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# Hollinswood Primary School and Nursery

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## Computing Skills and Knowledge Progression grid

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2022

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Our Computing curriculum gives children the skills, knowledge and understanding of computing they will need for the rest of their lives. They will learn how computers and computer systems work, design and build programs, develop their ideas using technology and create a range of content. Our main aim is that as learners they will be creative, confident and safe.



## Autumn - Digital Literacy (inc. online safety): how to use technology effectively, safely and responsibly

Emphasise this PSHE objective to all year groups to contrast any negative sides to the internet: **7a) that for most people the internet is an integral part of life and has many benefits.**

See final page of progression grid for inspiring videos (most suitable for Y5/6)

<p><b>EYFS</b></p>	<p><b>3-4:</b> Increasingly follow rules, understanding why they are important. (PSED)</p> <p><b>YR:</b> Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'. (PSED)</p> <p><b>YR:</b> Explore, use and refine a variety of artistic effects to express their ideas and feelings. (Expressive Art and Design)</p> <p><b>ELG:</b> Explain the reasons for rules, know right from wrong and try to behave accordingly. (PSED)</p>	<p>Internet Explorer challenges</p> <p>CEOP – ThinkUKnow <a href="https://www.thinkuknow.co.uk/5_7/">https://www.thinkuknow.co.uk/5_7/</a></p> <p>Smartie the Penguin Stories (online), Chicken Clicking story (book in nursery office), Troll Stinks book</p> <p><a href="#">Search and Access Resources</a> ▶ <a href="#">Year Group</a> ▶ <a href="#">Early Years</a> ▶ <a href="#">Online Relationships (projectevolve.co.uk)</a></p> <p><b>Nursery and YR:</b> E-Safety page: <a href="https://www.ilearn2.co.uk/e-safety---early-years.html">https://www.ilearn2.co.uk/e-safety---early-years.html</a> Literacy and Numeracy links: <a href="https://www.ilearn2.co.uk/digital-numeracy-and-literacy---early-years.html">https://www.ilearn2.co.uk/digital-numeracy-and-literacy---early-years.html</a> <b>YR:</b> Art and Design: <a href="https://www.ilearn2.co.uk/digital-art---early-years.html">https://www.ilearn2.co.uk/digital-art---early-years.html</a> Music Creation: <a href="https://www.ilearn2.co.uk/year1musiccreation.html">https://www.ilearn2.co.uk/year1musiccreation.html</a></p> <p>Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	<p>Computer, tablet, phone, screen, screen time, rules, parents, adults, trusted, problems, videos, pictures, photos</p> <p>Art, pictures, design, image, photo, colours, choose</p>
<p><b>Year 1</b></p>	<p><b>NC:</b> Use technology safely and respectfully, keeping personal information private;</p> <p><b>PSHE:4a) that people sometimes behave differently online, including by pretending to be someone they are not.</b></p>	<p>Revisit Chicken Clicking book from Foundation (kept in nursery office) Internet Explorer challenges</p> <p>Only cover Hector’s World episodes: <a href="https://www.ilearn2.co.uk/e-safety---key-stage-1.html">https://www.ilearn2.co.uk/e-safety---key-stage-1.html</a></p> <p>Self-image and identity – online behaviour lesson: <a href="#">Search and Access Resources</a> ▶ <a href="#">Curriculum</a> ▶ <a href="#">Self-Image and Identity (projectevolve.co.uk)</a> Speaking to a trusted adult lesson: <a href="#">Search and Access Resources</a> ▶ <a href="#">Curriculum</a> ▶ <a href="#">Self-Image and Identity (projectevolve.co.uk)</a></p>	<p>Internet, google chrome, google, password, private, safe, personal information, online.</p> <p>Kind, considerate, online, offline, trusted adult, respect, choice, permission, uncomfortable, embarrassed, sharing</p>

