



Imagine, Believe, Achieve

Computing Progression of Skills

Reception	Y1	Y2	Y3	Y4	Y5	Y6
Computer Science						
<p>Can explore the Bee-bots through unstructured play.</p> <p>Know to 'program not push' Bee-bots.</p> <p>Can build a home for a Bee-bot.</p> <p>Can create a simple program for a Bee-Bot.</p> <p>Understands the turn a Bee-Bot makes.</p> <p>Can program on screen using sequences of instructions to implement an algorithm</p>	<p>Can program on screen using sequences of instructions to implement an algorithm.</p> <p>Can create programs as sequences of instructions when programming on screen using simple programming apps (Tynker Jr, Daisy the Dino, Scratch Jr and Hour of Code).</p> <p>Can correct any coding errors (debug).</p> <p>Can describe and use instructions to program a sprite.</p> <p>Can insert and edit backgrounds on a stage.</p> <p>Can program a sprite to move, using gridlines and appropriate trigger/end blocks.</p> <p>Can use a repeat instruction to create a loop and predict the behaviour.</p>	<p>Can understand algorithms as sequences of instructions or sets of rules in everyday contexts.</p> <p>Can program on screen using sequences of instructions to implement an algorithm.</p> <p>Can create a simple program on screen, correcting any errors by debugging the code.</p> <p>Can resize and flip an onscreen sprite and make it talk.</p> <p>Can use a variety of trigger/end options when creating an algorithm.</p> <p>Can add a new scene to an animation in Scratch Jr.</p> <p>Can adjust the speed of movement for a sprite in an algorithm and predict the outcome.</p>	<p>Can design and write a program using a block language to a given brief, including simple interaction.</p> <p>Can use & explain sequence and repetition in programs.</p> <p>Can use an alternative programming language (Swift in Tynker) to create algorithms and debug programming errors, using logical reasoning.</p> <p>Can use a variety of iteration in their code, including repeat to a set number and forever loops.</p> <p>Can use conditional statements in their coding to enable multiple outcome options.</p> <p>Can debug code to fix mistakes, including adding/removing code and altering code sequences.</p>	<p>Can design and write a program using a block language to a given brief, including simple interaction.</p> <p>Can write a program that displays a question, accepts typed input and responds in an appropriate way to what is typed. Can use logical reasoning to detect and correct errors in programs.</p> <p>Can use sensors and variables in an algorithm.</p> <p>Can use and explain 'broadcasts' and different trigger options in Scratch Jr.</p> <p>Can use parallel algorithms when creating animations in Scratch Jr.</p> <p>Can use different sprite costumes in scratch 3.0.</p> <p>Can use grid coordinates to plan and</p>	<p>Can use decomposition to break down a problem into smaller sections.</p> <p>Can give clear and precise logical explanations of a number of algorithms, using a range of programming languages.</p> <p>Can use logical reasoning to detect and correct errors in algorithms.</p> <p>Can use abstraction to ensure a more specific outcome.</p> <p>Can create a new function for a repeated outcome.</p> <p>Can use a range of conditionals in their code (IF statements).</p> <p>Can create a simple interactive game using Scratch 3.0.</p> <p>Can create their own background for their</p>	<p>Can design, write and debug a program using both Swift and Scratch programming languages.</p> <p>Can solve problems using decomposition abstraction and iteration; tackling each part separately.</p> <p>Can use sequence, selection, repetition and variables in programs.</p> <p>Can use Micro:Bit computers to write a program that accepts inputs other than keyboard and mouse and produces outputs other than screen or speakers e.g. LED light displays.</p> <p>Can give clear and precise logical explanations of a number of algorithms.</p> <p>Can use logical reasoning to detect and correct errors in algorithms.</p>

				<p>implement movement in an algorithm.</p> <p>Can explain the difference between hardware and software and be able to identify a range of different input and output devices.</p> <p>Can create flowcharts using start/end symbols, process symbols and decisions symbols.</p> <p>Can understand that the internet transmits information as packets of data using IP addresses via ethernet cables/fibre optic cables/satellites. Know the difference between PAN, LAN and WAN.</p> <p>Can identify a range of network typologies (ring/star/bus/mesh).</p>	<p>game using the inbuilt paint features.</p>	<p>Can use nested loops and nested function in Swift.</p> <p>Can use repeat commands within a function.</p> <p>Can calculate the most effective way to write an algorithm, ensuring the least amount of code is used.</p>
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Digital Productivity (Information Technology)

