



Curriculum Progression Overview for ICT/Computing



This should be used alongside the EYFS Long Term Plan which breaks down each area of the EYFS and intended learning for each term. Each area of the EYFS is also reflected throughout the continuous provision within the learning environment both inside and outside – this enables children to be independent in their own learning and practice and develop skills taught.			
EYFS Area for History	Key skills/knowledge – What do you want children to know by the end of EYFS (Intent)	How we teach it – Topics / curricular goals (implementation)	Early Learning Goal – Where children will be by the end, the ELGs achieved (impact)
Understanding the world. Literacy. Communication and language. PSED (sense of self).	Preparing children for the KS1 Curriculum	Classrooms could contain a role play area with a range of technology, both functioning and model / broken devices, or a variety of electronic toys, such as remote controlled cars, walkie-talkies and interactive pets, as part of continuous provision. Further technology could be included in conjunction with other activities, such as digital cameras for pupils to photograph their own learning, although children should ideally be given the opportunity to select and use technology for a certain purpose. Unplugged activities, or those away from the machine, give children an opportunity to develop their understanding of technology without the need for expensive devices. Children could be asked to give precise instructions verbally, such as through giving instructions to a sandwich making robot, with links made to the importance of using the correct vocabulary, along with speaking clearly and precisely. Giving instructions could also form part of sessions linked to physical development activities, such as determining rules for certain playground games.	Barefoot Computing have a section dedicated to the Early years, full of ideas on how you can incorporate their resources into your classroom to help prepare them for the KS1 Computing Curriculum.
KS1 Breadth of study	- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions - Write and test simple programs - Use logical reasoning to predict the behaviour of simple programs - Organise, store, manipulate and retrieve data in a range of digital formats - Communicate safely and respectfully online, keeping personal information private and recognise common uses of information technology beyond school		
KS2 Breadth of Study	- Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selections and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs - Use logical reasoning to explain how a simple algorithm works, 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 - Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely - Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.		
Essential characteristics		Coding, use of ICT, range of devices, communicate across curriculum, data	



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Year 1	Autumn Castles (Year A) Fire, Fire (Year B)	Spring Back to the Future (Year A) Bright Lights, Big City (Year B)	Summer Land Ahoy! (Year A) Tribal Tales (Year B)
CONTENT & Units	<u>Online Safety / communicate across the curriculum</u> Project Evolve – Year 1 • Health, Well-being and Lifestyle • Managing Online Information Teach Computing – Year 1 • Computing Systems and Networks – Technology around us	<u>Use of software</u> Teach Computing – Year 1 • Digital painting • Digital writing	<u>Coding & Data</u> Teach Computing – Year 1 • Grouping Data (through Maths lessons) • Programming – Moving a Robot (Beebots)
OBJECTIVES (knowledge)	• Participate in class social media accounts • Understand online risks and the age rules for sites	• Using software on a range of devices • Use a range of applications and devices in order to communicate ideas, work and messages	• Use simple databases to record information in areas across the curriculum • Control motion by specifying the number of steps to travel, direction and turn
SKILLS	• Understand what technology is and how it can help me. • Use the internet to find things out • Recognise common uses of information technology outside of school and how to keep myself safe in the devices and games • Recognise may be people online who could make me feel sad, embarrassed or upset • Explain why important to be considerate and kind to people online • Know what information not to put online without asking a trusted adult first • Explore interactive 360 image • Pretend to interact with AR objects	• To type words on a digital device • Use the space bar • Use enter/return to make a new line • Add labels to an image • Order images in a storyboard / topic • Add pictures to story animation • Create a digital collage • Use a paint / drawing app to create a digital image	• Collect data on a topic • Create a tally chart and pictogram • Understand algorithms • Write an algorithm to move Beebot forward, backwards and turn left/right • Debug algorithm (locate and fix bugs in program for Beebot) • Sequence instructions on Beebot