	<p>PSHE: 4b) that the same principles apply to online relationships as to face-to face relationships, including the importance of respect for others online including when we are anonymous.</p>	<p>Being kind online and offline lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Being kind and considerate lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	
<p>Year 2</p>	<p><b>NC:</b> 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>PSHE:4a) that people sometimes behave differently online, including by pretending to be someone they are not.</p> <p>PSHE: 4b) that the same principles apply to online relationships as to face-to face relationships, including the importance of respect for others online including when we are anonymous.</p> <p>PSHE: 7d) why social media, some computer games and online gaming, for example, are age restricted.</p>	<p>Internet Explorer challenges PenguinPig book (kept in nursery office)</p> <p>Use Jessie and Friends episodes (CEOP): <a href="https://www.ilearn2.co.uk/e-safety---key-stage-1.html">https://www.ilearn2.co.uk/e-safety---key-stage-1.html</a></p> <p>Teach safe searching - <a href="#">Kiddle - visual search engine for kids</a> and <a href="#">Swiggle.org.uk - Child Friendly Search Engine for Kids</a> - SMART rules for surfing the net: <a href="#">Be SMART online   Childnet</a> Internet research pack: <a href="#">Year 2 Research - iLearn2   Primary Computing, Made Easy</a>. Pupil code: R877 Purple Mash – ‘What is the internet?’ slideshow Skills list: <a href="http://code-it.co.uk/dlplanning/webresearch/internet-research-skills">http://code-it.co.uk/dlplanning/webresearch/internet-research-skills</a></p> <p>Self-image and identity – saying ‘no’ lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Self-Image and Identity (projectevolve.co.uk)</a></p> <p>Online reactions lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Online Relationships (projectevolve.co.uk)</a> Sharing information online lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Online Relationships (projectevolve.co.uk)</a> Asking a trusted adult lesson: <a href="#">Search and Access Resources ▶ Curriculum ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Healthy Gaming ppt and worksheet, discussion cards – saved here: <a href="#">Autumn resources Digital Literacy</a> Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	<p>Internet, google chrome, google, password, private, safe, personal information, online, parents, carers, trusted adults, teachers, appropriate, right, wrong</p> <p>Internet, search, search results, browser, google chrome, safari, internet explorer, Microsoft edge, search engine, Kiddle, google,</p>
<p>Year 3</p>	<p><b>NC:</b> Use search technologies effectively,</p> <p>PSHE: 4c) the rules and principles for keeping safe online, how to recognise risks, harmful content and contact, and how to report them.</p>	<p><a href="#">What do the labels mean?   Pegi Public Site</a></p> <p>Web research guide: <a href="http://code-it.co.uk/dlplanning/webresearch/internet-research-skills">http://code-it.co.uk/dlplanning/webresearch/internet-research-skills</a></p> <p>Cyber People plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/cyberpeople">http://code-it.co.uk/dlplanning/digitalcitizenship/cyberpeople</a></p>	<p>Internet, google chrome, google, password, private, safe, personal information, online, safari, safe searching, criteria, web research, search results, browser</p> <p>Age range, age appropriate, suitable, restrictions, PEGI rating,</p>

	<p>PSHE: 4a) that people sometimes behave differently online, including by pretending to be someone they are not.</p> <p>PSHE: 7d) why social media, some computer games and online gaming, for example, are age restricted</p>	<p>Make Powerpoint of online safety rules</p> <p>Explore <a href="#">8-10s: Stay Safe (thinkuknow.co.uk)</a> Present what you have found out in your choice of program</p> <p>Internet Explorer challenges</p> <p>E-safety pack: <a href="https://www.ilearn2.co.uk/e-safety---key-stage-2.html">https://www.ilearn2.co.uk/e-safety---key-stage-2.html</a> Pupil code: ES74</p> <p>Respectful gaming chat activity</p> <p>Belief, opinion, fact lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Three ▶ Managing Online Information (projectevolve.co.uk)</a></p> <p>Search engine auto complete lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Three ▶ Managing Online Information (projectevolve.co.uk)</a></p> <p>Trusting people online lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Three ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>‘Knowing’ someone online lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Three ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Sharing information online lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Three ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	<p>advice, gaming, violence, language, unsuitable, Report abuse button, Gaming, blogs</p>
Year 4	<p><b>NC:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour;</p> <p>PSHE: 4c) the rules and principles for keeping safe online, how to recognise risks, harmful content and contact, and how to report them.</p>	<p>Internet Explorer challenges</p> <p>Gaming media violence lesson plan – saved here: <a href="#">Autumn resources Digital Literacy</a></p> <p>E-safety pack: <a href="https://www.ilearn2.co.uk/e-safety---key-stage-2.html">https://www.ilearn2.co.uk/e-safety---key-stage-2.html</a> Pupil code: ES74</p> <p>Internet Research Pack: <a href="https://www.ilearn2.co.uk/year-4-research.html">https://www.ilearn2.co.uk/year-4-research.html</a> Pupil code: RRQ2</p>	<p>Internet, google chrome, google, password, private, safe, personal information, online, safari, safe searching, criteria, web research, search results, browser</p> <p>Age range, age appropriate, suitable, restrictions, PEGI rating, advice, gaming, violence, language,</p>

