Heron Hill Computing Progression and Vocabulary Map

Computing	Autumn 1	Autumn 2	Spring 1		Spring 2	Summer 1	Summer 2
Computing focus	**Digital Literacy – Devices**		**Information Technology – Digital Painting**			**Computer Science - Beebots**	
Nursery Computing focus	Know how to click on an object using on interactive whiteboard.		Know how to draw a shape on an interactive whiteboard.			Know how to move a Beebot.	
Reception Computing focus	Know how to move a mouse and click.	Know that pictures online may not be real	Know how to use a paintbrush and change the colour.		Know how to take a picture	Know how to move a Beebot.	
Key vocabulary	Safe Screen Mouse Keyboard	Image Fake	Paint Image Mouse		Image Capture	On Off Forward Backwards	
Year 1	Unity in the Community	Happily Ever After	Come Fly with me – Arctic Circle		Royal Patrons	Going Wild	Paddington's Passport
	CONFLICT	COMMUNICATION	CULTURE		COMPETENCY UNITS	CONSERVATION	
Computing focus	DL - Technology around us	IT - digital painting	IT - Editing images	DL - Internet safety day	CS - Moving Beebots	CS – Websites	IT- audio passport
Learning objective	Know what a device is.	Know how to use a paintbrush, changing the style and colour.	Know how to make an image larger and smaller	Know that some people online are not who they say they are.	Know how to move a Beebot backwards and forwards.	Know what a website is.	Know how to turn an audio recorder on and off.
Key vocabulary	Computer Device Information Content	Image Paint Mouse Font Style	Digital Edit Smaller Larger	Online safety Device Protection	On Off Move Instructions - algorithms	Online Page Information Public	Start Stop Record
Year 2	Land Ahoy!	Zero to Hero	Inter-Nation Media Station		Powhatan People Dancing Spy	Light up the World	Never Eat Shredded Wheat
	CONFLICT	CULTURE	COMMUNICATION		NC	CONSERVATION	
Computing focus	DL - Technology around us and beyond	CS – Internet	IT - radio report	DL - Internet safety day	IT – data handling (graphs)	KidSafe	CS - Beebot maze
Learning objective	Know what a device is and the use of it.	Know what the internet is.	Know how to record a sound and play it back.	Know what to do if something I see online upsets me.	Know how to choose an appropriate software to create a graph.	Know how to talk openly about staying safe online.	Know how to move a Beebot in different directions.
Key vocabulary	Device Uses Information	Device Online Internet Public	Record Play Pause	E-safety Device Report	Software Input Data Graph	Safety Responsibly	Direction - Left, Right, Backwards, Forwards Algorithms Program

Computer Science (CS) Information Technology (IT) Digital Literacy (DL)

Year 3	Athens v Sparta	Cry Freedom	Picture our Planet		Lightning Speed		Lindow Man	Rocky the Findosaur
	CONFLICT	CULTURE	CONSERVATION		COMMUNICATION			
Computing focus	DL - online privacy	CS – programming	DL - Internet safety day	IT - Animation	CS - WWW	CS – software/ hardware	IT – data handling	CS - programming (Kodu or Scratch)
Learning objective	Know that people can access my information if put online.	Know how to plan a specific route for a BeeBot.	Know the risks of clicking on 'pop-ups' when online.	Know how to take a series of simple photos putting them together to create an animation.	Know what the World Wide Web is. Information	Know what software is. Know what hardware is.	Know what a spreadsheet is and how to input data.	Know how to debug one error in a set of code.
Key vocabulary	Safety Privacy Protection Personal	Route Direction Orientation	Phishing Risk Virus	Image Capture Movement Stop motion	Network World-wide Digital pages	Physical Digital Parts Instructions	Excel Spreadsheet Data Cell Input	Block coding Sequence Loops Debug

