Slater Primary Computing long-term plan
2024-2025

NC links KS1	NC links KS2	NC taxonomy KS2		
		Abbreviation	**Strand**	**Description**
Pupils should be taught to: **K1.1**. understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **K1.2** create and debug simple programs **K1. 3** use logical reasoning to predict the behaviour of simple programs **K1.4** use technology purposefully to create, organise, store, manipulate and retrieve digital content **K1.5** recognise common uses of information technology beyond school **K1.6** uses technology safely and respectfully, keeping personal information private; identifies where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	**Pupils should be taught to:** **K2. 1** design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **K2.2** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **K2.3** use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **K2.4** 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 **K2.5** use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content **K2.6** 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 **K2.7** use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify	NW	Networks	Understand how networks can be used to retrieve and share information, and how they come with associated risks
		CM	Creating Media	Select and create a range of media including text, images, sounds, and video
		DI	Data & Information	Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
		DD	Design & Development	Understand the activities involved in planning, creating, and evaluating computing artefacts.
		CS	Computing Systems	Understand what a computer is, and how its constituent parts function together as a whole
		IT	Impact of Technology	Understand how individuals, systems, and society as a whole interact with computer systems
		AL	Algorithms	Be able to comprehend, design, create, and evaluate algorithms
		PG	Programming	Create software to allow computers to solve problems
		ET	Effective Use of tools	Use software tools to support computing work
		SS	Safety & Security	Understand risks when using technology, and how to protect individuals and systems
EYFS **Theme: Technology** **Understanding the world**	In the Early Years curriculum, computing is based on children's essential skills to operate a simple programme on a computer or tablet. This may be a drawing programme or a programme linked to maths, literacy or topics. Simple mouse skills and operation skills are learnt during the foundation stage. Our children will recognise that a range of technology is used in places such as homes and schools and to select and use technology for particular purposes.			

Term	Unit 1	unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Theme	***Computing systems and networks***	***Creating Media***	***Programming A***	***Data Information***	***Creating media***	***Programming B***
NC link	**K1.4, 5 & 6**	**K1.4,5 & 6**	**K1, 2, 3, 5 & 6**	**K1.4, 5, 6**	**K1.4, 5 & 6**	**K1. 1, 2, 3 & 4**
Taxonomy Strands	**CS CN ET IT SS**	**CM DA ET IT SS**	**PG AL DT T IT SS**	**DI ET IT SS**	**CM DA ET IT SS**	**PG AL DT T IT SS**
Y1	**Information Technology Digital Literacy**	**Information Technology**	**Computer Science/ Digital Literacy**	**Information Technology/ Digital Literacy**	**Information Technology// Digital Literacy**	**Computer Science/ Information Technology**
	Technology around us Recognising technology in school and using it responsibly.	**Digital painting** Choosing appropriate tools in a program to create art, and making comparisons with working nondigitally.	**Moving a robot** Writing short algorithms and programs for floor robots, and predicting program outcomes.	**Grouping data** Exploring object labels, then using them to sort and group objects by properties.	**Digital writing** Using a computer to create and format text, before comparing to writing non-digitally.	**Programming animations** Designing and programming the movement of a character on screen to tell stories.
Y2	**Information Technology Digital**	**Information Technology /Digital Literacy**	**Computer Science/ Digital Literacy**	**Information Technology**	**Information Technology**	**Computer Science/ Information Technology**
	Information technology around us Identifying IT and how its responsible use improves our world in school and beyond.	**Digital photography** Capturing and changing digital photographs for different purposes.	**Robot algorithms** Creating and debugging programs, and using logical reasoning to make predictions	**Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Digital music** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	**Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz
KS2						
Term	Unit 1	unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Theme	***Computing systems and networks***	***Creating Media***	***Programming A***	***Data Information***	***Creating media***	***Programming B***
NC Link	**K2. 1,2, 4,6 & 7**	**K2. 5,6, &7**	**K.2 1.2.3 & 6**	**K2. 2,4, 5, 6 & 7**	**K2. 5, 6 & 7**	**K2. 1,2,3 & 6**
Taxonomy strand	**CS CN ET IT SS**	**CM DD ET IT SS**	**PG AL DD ET IT SS**	**DI ET IT SS**	**CM DD ET IT SS**	**PG AL DD ET IT SS**
Y3	**Computer Science/ Information Technology**	**Information Technology/ Digital Literacy**	**Computer Science/ Information Technology**	**Information Technology/ Digital Literacy**	**Information Technology**	**Computer Science/ Information Technology**
	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	**Stop-frame animation** Capturing and editing digital still images to produce a stop frame animation that tells a story.	**Sequencing sounds** Creating sequences in a block-based programming language to make music.	**Branching databases** Building and using branching databases to group objects using yes/no questions.	**Desktop publishing** Creating documents and modifying text, images and page layouts for a specific purpose.	**Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions.

Y4	**Computer Science Information Technology Digital Learning**	**Information Technology/ Digital Literacy**	**Computer Science/ Information Technology**	**Information Technology/ Digital Literacy**	**Computer Science/ Information Technology**	**Computer Science/ Information Technology**
	The Internet Recognising that the internet is a network of networks, including the WWW, and why we should evaluate online content.	**Audio production** Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	**Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes.	**Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	**Photo editing** Manipulating digital images, and reflecting on the impact of the changes and whether the required purpose is fulfilled.	**Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game
Y5	**Computer Science/ Information Technology**	**Computer Science/ Digital Literacy**	**Computer Science/ Information Technology**	**Information Technology**	**Information Technology**	**Computer Science/ Information Technology**
	Systems and searching Recognising IT systems in the world and how some can enable searching on the internet.	**Video production** Planning, capturing, and editing video to produce a short film.	**Selection in physical computing** Exploring conditions and selection using a programmable microcontroller	**Flat-file databases** Using a database to order data and create charts to answer questions.	**Introduction to vector graphics** Creating images in a drawing program by using layers and groups of objects.	**Selection in quizzes** Exploring selection in programming to design and code an interactive quiz.
Y6	**Computer Science/ Information Technology**	**Digital literacy/ Information Technology**	**Computer Science/ Information Technology/ Digital Learning**	**Information Technology**	**Digital literacy/ Information Technology**	**Computer Science/ Information Technology**
	Communication and collaboration Exploring how data is transferred by working collaboratively online.	**Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics and navigation	**Variables in games** Exploring variables when designing and coding a game.	**Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data	**3D modelling** Planning, developing, and evaluation 3D computer models of physical objects.	**Sensing movement** Designing and coding a project that captures inputs from physical devices.