	<p>PSHE: 4a) that people sometimes behave differently online, including by pretending to be someone they are not.</p> <p>PSHE: 7d) why social media, some computer games and online gaming, for example, are age restricted</p> <p>7g) where and how to report concerns and get support with issues online.</p>	<p>Explore <a href="#">8-10s: Stay Safe (thinkuknow.co.uk)</a> Present what you have found out in your choice of program  <a href="#">What do the labels mean?   Pegi Public Site</a></p> <p>Online Gaming safety quiz – saved here: <a href="#">Autumn resources Digital Literacy</a></p> <p>Feeling safe online lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Four ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Being respectful to others lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Four ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Thinking about others lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Four ▶ Online Bullying (projectevolve.co.uk)</a></p> <p>Social media bullying lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Four ▶ Online Bullying (projectevolve.co.uk)</a>  Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	<p>unsuitable, Report abuse button, Gaming, blogs</p>
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<p>Year 5</p>	<p><b>NC:</b> Use technology safely, respectfully and responsibly.</p> <p><b>NC:</b> Identify a range of ways to report concerns about content and contact</p> <p>PSHE:4a) that people sometimes behave differently online, including by pretending to be someone they are not.</p> <p>4e) how information and data is shared and used online.</p> <p>PSHE: 7b) about the benefits of rationing time spent online, the risks of excessive time spent on electronic devices and the impact of positive and negative content online on their own and others' mental and physical wellbeing.</p> <p>7c) how to consider the effect of their online actions on others and know how to recognise and display respectful behaviour online and the importance of keeping personal information private.</p>	<p><a href="#">What do the labels mean?   Pegi Public Site</a></p> <p>Online gaming discussion cards, scenario cards and writing activity saved here: <a href="#">Autumn resources Digital Literacy</a></p> <p>Identity plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/Keeping_our_identity_private">http://code-it.co.uk/dlplanning/digitalcitizenship/Keeping_our_identity_private</a></p> <p>Mobile phones plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/mobilephones">http://code-it.co.uk/dlplanning/digitalcitizenship/mobilephones</a></p> <p>Cyberbullying plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/cyberbullying">http://code-it.co.uk/dlplanning/digitalcitizenship/cyberbullying</a></p> <p>Internet Explorer challenges</p> <p>E-safety teaching ideas (Look at UKS2 resources) <a href="https://www.ilearn2.co.uk/e-safety---key-stage-2.html">https://www.ilearn2.co.uk/e-safety---key-stage-2.html</a> Pupil code: ES96</p> <p>In-app purchases, phishing ppt, saved here: <a href="#">Autumn resources Digital Literacy</a></p> <p>Online harm lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Telling a trusted adult lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Online Relationships (projectevolve.co.uk)</a></p> <p>Online identity lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Self-Image and Identity (projectevolve.co.uk)</a></p> <p>Online bullying lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Online Bullying (projectevolve.co.uk)</a></p> <p>Health and wellbeing lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Online Bullying (projectevolve.co.uk)</a></p> <p>Private information lesson: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Five ▶ Privacy and Security (projectevolve.co.uk)</a></p>	<p>Age range, age appropriate, suitable, restrictions, PEGI rating, advice, gaming, violence, language, unsuitable responsible, online communication, informed choices, virus threats, blogs messaging, cyberbullying, trusted adult, online identity</p>
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		<p>Click here for: <a href="#">Autumn resources Digital Literacy</a></p>	
<p>Year 6</p>	<p><b>NC:</b> Use technology safely, respectfully and responsibly.</p> <p><b>NC:</b> Identify a range of ways to report concerns about content and contact</p> <p>4d) how to critically consider their online friendships and sources of information including awareness of the risks associated with people they have never met.</p> <p>7f) how to be a discerning consumer of information online including understanding that information, including that from search engines, is ranked, selected and targeted</p> <p>7e) that the internet can also be a negative place where online abuse, trolling, bullying and harassment can take place, which can have a negative impact on mental health. (Snapchat)</p>	<p><a href="#">What do the labels mean?   Pegi Public Site</a></p> <p>Digital images plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/images">http://code-it.co.uk/dlplanning/digitalcitizenship/images</a></p> <p>Mobile phones plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/mobilephones">http://code-it.co.uk/dlplanning/digitalcitizenship/mobilephones</a></p> <p>Cyberbullying plan: <a href="http://code-it.co.uk/dlplanning/digitalcitizenship/cyberbullying">http://code-it.co.uk/dlplanning/digitalcitizenship/cyberbullying</a></p> <p>Internet Explorer challenges</p> <p>E-safety teaching ideas (Look at UKS2 resources) <a href="https://www.ilearn2.co.uk/e-safety---key-stage-2.html">https://www.ilearn2.co.uk/e-safety---key-stage-2.html</a> Pupil code: ES96</p> <p>Managing online information unit: <a href="#">Search and Access Resources</a>  ▶ <a href="#">Year Group</a> ▶ <a href="#">Year Six</a>   <a href="#">ProjectEVOLVE</a></p>	<p>Age range, age appropriate, suitable, restrictions, PEGI rating, advice, gaming, violence, language, unsuitable responsible, online communication, informed choices, virus threats, blogs messaging, cyberbullying, trusted adult, online identity</p>

		<p>Online bullying lessons: <a href="#">Search and Access Resources ▶ Year Group ▶ Year Six   ProjectEVOLVE</a></p>	
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Online friendships lessons: [Search and Access Resources ▶ Year Group ▶ Year Six | ProjectEVOLVE](#)

Click here for: [Autumn resources Digital Literacy](#)



## Spring - Computer Science: how computers work

See video links on final page for inspiration.