Year 4	Under the Canopy	That's all Folks!	Come Fly with me Africa			Law and Order	Viking Warrior - Saxon King	May the Force be with You
	CONSERVATION	COMMUNICATION	CULTURE			CONFLICT	NC	
Computing focus	DL - online privacy	IT - Animation	DL - Internet safety day	CS - networks	CS – hardware	IT –data handling	CS - programming/ algorithms (Scratch and Beebots)	DL - Copyright
Learning objective	Know how to prevent my information online from being shared.	Know how to create a short animation by capturing multiple images.	Know that certain sites have age restrictions and reasons for those.	Know what a network is.	Know the external parts of a computer	Know how to input the data into a given format to create a graph.	Know how to debug multiple errors in a set of code.	Know what copyright is and that online content is owned by someone
Key vocabulary	Private Confidential Safe Password	Movement Sequence Animation	Restriction Appropriate Age ratings	Data Hub Store Connected	Screen Keyboard Mouse Monitor Ports	Microsoft Excel Spreadsheet Input Output Cell Formula	Block coding Controls Variable Debug	Content Property Ownership

Year 5	Wars of the World		I have a Dream		Mission Control			Time Team	In Your Element	Enterprise
	CONFLICT		CULTURE		COMMUNICATION					CONSERVATION
Computing focus	IT - research	DL - staying safe online	IT - audio	CS – hardware	DL - online relationships	DL - Internet safety day	IT - video and audio	IT - data handling	CS - predictions for programming	CS - Website
Learning objective	Know how to search safely online.	Know the actions to take if I feel unsafe online.	Know how to record an audio soundtrack.	Know the key internal parts of a computer.	Know how to communicate online safely and responsibly.	Know that my online actions have consequences.	Know how to join video and audio together.	Know how to choose a format to input data into.	Know how to create a set of accurate code, predicting the outcome.	Know how to create their own website working collaboratively.

Computer Science (CS) Information Technology (IT) Digital Literacy (DL)

Key vocabulary	Device Safe Search engine Specific Appropriate	Trusted Protection Safety	Audio Record Replay Audio file	Hard drive Motherboard Random access memory (R.A.M.) Video card Sound card	Safe Trustworthy Messages Communication	Responsibility Actions Consequences	Record Visual Audio Soundtrack	Microsoft excel Workbook Input Output Formulas Data Format	Controls Variables Predict	Google sites Insert Embed Publish Public
Year 6	You're not Invited		Come Fly with Me America		A World of Bright Ideas			Global Warming	Walk Like an Egyptian	That's Life 1
	CONFLICT		CULTURE		COMMUNICATION			CONSERVATION		
Computing focus	DL- fake news	CS - hardware	IT – emails		CS – programming (game creation)	DL - Internet safety day		IT - data handling	IT – presentation with audio	CS - Website
Learning objective	Know that online information is based on someone's opinion. Biased	Know that a computer is made up of many interacting components.	Know that people communicate using emails and know how to send and reply to one.		Know how to create a set of code for a specific purpose, predicting and debugging outcomes.	Know that my online actions have consequences.		Know how to input data into and find different ways to present data.	Know how to create a presentation and add audio soundtracks.	Know how to create their own website independently.
Key vocabulary	Propaganda Fake Reliable	Hard drive Motherboard Random access memory (R.A.M.) Video card Sound card	Email Communicate Receive Send Subject Recipient		Algorithm Controls Variable Prediction Outcomes Debugging	Responsibility Maturity Actions Consequences		Workbook Input Output Formulas Data Presentation Charts/graphs	PowerPoint Slides Audio file Insert Embed Presentation	Google sites Insert Embed Publish Copyright

3 Strands of the Computing NC:

- Information technology is about the use of computers for functional purposes, such as collecting and presenting information, or using search technology.
- Digital Literacy (DL) is about the safe and responsible use of technology, including recognising its advantages for collaboration or communication.
- Computer science will introduce children of all ages to understanding how computers and networks work. It will also give all children the opportunity to learn basic computer programming to more complex sequences.

Computer Science (CS) Information Technology (IT) Digital Literacy (DL)

NC - Subject content

Key stage 1

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 or the internet or other online technologies.

Key stage 2

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.

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