

Computing





Computing Progression

Knowledge and Skills



	Nursery	Reception	Year 1	Year 2
Information technology	<p>Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support. (<i>Birth to 5 matters: Range 5</i>)</p> <p>Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets. (<i>Birth to 5 matters: Range 5</i>)</p> <p>Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. (<i>Birth to 5 matters: Range 5</i>)</p> <p>Plays with a range of materials to learn cause and effect, for example, makes a string puppet using. (<i>Birth to 5 matters: Range 5</i>)</p>	<p>Uses ICT hardware to interact with age-appropriate computer software. (<i>Birth to 5 matters: Range 6</i>)</p> <p>Can create content such as a video recording, stories, and/or draw a picture on screen. (<i>Birth to 5 matters: Range 6</i>)</p> <p><i>(note: ELG no longer have a 'Technology' specific section as technology is woven throughout the curriculum).</i></p> <p>Can operate a computer based program or app.</p>	<p>Use a camera to capture images which are in focus.</p> <p>Select options to change the appearance of digital content.</p> <p>Apply edits to digital content to achieve a particular effect.</p> <p>Combine words and images to create Word Computing.</p> <p>Use digital drawing tools to draw characters from a story or for a game.</p> <p>Combine images with text to create posters and invitations.</p> <p>Use photo editing tools to crop images.</p> <p>Create digital books combining text, images, and sounds.</p> <p>Collect images by capturing screenshots and editing them.</p> <p>Type words correctly using a keyboard.</p> <p>Create posters by adding images to frames, editing text by changing font style, colour and size.</p> <p>Create images with different layers by placing one image on top of another.</p> <p>Create a simple animation with moving characters and voice recordings.</p> <p>Combine words and images to create Word Computing.</p> <p>Create a visual plan using images and text to tell a story.</p> <p>Create a simple presentation using slides.</p>	<p>Create digital books combining text, images, and sounds.</p> <p>Type words correctly using a keyboard.</p> <p>Combine text and images to create video presentations.</p> <p>Edit video content to improve it.</p>



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	Nursery	Reception	Year 1	Year 2
Digital Literacy (Stand alone online safety lessons)	<p>Knows that information can be retrieved from digital devices and the internet. <i>(Birth to 5 matters: Range 5)</i></p>	<p>Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes</p> <p>Develops digital literacy skills by being able to access, understand and interact with a range of technologies. <i>(Birth to 5 matters: Range 6)</i></p> <p>Can use the internet with adult supervision to find and retrieve information of interest to them. <i>(Birth to 5 matters: Range 6)</i></p> <p><i>(note: ELG no longer have a 'Technology' specific section as technology is woven throughout the curriculum).</i></p>	<p>Explain how other people's identity online can be different to their identity in real life and how they might make themselves look different.</p> <p>Give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help (speak to adult I can trust).</p> <p>Recognise examples of information that is personal to me (name, address, birthday, age, where I go to school).</p> <p>Recognise that information about me can stay online for a long time and could be copied.</p> <p>Describe what information not to put online without asking a trusted adult first.</p> <p>Explain rules and give examples to keep us safe when we are using technology both in and beyond the home.</p> <p>Explain simple guidance for using technology in different environments and settings and say how those rules/guides can help you.</p> <p>Explain why work created using technology belongs to you and say why it belongs to you (e.g. 'it is my idea' or 'I designed it').</p> <p>Describe why other people's work belongs to them and recognise that content on the internet may belong to other people.</p> <p>Explain what Personal Information should be used online.</p> <p>Explain how to staying safe online and respect other people.</p> <p>Know where to turn if you find a problem online.</p>	<p>Explain why it is important to be considerate and kind to people online in ways that do not upset others and can give examples.</p> <p>Recognise that there may be people online who could make me feel sad, embarrassed or upset and give examples of when and how to speak to an adult you can trust.</p> <p>Give examples of bullying behaviour and how it could look online and how it can make someone feel.</p> <p>Talk about how someone can/would get help about being bullied online or offline.</p> <p>Explain how devices can be connected to the internet and can list some of those devices</p> <p>Talk about how to keep personal information private online?</p> <p>Know where to go for help and support with online problems</p> <p>Explain how to staying safe online and respect other people.</p>