	EYFS/NC ref.	Ideas and software	Vocabulary
EYFS	<p><b>3-4:</b> Explore how things work (Understanding of the World)</p> <p><b>YR:</b> Develop their small motor skills so that they can use a range of tools competently, safely and confidently. (Physical Development)</p> <p><b>YR:</b> Show resilience and perseverance in the face of a challenge. (PSED)</p> <p><b>ELG:</b> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. (PSED)</p> <p><b>See Barefoot resources for specific learning Computational Thinking objectives.</b></p>	<p><b>Open Door activities:</b> BeeBots/BlueBots (tinkering – not structured activity) Remote Control Cars Torches Cubetto Robot Mouse Noisy Things Beep Beep Sphero</p> <p>Purple Mash 2Code (summer term YR)</p> <p><b>Nursery:</b> Computer Discovery activities 1 - 3 <a href="https://www.ilearn2.co.uk/computerdiscoveryfree.html">https://www.ilearn2.co.uk/computerdiscoveryfree.html</a> <b>YR:</b> Mouse and Keyboard Skills Activities 1 – 7 <a href="https://www.ilearn2.co.uk/eyfsyear-1-mouse-and-keyboard-skills.html">https://www.ilearn2.co.uk/eyfsyear-1-mouse-and-keyboard-skills.html</a> <b>YR:</b> Early Programming <a href="https://www.ilearn2.co.uk/early-programming---early-years.html">https://www.ilearn2.co.uk/early-programming---early-years.html</a></p> <p>Barefoot Computing units: Boats Ahoy (4 lessons N/YR), Junk Scarecrows (1/2 lessons N/YR), Rabbit Run (YR), Seed Sequencing (N/YR) Click here for: <a href="#">Spring resources Computer Science</a></p>	<p>Button, switch, forwards, backwards, on, off, left, right, up, down.</p> <p>Coding: Program, code, input, instructions, forward, backwards, left, right, up, down</p> <p>Algorithms, decomposition, creating, tinkering, logic, patterns, abstraction, collaborating</p>
Year 1	<p><b>NC:</b> Create and debug simple programs</p> <p><b>Skills:</b> I can write a simple algorithm I can predict what a program will do I can input code I can add a sprite I can change a background I can program a Beebot (I can debug a Beebot)</p>	<p>BeeBots/BlueBots BeeBot/BlueBot app on iPads 2 code in Purple Mash Sphero Cubetto Robot Mouse</p> <p>Code-it.co.uk BeeBot planning: <a href="http://codeit.co.uk/ks1/turtle/ks1turtle">http://codeit.co.uk/ks1/turtle/ks1turtle</a> Code.org lessons: <a href="https://studio.code.org/s/coursea-2018">https://studio.code.org/s/coursea-2018</a></p> <p>Programming A – moving a robot planning:</p>	<p>Forwards, backwards, on, off, left, right, up, down.</p> <p>Coding: Program, code, instructions, input, bug, debug, order, sequence, first, last.</p> <p>Predict, Algorithm, Command</p>

		<p><a href="http://www.teachcomputing.org">Programming A – Moving a robot (teachcomputing.org)</a></p> <p>Introduce Programming: <a href="https://www.ilearn2.co.uk/year-1-programming.html">https://www.ilearn2.co.uk/year-1-programming.html</a></p> <p>Crazy Character Algorithms Sharing Sweets algorithms World Map Logic (All Barefoot Computing lessons) Barefoot Resources link: <a href="http://www.ilearn2.co.uk/year-1-programming.html">Computing</a></p>	<p>Instructions, persevering, creating, debugging, logic, Forwards, backwards, left, right, Right turn, left turn</p> <p>Concepts, approaches, computational thinking, tinkering, creating, persevering, collaborating, debugging, algorithms</p>
Year 2	<p><b>NC:</b> 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><b>NC:</b> Use logical reasoning to predict the behaviour of simple programs</p> <p><b>Skills as Y1 +</b> I can improve an algorithm I can predict what a program will do I can debug a program I can use logic to predict or solve a problem I can use loops</p>	<p>Scratch Junior (iPads) <a href="https://www.scratchjr.org/teach.html">https://www.scratchjr.org/teach.html</a> Scratch Jr: <a href="https://www.ilearn2.co.uk/year-2-scratch-jr.html">https://www.ilearn2.co.uk/year-2-scratch-jr.html</a> Scratch Jr plans: <a href="http://code-it.co.uk/scratchjrdance">http://code-it.co.uk/scratchjrdance</a></p> <p>Code-it.co.uk BeeBot planning: <a href="http://code-it.co.uk/ks1/turtle/ks1turtle">http://code-it.co.uk/ks1/turtle/ks1turtle</a> 2Code in Purple Mash</p> <p>Code.org lessons: <a href="https://studio.code.org/s/courseb-2018">https://studio.code.org/s/courseb-2018</a> 2Count, 2Graph, 2Question Also revisit Y1 apps/programs Develop Programming: <a href="https://www.ilearn2.co.uk/year-2-programming.html">https://www.ilearn2.co.uk/year-2-programming.html</a></p> <p>Algorun/Tynker Jr apps on iPads</p> <p>Programming A – robot algorithms unit: <a href="http://www.teachcomputing.org">Programming A – Robot algorithms (teachcomputing.org)</a></p> <p>Crazy Character Algorithms Sharing Sweets algorithms World Map Logic (All Barefoot Computing lessons) Barefoot Resources link: <a href="http://www.ilearn2.co.uk/year-2-programming.html">Computing</a></p>	<p>Coding: Program, code, instructions, input, bug, debug, order, sequence, first, last, action, algorithm, object</p> <p>Predict, Algorithm, Command Instructions, persevering, creating, debugging, logic, Forwards, backwards, left, right, Right turn, left turn</p> <p>Concepts, approaches, computational thinking, tinkering, creating, persevering, algorithms collaborating, debugging,</p>
Year 3	<p><b>NC:</b> Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts</p>	<p>2Code in Purple Mash Dash and Dot robots and Wonder apps on iPads Introduce Micro:bits - <a href="http://www.microsoft.com/microbit">Microsoft MakeCode for micro:bit (microbit.org)</a></p> <p>Algorithm design plan: <a href="http://code-it.co.uk/unplugged/gettingup">http://code-it.co.uk/unplugged/gettingup</a> Using loops plan: <a href="http://code-it.co.uk/cs/loops2dshapes">http://code-it.co.uk/cs/loops2dshapes</a></p>	<p>Coding: Action, Algorithm, Bug, Code Block, Code design, Command, Control,</p> <p>Debug/Debugging, Event, If, Input, Output, Object, Properties, Repeat, Selection, Timer, Variable</p>