<p>Can access the camera on an iPad.</p> <p>Can explore the camera features and take pictures.</p> <p>Can use PicCollage to collate photographs, add a title and their name and save.</p>	<p>Can handle an iPad effectively and search for/open/close a variety of apps.</p> <p>Can use a keyboard to type letters, numbers and special characters.</p> <p>Can edit text.</p> <p>Can select and format text.</p> <p>Can format font style, size and colour.</p> <p>Can add emphasis to text.</p>	<p>Can store, organise and retrieve content on digital devices for a given purpose.</p> <p>Can use technology purposefully to create, organise, store, manipulate and retrieve digital Content on an online learning platform.</p> <p>Can use annotation tools such as pen, erase, text box and shapes when uploading their work.</p>	<p>Can use and combine a range of programs on a computer.</p> <p>Can design and create content on a computer in response to a given goal.</p> <p>Can use a common search engine (eg Google with safe search mode on) to search for particular information on the Web.</p> <p>Can position their hands correctly on the home row.</p>	<p>Can use and combine a range of programs on a computer. Can design and create content on a computer in response to a given goal.</p> <p>Can use a common search engine (eg Google with safe search mode on) to search for particular information on the Web.</p> <p>Know the benefit of touch typing and practice it regularly, using the Home Row keys.</p>	<p>Can select, use and combine a range of programs on multiple devices.</p> <p>Can make use of a range of search engines appropriate to finding information that is required. Can analyse and evaluate data.</p> <p>Know the benefit of touch typing and practice it regularly, using the Home Row keys.</p>	<p>Can select, use and combine a range of programs on multiple devices.</p> <p>Can make use of a range of search engines appropriate to finding information that is required. Can analyse and evaluate data.</p> <p>Know the benefit of touch typing and practice it regularly, using the Home Row keys.</p>
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	<p>Can adjust the alignment of text on a page.</p> <p>Can access and upload work to an online learning platform (Seesaw).</p> <p>Can take a screenshot using an iPad.</p> <p>Can use a search engine to perform simple keyword searches to find information and images.</p>	<p>Can use a microphone to upload an audio file to an online learning platform.</p> <p>Can open, close and save a file.</p> <p>Can add an image to a document and format it.</p> <p>Can search for, select, copy and paste images from the internet.</p> <p>Can add text to a shape.</p>	<p>Can use a Bluetooth keyboard to enter text on a website and on a document.</p> <p>Can use the return and enter keys and a range of alternative keys.</p> <p>Can use the shift key to access further keyboard options.</p> <p>Can save their work, rename it and locate it.</p> <p>Can use more advanced formatting features in Word Processing to improve the appearance of text and images, including special effects.</p> <p>Can use custom animation in a presentation to apply entrance and exit effects to a selected object.</p> <p>Can use and edit text boxes and apply bullet points.</p>	<p>Can use presentation software to present information using a range of media and design techniques.</p> <p>Can use a variety of animation and transition effect options and personalise them using timings, effect options and sound.</p> <p>Can apply a range of formatting options on fonts and images to improve the presentation of their work.</p> <p>Can use and edit tables within a document. Can merge cells, add/delete rows/columns, format borders and apply cell backgrounds.</p> <p>Can personalise bullet points in a document to a chosen image.</p>	<p>Be able to use a range of advanced formatting features in Word Processing and presentation software.</p> <p>Can use headers and footers and various text wrapping options within a document.</p> <p>Can plan and create a digital quiz in Kahoot! Can insert images and online video clips and adjust question timings and settings.</p>	<p>Can use computers to collect numerical data & present this to an audience.</p> <p>Be able to use a range of advanced formatting features in Word Processing and presentation software. Understand how to use 'actions' and custom animations in presentations to create movement and interactivity.</p> <p>Can use and create animation paths in a presentation.</p> <p>Can insert navigational hyperlinks within a presentation.</p>
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Digital Creativity