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	Nursery	Reception	Year 1	Year 2
Computer Science	Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. (<i>Birth to 5 matters: Range 5</i>)	<p>Completes a simple program on electronic devices. (<i>Birth to 5 matters: Range 6</i>)</p> <p><i>(note: ELG no longer have a 'Technology' specific section as technology is woven throughout the curriculum).</i></p>	<p>Design and create programs for others to play</p> <p>Create simple programs.</p> <p>Describe uses of technology beyond school.</p> <p>Predict the outcomes of a program.</p>	<p>Identify, name and explain the functions of the main components of a computer.</p> <p>Name and compare common input and output devices of computer systems.</p> <p>Identify and describe uses of technology beyond school.</p> <p>Explain how robots can be controlled.</p> <p>Create simple programs.</p> <p>Debug an error in a simple algorithm.</p> <p>Understand that instructions in an algorithm need to be precise and unambiguous.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use basic selections in programs and explain using the language if ... then.</p>



Computing Progression

Knowledge and Skills



	Year 3	Year 4	Year 5	Year 6
Information technology	<p>Combine text (fonts, colours, backgrounds), images, voice recordings and videos to create a digital book.</p> <p>Edit digital content to improve it according to feedback.</p> <p>Create and edit a video by combining text, music, and images.</p> <p>Design and create digital logos and graphics combining fonts and text.</p> <p>Create a contents page, a blurb and add page numbers.</p> <p>Create a presentation with slides with animations and transition effects. (use Microsoft PowerPoint to complete this—not iPad)</p> <p>Use the camera accurately to create a short clip for editing.</p> <p>Plan videos content by using scripts.</p> <p>Combine animated characters and voice recordings for particular effects.</p> <p>Plan a movie with scripts that have a beginning, middle and end and combines text, music, and images.</p>	<p>Build a webpage that includes text, images and videos.</p> <p>Plan videos content by using scripts.</p> <p>Edit digital content to improve it, according to feedback.</p> <p>Organise a movie adding titles, images and effects.</p> <p>Create graphics with texts and images.</p> <p>Combine text (fonts, colours, backgrounds), images, voice recordings and videos to create a digital book.</p> <p>Remove the background from images</p> <p>Use photo editing tools to improve images.</p> <p>Create digital books/posters by combining text, images, voice recordings, and videos.</p> <p>Create a video by combining text, images and music.</p> <p>Use a keyboard accurately with two hands to type and format documents.</p>	<p>Work independently to create a presentation that includes graphics, and images.</p> <p>Make a presentation to an audience using digital tools.</p> <p>Plan a multi-scene animation including characters, scenes, camera angles and effects.</p> <p>Edit a stop-go animation to improve the quality of the animation using onion skinning feature.</p> <p>Edit/refine a movie to add special effects, text, sound effects, graphics and backing track</p> <p>Identify the pros and cons of different games.</p> <p>Use creative tools to create a marketing campaign for a game.</p> <p>Design and create 8-bit characters.</p> <p>Combine text and images to create posters.</p> <p>Plan and create a video by combining. images, text, music and different layouts.</p> <p>Use word processing tools to format a document.</p>	<p>Evaluate content against success criteria and make improvements accordingly.</p> <p>Present understanding of new programming concepts with digital tools.</p> <p>Design a suitable brand for a business and promote it.</p> <p>Create a spreadsheet with formulas for profit and loss of a business. (use Microsoft Excel to complete this—not numbers)</p> <p>Work independently to create a presentation that includes graphics, images and movies.</p> <p>Design and build a webpage and share it online.</p> <p>Make a presentation to an audience using digital tools.</p>