		<p>Scratch Junior on iPads Code.org lessons: <a href="https://studio.code.org/s/coursec-2018">https://studio.code.org/s/coursec-2018</a> <b>Y3 Pupil Activities for Scratch:</b> <a href="https://www.ilearn2.co.uk/y3scratch.html">https://www.ilearn2.co.uk/y3scratch.html</a> <a href="#">Scratch Tinkering Activity   Resources   Barefoot Computing</a> Investigating Inputs Activity (Scratch) – links to D&amp;T <a href="#">Investigating Inputs Activity   Resources   Barefoot Computing</a> <a href="#">Make a Game Project   Resources   Barefoot Computing</a> <a href="#">Planet Protectors   Resources   Barefoot (barefootcomputing.org)</a> Barefoot Computing lesson downloads are saved here: <a href="#">Spring resources Computer Science</a></p>	
Year 4	<p><b>NC:</b> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems;</p> <p><b>NC:</b> Use sequence, selection, and repetition in programs;</p>	<p>2Code in Purple Mash Dash and Dot robots and Wonder apps on iPads Micro:bits - <a href="https://www.microsoft.com/microbit">Microsoft MakeCode for micro:bit (microbit.org)</a></p> <p>Sandwich making algorithm: <a href="http://code-it.co.uk/wp-content/uploads/2015/05/sandwich_algorithm1.pdf">http://code-it.co.uk/wp-content/uploads/2015/05/sandwich_algorithm1.pdf</a> Code.org lessons: <a href="https://studio.code.org/s/coursed-2018">https://studio.code.org/s/coursed-2018</a> Debugging activity - <a href="#">Bug in the Water Cycle   Resources   Barefoot Computing</a> <b>Y4 Pupil Activities for Scratch:</b> <a href="https://www.ilearn2.co.uk/y4scratch.html">https://www.ilearn2.co.uk/y4scratch.html</a> Scratch sample plans: <a href="http://code-it.co.uk/sampleKS2plan">http://code-it.co.uk/sampleKS2plan</a> Fossil Formation Animation (Scratch) <a href="#">Fossil Formation Animation   Resources   Barefoot Computing</a> Barefoot Computing lesson downloads are saved here: <a href="#">Spring resources Computer Science</a></p>	<p>Coding: Action, Alert, Algorithm, Bug, Command, Control, Debug/Debugging, Event, Get input, If, If/Else, Input, Output, Object, Repeat, Selection, Timer, Variables, sprite</p>
Year 5	<p><b>NC:</b> Use sequence, selection and repetition in programs;</p> <p>Work with variables and various forms of input (microphone) and output (Sphero, Crumble).</p>	<p>Programming with Sphero: <a href="https://www.ilearn2.co.uk/year-5-sphero-programming.html">https://www.ilearn2.co.uk/year-5-sphero-programming.html</a></p> <p>Use Scratch to complete an animation (link to topic or Literacy) Y5 Pupil Activities for Scratch: <a href="https://www.ilearn2.co.uk/y5scratch.html">https://www.ilearn2.co.uk/y5scratch.html</a></p> <p>Movie making (iMovie). Link to Literacy (importance of ordering) Green screen movie linked to topic (Do ink app)</p> <p><a href="#">Year 5 Text-based Programming - iLearn2   Primary Computing. Made Easy.</a> Pupil code TBJ4</p>	<p>Coding- Action, Alert, Algorithm, Bug, Code Design, Command, Control, Debug/ Debugging, Design Mode, Event, Get input, If, If/Else, Input, Output, Object, Repeat, Sequence, Selection, Timer, Variable</p>