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Year 2	Autumn Castles (Year A) Fire, Fire (Year B)	Spring Back to the Future (Year A) Bright Lights, Big City (Year B)	Summer Land Ahoy! (Year A) Tribal Tales (Year B)
CONTENT & Units	<u>Communicate across the curriculum</u> Teach Computing – Year 2 - Digital writing <u>Use of software & Data</u> Teach Computing – Year 2 - Digital photography	<u>Online Safety / communicate across the curriculum</u> Project Evolve – Year 2 - Privacy and Security - Self image and identity Cross curricular use of IT	<u>Coding</u> Teach Computing – Year 2 - Programming – Robot Algorithms (Beebots) <u>Use of software & Data</u> Teach Computing – Year 2 - Data – pictograms (through maths/statistics lessons)
OBJECTIVES (knowledge)	Use a range of applications and devices in order to communicate ideas, work and messages	- Using software on a range of devices / data - Participate in class social media accounts - Understand online risks and the age rules for sites	- Control motion by specifying the number of steps to travel, direction and turn - Specify user inputs to control events - Specify the nature of events (single or multiple) - Use a data base to record information in areas across the curriculum (link to maths unit)
SKILLS	- Write text with space bar - Change font size and colour - Copy and paste images and text - Use caps lock - Import images to a project from camera roll or web - Edit a photo (crop, filters, mark up) - Select and use tools for digital imagery - Layer images on top of others - Create AR experience using objects I have created to explain a concept	- Use the internet to find things out - Recognise common uses of information technology outside of school and how to keep myself safe in the devices and games – give examples of online issues - Explain how other people's identity online can be different to their identity in real life - Describe ways people make themselves look different online - Add speech bubbles to an image to show what they are thinking - Use the internet to find things out – key words in search engine, true/made up online	- Use logical reasoning with algorithms - Sequence an algorithm to move Beebot forward, backwards and turn left/right - Debug algorithm (locate and fix bugs in program for Beebot) - Sequence instructions on Beebot - Sort objects into a range of charts - Create a pictogram to explain what the data is showing



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Year 3	Autumn Ancient Civilisations (Year A) Invasions (Year B)	Spring Tomorrow's World (Year A) Blue Planet (Year B)	Summer Survival (Year A) Magnificent Monarchs (Year B)
CONTENT & Units	<u>Online Safety / communicate across the curriculum</u> Project Evolve – Year 3 • Online relationships • Privacy and Security • Self image and identity Teach Computing – Year 3 • Connecting computers	<u>Use of software & Data</u> Teach Computing – Year 3 • Desktop publishing • Data – branching databases(through maths/statistics lessons)	<u>Coding</u> Teach Computing – Year 3 • Stop-frame animation • Programming – Events & actions in programs (Scratch)
OBJECTIVES (knowledge)	• Give examples of the risks posed by online communications • Understand that comments made online can be hurtful or offensive - bullying • Use some advanced features of applications to communicate ideas	• Use some advanced features of applications to communicate ideas • Devise and construct databases using IT applications	• Use specified screen coordinates to control movement • Set the appearance of objects and create sequences of changes • Use IF THEN conditions to control events or objects
SKILLS	• Use index fingers on home key • Understand how computers are connected in a network • Explain how to represent themselves in different ways online (avatars and social media) • Give examples of technology specific forms e.g. emojis, acronyms) • Explain how to be safe and keep others safe online (who to trust and 'like') • Recognise the need to be careful before sharing anything online – use of passwords • Recognise appropriate time use of technology. • Explain what autocomplete is and how to choose the best suggestion	• Edit the style of text and images for effect • Cut copy and paste quickly to organise text • Create digital image using a range of tools, pens, brushes and effects • Create own sorting diagram and data handling activity • Add speech bubbles to an image to show what they are thinking • Import images to a project from camera roll or web	• Set and control the pen colour (including shade), size and shape • Create interactive comic strip/ animation with tools such as sound, text, images, video) • Create and edit animations of a character • Improve stop motion animation clips • Create algorithms for programming with separate steps • Use pattern and repetition in algorithms • Specify conditions to trigger events



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Year 4	Autumn Ancient Civilisations (Year A) Invasions (Year B)	Spring Tomorrow's World (Year A) Blue Planet (Year B)	Summer Survival (Year A) Magnificent Monarchs (Year B)
CONTENT & Units	<u>Online Safety / communicate across the curriculum</u> Project Evolve – Year 4 • Online relationships Privacy and Security • Self image and identity Teach Computing – Year 4 • The internet	<u>Coding</u> Teach Computing – Year 4 • Data – data logging (through maths/statistics lessons) Programming – repetition in programming (Microbits & scratch)	<u>Use of software</u> Teach Computing – Year 4 • Photo editing Select use and combine software from internet or digital device to interpret and represent information AI objectives linked through PSHE
OBJECTIVES (knowledge)	• Give examples of the risks posed by online communications • Understand that comments made online can be hurtful or offensive - bullying • Use some advanced features of applications to communicate ideas	• Specify conditions to trigger events or objects • Devise and construct databases using IT applications • Set the appearance of objects and create sequences of changes • Use sensing proximity and control variables	• Use some advanced features of applications and devices to communicate ideas
SKILLS	• Understand servers, internet and how it links for collaboration • Identify difference in real and AI • Understand and describe how information could have been created, copied or shared • Analyse difference between a 'belief' and an 'opinion' and a 'fact' • Make a judgement about the accuracy of information • Describe strategies for safe and fun experiences in a range of online social environments • Give examples of how to be respectful to others online. • Describe strategies, tips or advice for healthy sleep with regards to technology	• Input data to solve a problem • Export data in a variety of ways • Create a sequence of sounds and/or lights • Write increasingly more precise algorithms when programming • Use logical reasoning to detect and correct errors in programs • Work with various forms of output	• Combine digital images, objects and text • Enhance digital images – crop, brightness, contrast and resize • Add multiple objects through AR for a concept • Use shortcuts for cut copy and paste • Use AI to support work • Insert hyperlinks • Organise text / images for specific purpose • Explain that technology can be designed to act like or impersonate living things • Explain what is meant by fake news • Explain why sharing of same opinions or beliefs online don't make



