



Computing Curriculum

INTENT:

To provide a high quality computing curriculum that equips pupils to use computational thinking and creativity to change the world whilst remaining creative, engaging and cross-curricular. The four key areas of coverage ensure skills are both progressive and comprehensive.

STRUCTURE:

Computer Science (CS) – pupils are taught the principles of computational thinking, they will design and build programs

Information technology (IT) - allows pupils express themselves and develop their ideas through information and communication technology

Digital Literacy (DL) – to understand how computers and computer systems work

Online Safety (OS) – pupils use technology safely & respectfully

PROGRAMMES OF STUDY:

	KS1	KS2
CS	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p>	<p>Design, write & debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>

IT	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Use search technologies effectively 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 and presenting data and information
DL	Recognise common uses of information technology beyond school	Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web Appreciate how {search} results are selected and ranked Understand the opportunities {networks} offer for communication and collaboration
OS	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	Be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

EXPECTATIONS:

Computer Science and Digital Literacy are **distinct units of work** (on average 6 lessons each) and should be taught as 1 unit each half term. With the exception of Y2 and 6 will have 4 units across the year instead of 6.

Online Safety is a planned and regular session, 1 lesson per half term.

Information Technology Units, are CROSS CURRICULAR media units that focus on the development of multi-media creation skills.

Information Technology Skills are **embedded skills** to be taught within Computer Science, cross curricular lessons and any other use of technology

PROGRESSION:

Please see document ATLP Primary Computing Progression

RESOURCES:

Everyone Can Create (ECC) <https://www.apple.com/uk/education/everyone-can-create/>

Everyone Can Code (EC Code) <https://www.apple.com/uk/education/k12/teaching-code/>

Everyone Can animate (EC Animate) <https://books.apple.com/gb/book/everyone-can-animate-an-introduction-to-animation/id1509015551>

Be Internet Legends (BIL) https://beinternetlegends.withgoogle.com/en_uk

Be Internet Citizens (BIC) <https://internetcitizens.withyoutube.com>

CURRICULUM OVERVIEW:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	<p>CS 1A: Barefoot Algorithms</p> <p>IT ECC: Drawing: Word Art</p> <p>OS PenguinPig</p>	<p>DL Computer systems & Networks</p> <p>IT ECC: Drawing: Observational Sketching</p> <p>OS Be Internet Legends: Sharp: Activity 1</p>	<p>DL Connecting Computers</p> <p>IT ECC: Drawing: Portraits</p> <p>OS Be Internet Legends: Alert: Activity 2</p>	<p>DL The Internet</p> <p>IT ECC: Drawing: Architectural design</p> <p>OS Be Internet Legends: Kind: Activity 1</p>	<p>CS Sphero</p> <p>IT ECC: Drawing: Infographics</p> <p>OS Be Internet Citizens: 3 sides to every story: Baseline & Activity 1</p>	<p>CS Swift – EC Code Puzzles 7& 8</p> <p>IT ECC: Photo: Photo Journalism</p> <p>OS Be Internet Citizens: Us Vs Them: Activity 2, Plenary & assessment</p>
Autumn 2	<p>DL 1E: Technology around Us</p> <p>IT ECC: Photo: Everyday Objects</p> <p>OS Hectors World Episode 1 & 2</p>	<p>CS 2A: Scratch Astronauts</p> <p>IT ECC: Photo: Portraits</p> <p>OS Be Internet Legends: Sharp: Activity 2</p>	<p>CS Scratch Maths Quiz</p> <p>IT ECC: Photo: Scenes</p> <p>OS Be Internet Legends: Alert: Activity 3</p>	<p>CS Scratch Game developers</p> <p>IT ECC: Photo: Action</p> <p>OS Be Internet Legends: Kind: Activity 2</p>	<p>CS Minecraft</p> <p>IT ECC: Photo: Collage Competition</p> <p>OS Be Internet Citizens: 3 sides to every story: Activity 2</p>	<p>CS Python Coding</p> <p>IT ECC: Photo: Publishing Competition</p> <p>OS Be Internet Citizens: Haters Gonna Hate: Baseline & Activity 1</p>
Spring 1	<p>CS 1B: Bee Bot Treasure Hunters</p>	<p>CS 2B: Lego WeDo</p>	<p>CS Sphero Block Coding</p>	<p>CS Minecraft</p>	<p>DL Sharing Information</p>	