		<p><a href="#">You're the Cyber Security Expert   Resources   Barefoot Computing</a>  <a href="#">Classroom Sound Monitor   Resources   Barefoot Computing</a>  <a href="#">Logical Number Sequences   Resources   Barefoot Computing</a>  Barefoot Computing lesson downloads are saved here: <a href="#">Spring resources Computer Science</a></p> <p>Unit of lessons on use of Crumble: <a href="#">Programming A – Selection in physical computing (teachcomputing.org)</a></p> <p>Unit of lessons designing a quiz: <a href="#">Programming B – Selection in quizzes (teachcomputing.org)</a></p> <p>Code.org lessons: <a href="#">Express Course (2021) - Code.org</a>  Click here for: <a href="#">Spring resources Computer Science</a></p>	
Year 6	<p><b>NC:</b> Work with variables and various forms of input (microphone) and output (Sphero, Crumble).</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>Unit of work on variables in programming: <a href="#">Programming A – Variables in games (teachcomputing.org)</a></p> <p>Unit of lessons on use of Crumble: <a href="#">Programming A – Selection in physical computing (teachcomputing.org)</a></p> <p>Y6 Pupil Activities for Scratch:  <a href="https://www.ilearn2.co.uk/y6scratch.html">https://www.ilearn2.co.uk/y6scratch.html</a></p> <p>Programming in HTML activity pack: <a href="#">Year 6 HTML - iLearn2   Primary Computing. Made Easy.</a> Pupil code H7X9</p> <p><a href="#">Logical Reasoning Unplugged Activity   Barefoot Computing</a></p> <p><a href="#">Bug in the Water Cycle   Resources   Barefoot Computing</a></p> <p><a href="#">Code Cracking   Resources   Barefoot Computing</a>  Barefoot Computing lesson downloads are saved here: <a href="#">Spring resources Computer Science</a></p>	<p>Coding- Action, Alert, Algorithm, Bug, Code Design, Command, Control, Debug/Debugging, Event, Function, Get Input, If, If/Else, Input, Output, Object, Repeat, Sequence, Selection, Timer, Variable</p>

**Summer - Information technology: how computers are used purposefully to create programs, systems and a range of content**