<p>Can access the camera on an iPad.</p> <p>Can explore the camera features and take pictures.</p> <p>Can use PicCollage to collate photographs, add a title and their name and save.</p>	<p>Can access the camera on an iPad.</p> <p>Can capture still images and video footage using an iPad camera.</p> <p>Can explore the camera features and take pictures (using front and reverse lens options).</p> <p>Can create basic pictures using shapes in Pages. Can resize,</p>	<p>Can create an e-book comic using Book Creator.</p> <p>Can select frame options and format the gutter.</p> <p>Can add text, speech, stickers and thought bubbles to a comic.</p> <p>Can create images in Scratch Jr using backgrounds and sprites.</p>	<p>Can use a variety of online and offline digital art applications and compare their advantages and disadvantages.</p> <p>Can use shapes, lines and pen options and adjust line width and style.</p> <p>Can import a background on to an art canvas.</p>	<p>Can use an Apple pencil and pair it to an iPad.</p> <p>Can use basic image editing tools in Apple notes, including pen-to-text, pen, highlighter, crayon, eraser, lasso and ruler.</p> <p>Can use shape recognition technology to create perfect shapes with an Apple pencil.</p>	<p>Can use a range of advanced pen options in Sketch.io, including calligraphy, fur, sketchy and stamp.</p> <p>Can use an Apple Pencil and an advanced digital art package (Procreate) to create digital images. Can use a range of pen options and adjust the pen width.</p> <p>Can effectively use the colour palette to</p>	<p>Can use an Apple Pencil and an advanced digital art package (Procreate) to create effective digital images.</p> <p>Can use a range of drawing adjustment options, including noise, blur and liquify.</p> <p>Can create their own personalised brush in Procreate.</p>
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	<p>move, rotate and edit the shapes.</p> <p>Can create a simple drawing using a basic art app (Doodle Buddy). Can use pen options, colour options and undo/redo.</p> <p>Can create a simple slideshow using backgrounds, text, images and transition effects.</p>	<p>Can use the 'full screen' option to take a screenshot in Scratch Jr and insert the image into a different application.</p>	<p>Can format and edit shapes with advanced use of colour options and pattern effects.</p> <p>Can adjust the hue, tint and warmth of an image.</p> <p>Can use an iPad to take effective images, taking consideration of angle, range, frame and focus.</p> <p>Can edit captured images by using crop and adjusting brightness and colour options.</p> <p>Can apply filters to a photo.</p> <p>Can arrange a series of captured images into a collage using PicCollage.</p> <p>Can apply backgrounds, stickers, text and animation to a collage.</p>	<p>Can use a variety of advanced pen option in Sketch.io including mirror.</p>	<p>experiment with a range of colours. Can use the pipette function and adjust colour opacity.</p> <p>Can use the blend and smudge options to alter the look of an image.</p> <p>Can add layers to digital artwork and then trace over an imported image.</p> <p>Can create simple animations in Stop Motion Studio using still frames. Can adjust the speed of an animation.</p> <p>Can create simple animations using animation assist in Procreate. Can alter the onion layers and speed of playback. Can duplicate a frame and add new frames.</p> <p>Can export an animation as an animated MP4 to an online learning platform.</p> <p>Can create an animate a story using scenes, characters and speech in Plotagon.</p>	<p>Can create a movie trailer using iMovie by inserting script and video clips.</p> <p>Can use videography skills to capture video using a range of styles – closeup, medium, long shot, action and landscape.</p>
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Digital Citizenship