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	Year 3	Year 4	Year 5	Year 6
Digital Literacy	<p>Describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).</p> <p>Explain why copying someone else's work from the internet without permission can cause problems and give examples of what those problems might be.</p> <p>Use search engines effectively and narrow search results down.</p> <p>Analyse information and have ways to check its credibility.</p> <p>Be sceptical of things I find online such as fauxtography.</p> <p>Explain why copying someone else's work from the internet without permission can cause problems and give examples of what those problems might be.</p> <p>When searching on the internet for content to use, explain why you need to consider who owns it and whether you have the right to reuse it and give some simple examples.</p>	<p>When searching on the internet for content to use, explain why you need to consider who owns it and whether you have the right to reuse it and give some simple examples.</p> <p>Explain why spending too much time using technology can sometimes have a negative impact and can give examples of activities where it is easy to spend a lot of time engaged online (e.g. games, films, videos).</p> <p>Describe and explain some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.</p>	<p>Understand that there are many positives and negatives to using social media.</p> <p>Describe ways that information about people online can be used by others to make judgments about an individual.</p> <p>Describe some simple ways that help build a positive online reputation.</p> <p>Define the terms 'influence', 'manipulation' and 'persuasion' and explain how these might be encountered online (e.g. advertising and 'ad targeting').</p> <p>Evaluate digital content and explain how to make choices from search results.</p> <p>Explain how search engines work and how results are selected and ranked.</p> <p>Describe ways technology can affect healthy sleep and strategies, tips or advice to promote healthy sleep with regards to technology.</p> <p>Explain the importance of self-regulating my use of technology and demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).</p> <p>Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.</p>	<p>Describe ways in which media can shape ideas about gender.</p> <p>Describe issues online that might make me or others feel sad, worried, uncomfortable or frightened.</p> <p>Explain how identity online can be copied, modified or altered.</p> <p>Demonstrate responsible choices about my online identity, depending on context.</p> <p>Understand the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead).</p> <p>Explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation either by accident or on purpose).</p> <p>Create and use strong and secure passwords and use different them for a range of online services.</p> <p>Describe ways in which some online content targets people to gain money or information illegally and describe strategies to identify such content (e.g. scams, phishing).</p> <p>Describe how to get help for someone that is being bullied online and assess when to do or say something or tell someone.</p> <p>Identify a range of ways to report concerns both in school and at home about online bullying.</p> <p>Make positive contributions and be part of online communities and describe how to collaborate with others positively.</p> <p>Explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).</p> <p>Understand that there are many positives and negatives to using social media.</p> <p>Access and justify when it is acceptable to use the work of others.</p> <p>Explain how search engines work and how results are selected and ranked.</p>



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	Year 3	Year 4	Year 5	Year 6
Digital Literacy (Stand alone online safety lessons)	<p>How I can protect my online reputation.</p> <p>How to work out whether information online is true and reliable.</p> <p>How to make strong passwords to secure my information online.</p> <p>Ways in which I can be 'kind' to others online.</p> <p>What having a positive digital footprint means.</p> <p>Ways in which I can start to build a positive digital footprint.</p>	<p>How I can protect my online reputation.</p> <p>How to work out whether information online is true and reliable.</p> <p>How to make strong passwords to secure my information online.</p> <p>Ways in which I can be 'kind' to others online.</p> <p>What having a positive digital footprint means.</p> <p>Ways in which I can start to build a positive digital footprint.</p>	<p>How to be a critical user (someone who is using the Internet) while online.</p> <p>Learn about different online scams, including what 'phishing' means.</p> <p>Learn ways to develop safe habits online, including the importance of protecting personal information.</p> <p>Learn how to respect online privacy boundaries for themselves and others.</p> <p>Learn ways to seek or ask for help if they or others feel unsafe online.</p> <p>Learn how to develop respectful, empathetic and healthy online relationships.</p> <p>Learn ways to manage and respond in a healthy and safe way to hurtful online behaviour.</p>	<p>Learn ways to develop safe habits online, including the importance of protecting personal information.</p> <p>Learn how to respect online privacy boundaries for themselves and others.</p> <p>Learn ways to seek or ask for help if they or others feel unsafe online.</p> <p>Learn how to develop respectful, empathetic and healthy online relationships.</p> <p>Learn ways to manage and respond in a healthy and safe way to hurtful online behaviour.</p>



