



Computing & ICT - KS1 Curriculum Overview



Cycle	Autumn	Spring	Summer
2022-2023	Emergency!	Animal Kingdom	Super Heroes
ICT	<p>CS: Understand simple algorithms. Create simple programs (Beebot) – forward / backwards.</p> <p>ICT: Sound - Use IPADS/Easispeak to record/ playback (retell story of great fire of London). Use cameras – recreate parts of story from great fire. Combine text and graphics - create fire safety poster. Create/store/ retrieve own work.</p> <p>e-Safety: Safe and unsafe behaviours (Anti-bullying week). Smartie the Penguin - Tell a trusted adult.</p>	<p>CS: Use digital devices to program simple journeys. Make predictions and debug errors. Talk about what a computer does.</p> <p>ICT: Use Cameras to take photos of local area/ animals and add to Photostory/iPhoto. Record sound to accompany photographs using iPad/Easispeak/pegs – playback and use in writing. Create/store/retrieve Word documents.</p> <p>e-Safety: Privacy and passwords (Safer Internet Day)</p>	<p>CS: iPad apps - writing precise and unambiguous instructions eg Daisy the dinosaur, Kodables, Beebot app</p> <p>ICT: Research superheroes using the internet. Create own superhero using drawing/painting software. Create superhero animation/ comic strip. Combine text and graphics to create their own superhero cards.</p> <p>e-Safety: Don't share information and what to do if you come across pop ups.</p>
2023-2024	Toys	Dinosaurs	Explorers
ICT	<p>CS: Understand that algorithms are implemented as programs on digital devices (Beebots). Make routes using precise instructions using arrow cards. Debug simple programs – did it reach the right place? Use Beebot app for more complex instructions and programs.</p> <p>ICT: Use branching database to sort and identify animals.</p> <p>e-Safety: It's OK to tell (Anti-bullying week): Learn rules for online safety/trusted adults etc</p>	<p>CS: Introduce programming using iPad apps</p> <p>ICT: Consider different uses of technology in our daily lives at home and at school. Design poster advertising for a job as an explorer/astronaut using desktop publishing. Record sounds using easispeak pegs/iPads Record video eg Hot seating.</p> <p>e-Safety: Privacy and passwords (Safer Internet Day): CEOP, Hector's World, Think-u-know.</p>	<p>CS: Use logical reasoning to predict the behaviour of simple programs and sets of instructions. How do we debug? Use Beebot app for more complex instructions.</p> <p>ICT: Word process/Publisher/PowerPoint - nonfiction texts, posters, information leaflets. Combine text and graphics with Photostory.</p> <p>e-Safety: Netsmartz – Router's Birthday Surprise. Magda and Mo e-book – tell a trusted adult.</p>
2021-2022	Castles	Weather	Rainforests
ICT	<p>CS: Understand that algorithms are programs on digital devices. Make routes using precise instructions. Debug simple programs. Begin to use block programming.</p> <p>ICT: Learn to log in to a computer. Type short texts using keyboard skills including the space bar. Navigate around the screen using mouse skills.</p> <p>Be able to independently find and use an app on a tablet eg take and view a photograph/video.</p> <p>Use a Database for sorting and identifying materials.</p> <p>e-Safety: Internet Traffic Light – Common Sense Media.</p>	<p>CS: Understand that algorithms programs on digital devices. Be able to debug more complex problems.</p> <p>ICT: Use technology purposefully to organise & manipulate digital content. Combine simple text and graphics. Create a poster and be able to save, retrieve and print work.</p> <p>e-Safety: Putting a stop to online meanness – Common Sense Media. With support, use a safe search engine e.g. Swiggle https://swiggle.org.uk/.</p>	<p>CS: Use logical reasoning to predict the behaviour of simple programs. Plan a journey around a simple route.</p> <p>ICT: Create and add simple images. Draw or modify a picture related to other work in the curriculum. Add a suitable picture into a piece of work.</p> <p>e-Safety: Use technology safely - CEOP - Hector's World.</p>

National curriculum – Computing and ICT – Key Stage

Computer Science	Information and Communication Technology	e-Safety
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school 	<ul style="list-style-type: none"> • 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.

Key Vocabulary to support Computer Science, Information and Communication Technology and e-Safety

	Year 1	Year 2
Computer Science	Instructions, buttons, robots, patterns, program	Forward, backward, right-angle turn, algorithm, sequence, debug, predict.
ICT	Purpose, online tools, communication, camera stills, sounds, image bank, word bank, space bar, photographs, video, sound, data, pictogram, digital.	Information, communication, purpose, website, content, paint, effects, animation, documents, Index-finger typing, enter/return, caps lock, backspace, image, questions, data collection, graphs, charts, save, retrieve.
e-Safety	Rules Online Private information Email	Appropriate/inappropriate sites, cyber-bullying, digital footprint, search engine, keyword searching.

Progression of skills

	What computing looks like in Year 1	What computing looks like in Year 2	What computing looks like in Year 3
Computer Science	<ul style="list-style-type: none"> • Know which button on a device represents which action • Know how to program a robot to follow simple sequence of instructions (1- 2 turns) • Make a simple algorithm • Be able to make simple predications about an algorithm and a program. • Be able to change (debug) the program to improve the route 	<ul style="list-style-type: none"> • Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze) • Begin to use block programming to complete a simple program. • Be able to debug more complex problems 	<ul style="list-style-type: none"> • Be able to use a block program to make a simple program using sequencing and timing. • Input sets of instructions according to programming language and environment • Use repeat loops for instance to create a program to draw regular 2D shapes • Independently be able to debug basic mistakes • Begin to use conditionals – If I click here then this happens...
ICT	<ul style="list-style-type: none"> • Be able to log onto a computer independently • Be able to navigate around the screen with a mouse or touchpad • Know how to type text using the space bar to separate words • Be able to independently find and use an app for instance to take and view a video or photograph 	<ul style="list-style-type: none"> • Be able to save, retrieve and print work • Know how to type and format text including basic punctuation and capital letters • Be able to confidently use pointing device • Be able to add and create simple images • Be able to combine simple text and graphics, for instance create a poster for a purpose 	<ul style="list-style-type: none"> • Be able to log in to computer system as themselves and can find their documents • Know how to open shared documents • Know how to use software to create a simple brochure or poster • Know how to sequence and add to slides to make a simple presentation • Create a meaningful document that contains both pictures and text
e-Safety	<ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet • Know that they should always ask a responsible adult if they want to use a device and ask for help if they see anything that worries them • With support from an adult be able to find information on the internet 	<ul style="list-style-type: none"> • Know devices that enable direct communication between people through images and text. • Know what personal information is and that they should never share this with anyone they don't know. • Know that they should tell a trusted adult if they are upset or worried about anything on a device. • With support be able to use a safe search engine 	<ul style="list-style-type: none"> • Know that some people on the internet should not be trusted • Know that concerns about what they see online should be reported to a trusted adult • Create and use a simple password • Use a Search engine to find information given key words • Know which websites are useful and begin to understand all might not be trustworthy. • Be able to log in and out of websites used at school