KS2: See final page for links to influential tech leaders

<p>EYFS</p>	<p><b>3-4:</b> Match their developing physical skills to tasks and activities in the setting. (Physical Development)</p> <p><b>YR:</b> Explore, use and refine a variety of artistic effects to express their ideas and feelings. (Expressive Art and Design)</p> <p><b>YR:</b> Develop their small motor skills so that they can use a range of tools competently, safely and confidently. (Physical Development)</p> <p><b>ELG:</b> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. (PSED)</p> <p><b>ELG:</b> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p><b>Open Door tinkering:</b> Beebots and Blue-bots</p> <p>N – Beep Beep games, Purple Mash activities</p> <p>YR – Digital photos and videos <a href="#">EYFS - Digital Photos and Videos - iLearn2   Primary Computing. Made Easy.</a></p> <p>N/YR - Uploading photos to Twitter/ClassDojo. Do this as a whole class. Talking to pupils about collecting information.</p> <p>Purple Mash applications</p> <p>Digital Art and Design activity pack (N/YR) Pupil code 16J4: <a href="#">EYFS - Digital Art and Design - iLearn2   Primary Computing. Made Easy.</a></p> <p>YR - Re-visit Mouse and Keyboards Skills unit from Spring term: <a href="https://www.ilearn2.co.uk/eyfsyear-1-mouse-and-keyboard-skills.html">https://www.ilearn2.co.uk/eyfsyear-1-mouse-and-keyboard-skills.html</a></p> <p>Purple Mash activities</p> <p>YR – Barefoot Computing units: Colour Collections, Journeys, Seaside Tangrams (all these units are saved in the Computing folder) Click here for: <a href="#">Summer resources I. T</a></p>	<p>Button, press, function, direction, forwards, backwards, left, right</p> <p>Website, computer, screen, mouse, keyboard</p>
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	(PSED)		
Year 1	<b>NC:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content	<p>Discovery Education</p> <p>2Animate</p> <p>2Paint a Picture</p> <p>2Publish</p> <p>2DIY</p> <p>2Simple 2Connect</p> <p>Word</p> <p>Book Creator (PC or iPad)</p> <p>Code-it.co.uk planning: <a href="http://code-it.co.uk/ks1/library/library">http://code-it.co.uk/ks1/library/library</a></p> <p>. <a href="#">Year 1 Text &amp; Images - iLearn2   Primary Computing. Made Easy.</a></p> <p>Comic Creation: <a href="https://www.ilearn2.co.uk/year-1-comic-creation.html">https://www.ilearn2.co.uk/year-1-comic-creation.html</a></p> <p>Music Creation: <a href="https://www.ilearn2.co.uk/4400.html">https://www.ilearn2.co.uk/4400.html</a></p> <p>Design: <a href="https://www.ilearn2.co.uk/year13ddesign.html">https://www.ilearn2.co.uk/year13ddesign.html</a></p>	<p>Log in, Username, password, Avatar, Log out, Save, Notification</p> <p>Text, image, resize, page, background, colour, plus, minus, character, speech bubble, insert, undo, print</p> <p>Videos, Sounds, Image bank Word bank, Space bar</p> <p>Animate, animation, movement, story, character, background, draw, colour, tools, copy, paste, change, edit, move</p>
Year 2	<b>NC:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content	<p>As Y1, plus:</p> <p>Presentation planning (Powerpoint): <a href="http://code-it.co.uk/dlplanning/presentationmedia/presentationmedia2">http://code-it.co.uk/dlplanning/presentationmedia/presentationmedia2</a></p> <p>Data Handling: <a href="https://www.ilearn2.co.uk/year-2-data-handling.html">https://www.ilearn2.co.uk/year-2-data-handling.html</a> Also 2Graph and 2 Survey</p> <p>Animation/Stop motion: <a href="https://www.ilearn2.co.uk/year-2-animation.html">https://www.ilearn2.co.uk/year-2-animation.html</a></p> <p>Also 2Animate <a href="#">ABCya Make an Animation</a></p> <p>Digital Art: <a href="https://www.ilearn2.co.uk/year-2-digital-art.html">https://www.ilearn2.co.uk/year-2-digital-art.html</a></p> <p>Typing - <a href="http://edclub.typingclub.com">edclub (typingclub.com)</a></p>	<p>Data, data handling, information, question, answer, tally chart, tally, amount, total, axis, bar graph, title, bar chart, pie chart</p> <p>Animate, animation, movement, story, character, background, draw, colour, tools, copy, paste, change, edit, move</p> <p>image, portrait, colour, shade, tone, light, dark, water, erase, undo, save, print, file, name</p> <p>Typing, keyboard, home row, keys, space bar, volume, log on, image, resize, page, background, colour, plus, minus, shade, undo, save, print, file name</p>
Year 3	<b>NC:</b> 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,	<p>Word</p> <p>Publisher</p> <p>Powerpoint</p>	<p>Typing: keyboard, keys, shift key, Caps lock, space bar, home keys</p>

	<p>systems and content that accomplish given goals including presenting data and information</p> <p><b>Skills:</b>          Beginning to touch type          Use shift key for capital letters          Delete using backspace          Insert text/image box          Edit and improve text          Save work (some with support)          Print work (some with support_</p>	<p>Book Creator (PC or iPad)</p> <p>IT skills checklist: <a href="http://code-it.co.uk/dlplanning/generalictskills/generalictskills">http://code-it.co.uk/dlplanning/generalictskills/generalictskills</a></p> <p>Word processing checklist (Part 1): <a href="http://code-it.co.uk/dlplanning/wordprocessing/WordProcessingSkillsandUnderstanding">http://code-it.co.uk/dlplanning/wordprocessing/WordProcessingSkillsandUnderstanding</a></p> <p>Document creation and editing  <a href="https://www.ilearn2.co.uk/document.html">https://www.ilearn2.co.uk/document.html</a></p> <p>Understanding computer systems unit of work:  <a href="http://teachcomputing.org/Computing%20systems%20and%20networks%20-%20Connecting%20computers">Computing systems and networks – Connecting computers (teachcomputing.org)</a></p> <p>Creating media (animation) – unit of work:  <a href="http://teachcomputing.org/Creating%20media%20-%20Animation">Creating media – Animation (teachcomputing.org)</a></p>	<p>Internet: search, search engine, sharing, appropriate, suitable, copy, paste</p> <p>Microsoft: text box, clip art, resize, save, slide, page, font, size, cut and paste</p>
<p>Year 4</p>	<p><b>NC:</b> 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 presenting data and information</p> <p><b>Skills as Y3 +</b>          Move the cursor with arrow key          Use delete button          Highlight text by left clicking          Resize, rotate and format a text box          Insert pictures from a file          Insert and format shapes          Cut and paste text and objects          Save work and open saved work          Print work to correct printer</p>	<p>Word          Publisher          Powerpoint          Book Creator (PC or iPad)</p> <p>Desktop publishing key skills: <a href="http://code-it.org.uk/Supported%20by%20HIAS%20-%20Desktop%20Publishing%20Skills%20and%20Understanding">Desktop Publishing Skills and Understanding   code-it supported by HIAS, Hampshire Inspection and Advisory Service</a></p> <p>Word processing checklist (Part 1): <a href="http://code-it.co.uk/dlplanning/wordprocessing/WordProcessingSkillsandUnderstanding">http://code-it.co.uk/dlplanning/wordprocessing/WordProcessingSkillsandUnderstanding</a></p> <p>Understanding the internet – unit of work:  <a href="http://teachcomputing.org/Computing%20systems%20and%20networks%20-%20The%20Internet">Computing systems and networks – The Internet (teachcomputing.org)</a></p> <p>Creating media – photo editing unit of work:  <a href="http://teachcomputing.org/Creating%20media%20-%20Photo%20editing">Creating media – Photo editing (teachcomputing.org)</a></p> <p>Comic Creation (word processing, presenting work)  <a href="https://www.makebeliefscomix.com/Comix/">https://www.makebeliefscomix.com/Comix/</a>  <a href="https://www.ilearn2.co.uk/comiccreationteacher.html">https://www.ilearn2.co.uk/comiccreationteacher.html</a></p>	<p>Multimedia Presentations          Alignment, Brush size, Repeats, Reflections, green screening</p> <p>Microsoft: text box, clip art, resize, save, slide, page, font, size, cut and paste</p> <p>Internet: search, search engine, sharing, appropriate, suitable, copy, paste</p> <p>Photo, image, colour effect, crop, retouching, cloning, copy, rotate</p> <p>Animate, animation, movement, story, character, background, draw, colour, tools, copy, paste, change, edit, move</p>