	<p>IT ECC: Music: Live Loops</p> <p>OS Hectors World Episode 3 & 4</p>	<p>IT ECC: Music: Song Construction</p> <p>OS Be Internet Legends: Sharp: Activity 3</p>	<p>IT ECC: Music: Rhythm & beat</p> <p>OS Be Internet Legends: Secure: Activity 1</p>	<p>IT ECC: Music: Chords & Melodic</p> <p>OS Be Internet Legends: Kind: Activity 3</p>	<p>IT ECC: Music: Song</p> <p>OS Be Internet Citizens: 3 sides to every story: Activity 3 & Plenary / assessment</p>	<p>IT ECC: Music Post Production</p> <p>OS Be Internet Citizens: Haters Gonna Hate: Activity 2, plenary & assessment</p>
Spring 2	<p>DL Data</p> <p>IT ECC: Video: Your First Film</p> <p>OS MonkeyCow</p>	<p>IT ECC: Video: Silent Film</p> <p>OS Be Internet Legends: Sharp: Activity 4</p>	<p>CS Lego WeDo 2</p> <p>IT ECC: Video: Animatics</p> <p>OS Be Internet Legends: Secure: Activity 2</p>	<p>CS Sphero</p> <p>IT ECC: Video: Tutorials</p> <p>OS Be Internet Legends: Kind: Activity 4</p>	<p>CS Lego Prime</p> <p>IT ECC:Video: documentaries</p> <p>OS Be Internet Citizens: Emotional Manipulation: Baseline & Activity 1</p>	<p>IT ECC: Video: Mobile Reports</p> <p>OS Be Internet Citizens: Creators for Change: Reconnecting & section 1 activity</p>
Summer 1	<p>CS 1C: Knock Knock Scratch Junior</p> <p>IT ECC: Animation: Episode</p> <p>OS Hectors World Episode 5 & 6 (Thinkuknow)</p>	<p>IT ECC: Animation: Episode</p> <p>OS Be Internet Legends: Sharp: Activity 5</p>	<p>CS Swift- EC Code Puzzles 1 & 2</p> <p>IT ECC: Animation: Episode</p> <p>OS Be Internet Legends: Secure: Activity 3</p>	<p>DL HTML Coders</p> <p>IT ECC: Animation: Episode</p> <p>OS Be Internet Legends: Kind: Activity 5</p>	<p>CS Swift – EC Code Puzzles 5 & 6</p> <p>IT ECC: Animation: Episode</p> <p>OS Be Internet Citizens: Emotional Manipulation: Activity</p>	<p>CS BBC MicroBit</p> <p>IT ECC: Video: Short Film Production: Animation</p> <p>OS Be Internet Citizens: Creators for change: section 2</p>

					2, Plenary & assessment	
Summer 2	<p>CS 1D Beginning to Code</p> <p>IT ECC: Creative Projects (publishing)</p> <p>OS Jessie & friends Episodes 1,2, 3</p>	<p>CS 2C: Bug Fixers</p> <p>IT ECC: Creative Projects (publishing)</p> <p>OS Be Internet Legends: Alert: Activity 1</p>	<p>DL Data</p> <p>IT ECC: Creative Projects (publishing)</p> <p>OS Be Internet Legends: Secure: Activity 4</p>	<p>CS Swift – EC Code 3 & 4</p> <p>IT ECC Creative Projects (publishing)</p> <p>OS Be Internet Legends: Brave: (Summary)</p>	<p>DL Communication & Data</p> <p>IT ECC Creative Projects (publishing)</p> <p>OS Be Internet Citizens:Us Vs Them: Baseline & Activity 1</p>	<p>DL Computers past, present, future</p> <p>IT ECC Creative Projects (Publishing)</p> <p>OS Be Internet Citizens: Creators for Change: Section 3 & Close of unit</p>