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	Year 3	Year 4	Year 5	Year 6
Computer Science	<p>Identify the uses of technology beyond school and discuss the reasons why they are helpful (e.g. robots and simulations).</p> <p>Understand how a computer stores data.</p> <p>Understand the main hardware components of a computer system.</p> <p>Understand how the internet works, including how it is structured and data travels along.</p>	<p>Create different graphs and tables and interpret them. (use Microsoft Excel to complete this—not numbers)</p> <p>Write programs that accomplish specific goals.</p> <p>Use selection in algorithms and programs, i.e. if... then</p> <p>Use logical reasoning to write simple algorithms explaining the sequence commands should run in.</p> <p>Solve problems by decomposing into smaller parts.</p> <p>Debug programs so they run correctly.</p> <p>Create programs including repeat commands.</p> <p>Design and create a prototype game and make improvements following feedback.</p> <p>Review a game and make improvements by debugging.</p> <p>Create a program using a range of events/inputs to control what happens.</p> <p>Work with various forms of input/output.</p>	<p>Describe the impact of technology on society.</p> <p>Understand about e-commerce - what it is and its impact.</p> <p>Investigate the services offered by the internet.</p> <p>Understand about different types of robotics and how they can impact our lives.</p> <p>Understand about the advancements in technology and the impact this has had on society.</p> <p>Work independently to design and program a game for a specific audience.</p> <p>Program a game which tells a story over more than one level.</p> <p>Experiment with different codes to test each element of a game until the desired outcome is reached.</p> <p>Make predictions about what will happen in a program when inputs are changed.</p> <p>Test, debug and improve programs.</p>	<p>Work independently on a topic to build and create a website with pages, titles, images, videos and text.</p> <p>Recognise an audience when designing and creating a website.</p> <p>Use selections and procedures in programs.</p> <p>Create programs including repeat commands.</p> <p>Create simple variables and understand their role in a program.</p> <p>Use logical reasoning to detect and correct errors in algorithms.</p> <p>Create variables in spreadsheets and understand their role in a program. (use Microsoft Excel to complete this—not numbers)</p>



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	Nursery	Reception	Year 1	Year 2
Keyboard Skills			<p>Use a word, sound or picture bank to present ideas.</p> <p>Use index fingers (left and right hand) on a keyboard to build words and sentences.</p> <p>Know when and how to use the SPACE BAR (thumbs) to make spaces between words</p>	<p>Use keyboard to enter text (index fingers left and right hand).</p> <p>Know when and how to use the RETURN/ENTER key.</p> <p>Use SHIFT and CAPS LOCK to enter capital letters.</p> <p>Use DELETE and BACKSPACE buttons to correct text.</p> <p>Create sentences, SAVE and edit them</p>