<p>Know what the internet is and what we can use it for. Know how to be a good friend online.</p> <p>Know that they should tell a teacher or parent if they find inappropriate images.</p> <p>Understands what to do if they have concerns about content or contact online.</p> <p>Know how to deal with pop ups online. Know how to stay safe online.</p> <p>Know what the internet is and what we can use it for. Know how to be a good friend online.</p> <p>Know that they should tell a teacher or parent if they find inappropriate images.</p> <p>Understands what to do if they have concerns about content or contact online.</p> <p>Know how to deal with pop ups online. Know how to stay safe online</p>	<p>Know that they need to keep themselves safe when using digital technology. Know that they should tell a teacher or parent if they find inappropriate images. Know to respect others' rights, so should not look at someone else's work or copy it without permission/ acknowledgement. Understands what to do if they have concerns about content or contact online Know how to deal with pop ups online. Can use technology safely and respectfully in the context of keeping personal information safe. Can understand what personal information keep safe. Can safely search for images online. Can use technology safely and respectfully in the context of learning about the SMART rules for Internet safety. Can understand how to communicate safely online. To apply my online safety knowledge to help others make good choices online.</p>	<p>Know that they need to keep themselves safe when using digital technology. Know to use child friendly search engine when looking for images and information on the web. Know that they should tell a teacher or parent if they find inappropriate images. Know to respect others' rights, so should not look at someone else's work or copy it without permission/ acknowledgement. Know that they should observe age restrictions on computer games. (PEGI assembly)</p> <p>Understands that they should not share personal information online.</p> <p>Understands what to do if they have concerns about content or contact online</p> <p>Know how to deal with pop ups online.</p> <p>Be responsible, competent, confident and creative users of information and communication technology.</p> <p>Use technology safely and respectfully, keeping personal information private. Know how to create strong passwords.</p>	<p>Can demonstrate that they can act responsibly when using computers. That they should show responsibility eg when creating or remixing online content, including observing copyright and any terms and conditions. Can understand the difference between acceptable and unacceptable behaviours when using digital technology in a range of contexts. Know to report inappropriate behaviour when using technology at home or in school to a trusted adult. Can decide whether digital content is relevant for a given purpose.</p> <p>Understand the importance of protecting work using passwords and know what makes a password more effective.</p> <p>Understand that not all information on the internet is valid or reliable.</p> <p>Identify how screen activities and habits can affect people in different ways.</p> <p>Identify strategies for developing healthy digital habits.</p> <p>Lessons 1-2</p>	<p>Can demonstrate that they can act responsibly when using computers. That they should show responsibility eg when creating or remixing online content, including observing copyright and any terms and conditions. Can understand the difference between acceptable and unacceptable behaviours when using digital technology in a range of contexts. Know to report inappropriate behaviour when using technology at home or in school to a trusted adult. Can decide whether digital content is relevant for a given purpose.</p> <p>Understand the SMART principles of e-safety and know what cyberbullying is and how they should deal with it. Identify how screen activities and habits can affect people in different ways.</p> <p>Identify strategies for developing healthy digital habits. Identify phishing and know how to deal with it</p>	<p>Can show that they can think through the consequences of their actions when using digital technology. Can identify principles underpinning acceptable use of digital technologies. Know how to report inappropriate behaviour when using technology in school (teacher, network manager, trusted adult) Know how to report any concerns over, or inappropriate behaviour with, digital technology at home. Know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or the police.</p> <p>Know the legal restrictions, dangers and risks of a number of different social media applications, such as WhatsApp and Instagram.</p> <p>Understand what digital wellbeing means and the impact that technology can have on social relations, health and the environment.</p> <p>Identify what is meant by Digital Wellbeing and how certain activities can have a positive and negative impact on it.</p>	<p>Can show that they can think through the consequences of their actions when using digital technology. Can identify principles underpinning acceptable use of digital technologies. Know how to report inappropriate behaviour when using technology in school (teacher, network manager, trusted adult) Know how to report any concerns over, or inappropriate behaviour with, digital technology at home. Know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or the police.</p> <p>Know what digital footprints are. Know what viruses and malware are (including their causes and effects).</p> <p>Identify what is meant by Digital Wellbeing and how certain activities can have a positive and negative impact on it.</p> <p>Identify how we can use our knowledge and tools to make personal choices to create healthy digital habits.</p> <p>Understand the SMART principles of e-safety and know what</p>
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		<p>Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>	<p>To understand how to stand up to others online</p> <p>To know how to turn negative into positive</p> <p>To understand what 'Cyberbullying' is and how to deal with it</p> <p>Understand the SMART principles of e-safety and know what cyberbullying is and how they should deal with it.</p>		<p>Identify how we can use our knowledge and tools to make personal choices to create healthy digital habits.</p> <p>Know how to be internet secure and protect your things</p> <p>Know how to build a strong password</p> <p>Understand the SMART principles of e-safety and know what cyberbullying is and how they should deal with it.</p> <p>Identify how to take positive action if they see hurtful comments posted online.</p> <p>To know what makes communication unkind and how this might make others feel</p> <p>To know what the law is relating to cyberbullying</p>	<p>cyberbullying is and how they should deal with it.</p> <p>To know what information to keep private</p> <p>To help others with cyberbullying by creating a video to help others.</p> <p>To know what is suitable to consent to</p> <p>To understand the Terms and conditions of social media and the sharing of personal information</p>
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