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Year 5	Autumn Hola Mexico! (Year A) Britain through the decades (Year B)	Spring Marvellous Muggles and Harry Potter (Year A) Reach for the stars (Year B)	Summer A place I call home (Year A) Kingdoms – people and animals (Year B)
CONTENT & Units	<u>Online Safety / communicate across the curriculum</u> Teach Computing – Year 5 • Systems & searching (through topic) <u>Use of software</u> Teach Computing – Year 5 • Video production	<u>Online Safety / communicate across the curriculum</u> Project Evolve – Year 5 • Online relationships • Self image and identity – link to PSHE and health, well-being unit <u>Coding</u> Teach Computing – Year 5 • Data – flat file databases (through maths/statistics lessons)	<u>Coding</u> Teach Computing – Year 5 • Selection in physical computing (Crumb!) <u>Use of software</u> Teach Computing – Year 5 • Introduction to vector graphics (layer objects link through art) • Music production (through music)
OBJECTIVES (knowledge)	• Choose the most suitable applications and devices for the purposes of communication • Understand how simple networks are set up and used by effective searching	• Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems • Understand the effect of online comments and show responsibility and sensitivity when online • Select appropriate applications to devise construct and manipulate data	• Change the position of objects between screen layers (send to back, bring to front) • Use a range of sensing tools to control events or actions • Use IF THEN ELSE conditions to control events or object • Compose a soundtrack (through Charanga in music in Spring term)
SKILLS	• Add voice over and edit sound clips • Use software to create and edit a 3D animated topic • Use video editing tools for effect – use of resize crop film and masking techniques • Apply useful effects such as hyperlinks • Understand how we view web pages • Use searching technologies effectively • Search for information online and create summary reports of the information found • Evaluate digital content and make reasonable analyses of information gathered – AI	• Demonstrate responsible choices about my online identity, depending on context • Make positive contributions as part of online communities • Describe helpline services (Childline) for support • Organise and reorganise text / images to suit a purpose • Edit and format cells in a spreadsheet • Create and publish online charts / data from questionnaire and analyse the results • Evaluate digital content and voice activated searching	• Link and explain how to photoshop images in media • Describe fake photos and understand how this can be harmful • Use drawing tools and group together shapes • Use selection in algorithms • Recognise the need for conditions in repetition within algorithms • Evaluate and identify errors in programming • Create a remix of a popular song (through music)



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Year 6	Autumn Hola Mexico! (Year A) Britain through the decades (Year B)	Spring Marvellous Muggles and Harry Potter (Year A) Reach for the stars (Year B)	Summer A place I call home (Year A) Kingdoms – people and animals (Year B)
CONTENT & Units	Coding Teach Computing – Year 6 - Programming – variables and sensing movement (Crumb) Use of software 3D Modelling	Online Safety / communicate across the curriculum Project Evolve – Year 6 - Online relationships - Self image and identity – link to PSHE and health, well-being unit Teach Computing – Year 6 - Communication & collaboration (topic)	Use of software Teach Computing – Year 6 - Data – introduction to spreadsheets (through maths/enterprise lessons) Teach Computing – Year 6 - Web page creation
OBJECTIVES (knowledge)	- Use a range of sensing tools to control events or actions - Use IF THEN ELSE conditions to control events or objects - Use many of the advanced features in order to create a high quality, professional or efficient communications - Change the position of objects between screen layers (send to back, bring to front)	- Choose the most suitable applications and devices for the purposes of communication - Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems - Compose a soundtrack (through Charanga in music) - Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express permission from copyright holder - Understand the effect of online comments and show responsibility and sensitivity when online	- Select appropriate applications to devise construct and manipulate data - Use many of the advanced features in order to create a high quality, professional or efficient communications
SKILLS	- Recognise and write precise algorithms when programming - Identify variables needed and their use in selection and repetition - Mix 3D animations with videos to describe learning - Merge media - Use 3D drawing app to create a realistic representation of world objects - Format text / images to suit a purpose - Publish documents online and discuss audience and purpose of content	- Describe ways in which media can shape ideas about gender roles and how this might make people feel - Show an understanding of responsibilities for the well-being of others in online groups - Describe how to build a positive online reputation - Describe helpline services (Childline) for support - Demonstrate the strategies to apply when evaluating digital content - AI - Compose a soundtrack with sound clips (through Charanga music unit)	- Use formulae to solve calculations including =sum - Write spreadsheet formula to solve challenging maths problems - Create web site which includes a variety of media - Create a webpage using HTML



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