Computing Progression

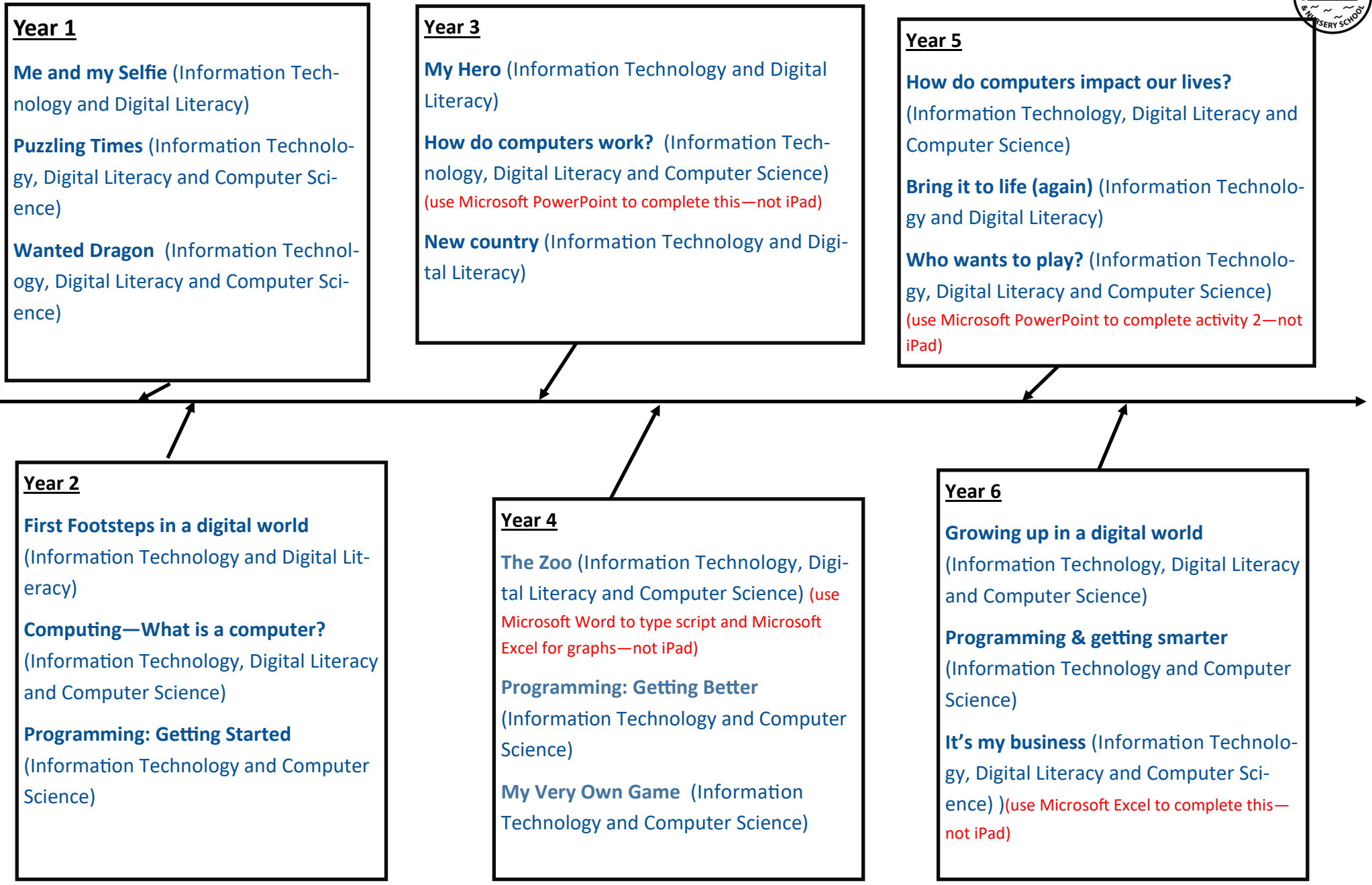
Knowledge and Skills



	Year 3	Year 4	Year 5	Year 6
Keyboard Skills	<p>Use keyboard to enter text (index fingers left and right hand).</p> <p>Know when and how to use the RETURN/ENTER key.</p> <p>Use SHIFT and CAPS LOCK to enter capital letters.</p> <p>Use DELETE and BACKSPACE buttons to correct text.</p> <p>Create sentences, SAVE and edit them later.</p>	<p>Use font sizes and effects such as bullet points appropriately.</p> <p>Use CUT, COPY and PASTE to organise and reorganise text on screen.</p> <p>Edit text using DELETE, INSERT and OVERWRITE as appropriate.</p> <p>Drag over and move text.</p> <p>Know how to use a spellcheck.</p> <p>Use individual fingers, returning to home keys, to input text.</p> <p>Use the shift key (little finger) to type characters such as £ () +</p> <p>Input numbers using individual fingers, returning to home keys.</p>	<p>Use individual fingers, returning to home keys, to input text.</p> <p>Use knowledge of text marking/editing to extract key points from texts.</p> <p>Use the shift key (little finger) to type characters as needed.</p> <p>Input numbers using individual fingers, returning to home keys.</p>	<p>Use individual fingers, returning to home keys, to input text.</p> <p>Use the understanding of the editing tools of a text handling program to write different versions and genres of texts.</p> <p>Use knowledge of text marking/editing to extract key points from texts.</p> <p>Use the shift key (little finger) to type characters as needed.</p> <p>Input numbers using individual fingers, returning to home keys.</p>

Mr Andrews Computing Progression

Knowledge and outcomes



Year 1

Me and my Selfie (Information Technology and Digital Literacy)

Puzzling Times (Information Technology, Digital Literacy and Computer Science)

Wanted Dragon (Information Technology, Digital Literacy and Computer Science)

Year 3

My Hero (Information Technology and Digital Literacy)

How do computers work? (Information Technology, Digital Literacy and Computer Science) (use Microsoft PowerPoint to complete this—not iPad)

New country (Information Technology and Digital Literacy)

Year 5

How do computers impact our lives? (Information Technology, Digital Literacy and Computer Science)

Bring it to life (again) (Information Technology and Digital Literacy)

Who wants to play? (Information Technology, Digital Literacy and Computer Science) (use Microsoft PowerPoint to complete activity 2—not iPad)

Year 2

First Footsteps in a digital world (Information Technology and Digital Literacy)

Computing—What is a computer? (Information Technology, Digital Literacy and Computer Science)

Programming: Getting Started (Information Technology and Computer Science)

Year 4

The Zoo (Information Technology, Digital Literacy and Computer Science) (use Microsoft Word to type script and Microsoft Excel for graphs—not iPad)

Programming: Getting Better (Information Technology and Computer Science)

My Very Own Game (Information Technology and Computer Science)

Year 6

Growing up in a digital world (Information Technology, Digital Literacy and Computer Science)

Programming & getting smarter (Information Technology and Computer Science)

It's my business (Information Technology, Digital Literacy and Computer Science) (use Microsoft Excel to complete this—not iPad)