: Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)
Year 2	**The First Moon Landing** C1, C2, C3 - Unit 2.1 – Coding C6 - Unit 2.2 - Online Safety C4 - Unit 2.3 – Spreadsheets Online Safety Coverage throughout the term: Privacy and Security and Online Bullying (See Online Safety LTP)	**London** C4 - Unit 2.4 – Questioning C4, C5 - Unit 2.5 – Effective Searching Online Safety Coverage throughout the term: Online Relationships & Reputation and Self-Image and Identity & Managing Online Information (See Online Safety LTP)	**Explorers of the Sea** C4 - Unit 2.6 – Creating Pictures C4 - Unit 2.7 – Making Music C4 - Unit 2.8 – Presenting Ideas Online Safety Coverage throughout the term: Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)

Programme of Study
Key Stage 2

Pupils should be taught to:

- (C7) design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

- (C8) use sequence, selection, and repetition in programs; work with variables and various forms of input and output

- (C9) use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

- (C10) 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

- (C11) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

- (C12) 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

- (C13) use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Predominant Area of Computing
*Most units will include aspects of all strands

Computer Science	Information technology	Digital Literacy

		Autumn	Spring	Summer
Year 3		**WWII** Unit 3.1 – Coding C7, C8, C9 Unit 3.2 – Online Safety C13 Unit 3.3 – Spreadsheets C12 Online Safety Coverage throughout the term: Privacy and Security and Online Bullying (See Online Safety LTP)	**Stone, Bronze and Iron Age** Unit 3.4 – Touch Typing C12 Unit 3.5 – E-mail C9, C12, C13 Unit 3.6 – Branching Databases C12 Online Safety Coverage throughout the term: Online Relationships & Reputation and Self-Image and Identity & Managing Online Information (See Online Safety LTP)	**Volcanoes and Earthquakes** Unit 3.7 – Simulations C12 Unit 3.8 – Graphing C12 Unit 3.9 – Presenting C12 Online Safety Coverage throughout the term: Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)
Year 4		**Ancient Egypt** Unit 4.1 – Coding C7, C8, C9,C12 Unit 4.2 – Online Safety C13 Online Safety Coverage throughout the term: Privacy and Security and Online Bullying (See Online Safety LTP)	**Romans** Unit 4.3 – Spreadsheets C12 Unit 4.4 – Writing for different purposes C12 Unit 4.5 – Logo C7, C8, C9 Online Safety Coverage throughout the term: Online Relationships & Reputation and Self-Image and Identity & Managing Online Information	**Rainforests** Unit 4.6 – Animation C12 Unit 4.7 – Effective Search C11 Unit 4.8 – Hardware Investigators C10 Unit 4.9 – Making Music C8 Online Safety Coverage throughout the term:

		(See Online Safety LTP)	Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)
Year 5	**Ancient Greece** Unit 5.1 – Coding C7, C8, C9, C12 Unit 5.2 – Online Safety C10, C13 Online Safety Coverage throughout the term: Privacy and Security and Online Bullying (See Online Safety LTP)	**Vikings, Anglo Saxons and Scots** Unit 5.3 – Spreadsheets C12 Unit 5.4 – Databases C12 Online Safety Coverage throughout the term: Online Relationships & Reputation and Self-Image and Identity & Managing Online Information (See Online Safety LTP)	**Rivers and The Water Cycle** Unit 5.5 – Game Creator C7, C12 Unit 5.6 – 3D Modelling C12 Unit 5.7 – Concept Maps C12 Unit 5.8 – Word Processing C12 Online Safety Coverage throughout the term: Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)
Year 6	**Ancient Mayan Civilization** Unit 6.1 – Coding C7, C8, C9, C12 Unit 6.2 – Online Safety C10, C11, C13 Unit 6.3 – Spreadsheets C12 Online Safety Coverage throughout the term: Privacy and Security and Online Bullying	**Crime and Punishment** Unit 6.4 – Blogging C10, C12, C13 Unit 6.5 – Text Adventures C7, C8, C9, C12 Unit 6.6 – Networks C10 Online Safety Coverage throughout the term:	**The Changing World** Unit 6.7 – Quizzing C12 Unit 6.8 – Understanding Binary C7, C8, C9 Unit 6.9 – Spreadsheets C12 Online Safety Coverage throughout the term: Health, Wellbeing & Lifestyle and recap on all content (See Online Safety LTP)

	(See Online Safety LTP)	<mark>Online Relationships & Reputation</mark> and <mark>Self-Image and Identity & Managing Online Information</mark> (See Online Safety LTP)	