<p>Year 5</p>	<p><b>NC:</b> Create and design a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Child friendly example: <a href="#">Use Word/Publisher/Book Creator to create a list/poster/ebook using information you have collected. Save, evaluate and edit your work.</a></p> <p><b>Key skills as Y4 +</b> Know how to undo and redo Can use save and save as Can make text bold, italic or underline it as appropriate Can cut and paste Search for and insert clip art Delete a text box Use WordArt Can insert a table</p> <p><b>NC:</b> Appreciate how (search) results are selected and ranked and be discerning in evaluating digital content</p> <p><b>NC:</b> Understand computer networks including the internet; how they provide multiple services, such as the World Wide Web</p>	<p>Word Publisher Powerpoint Book Creator (pc or iPad) Computer systems – unit of work: <a href="#">Computing systems and networks – Sharing information (teachcomputing.org)</a></p> <p>Creating media – video editing unit of work: <a href="#">Creating media – Video editing (teachcomputing.org)</a></p> <p>‘How the internet works’ planning: <a href="http://code-it.co.uk/wp-content/uploads/2015/05/connectingtheinternet.pdf">http://code-it.co.uk/wp-content/uploads/2015/05/connectingtheinternet.pdf</a> OR: Use of Padlet/understanding Computer Networks unit: <a href="https://www.ilearn2.co.uk/year-5-computer-networks.html">https://www.ilearn2.co.uk/year-5-computer-networks.html</a></p> <p>Data handling unit of work: <a href="#">Year 5 Data Handling - iLearn2   Primary Computing. Made Easy.</a> Pupil code DHX5</p> <p>Checklist of key skills for web research: <a href="http://code-it.co.uk/dlplanning/webresearch/internet-research-skills">http://code-it.co.uk/dlplanning/webresearch/internet-research-skills</a></p>	<p>Microsoft: text box, clip art, resize, save, slide, page, font, size, cut and paste, undo, redo, save/save as, bold, italic, underline, highlight, format, insert, delete, WordArt, table, column, row</p> <p>Visual media, video, features, microphone, storyboard, scenes, store, retrieve, export, share</p> <p>Networks- Internet, World Wide Web, Network, Local Area Network (LAN), Wide area Network (WAN), Router, Network Cable, Wireless</p> <p>Data, spreadsheet, cells, formulae, totals, averages, minimum, maximum, search, information</p>
<p>Year 6</p>	<p><b>NC:</b> Create and design a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Child friendly example: <a href="#">Use Wordpress to create a web page about your school. Include information about classes and after-school clubs. Evaluate and edit your webpage.</a></p> <p><b>NC:</b> Understand computer networks including the internet; how they provide multiple services, such as the World Wide Web and the opportunities they offer for communication and collaboration</p>	<p>Basic programs as Y5 + Use Sway to create a website.</p> <p>Computing systems – communication unit of work: <a href="#">Computing systems and networks – Communication (teachcomputing.org)</a></p> <p>Creating media – web page creation unit of work: <a href="#">Creating media – Web page creation (teachcomputing.org)</a> OR: <a href="https://www.ilearn2.co.uk/year-6-web-design.html">https://www.ilearn2.co.uk/year-6-web-design.html</a></p> <p>Checklist of key skills for web research: <a href="http://code-it.co.uk/dlplanning/webresearch/internet-research-skills">http://code-it.co.uk/dlplanning/webresearch/internet-research-skills</a></p> <p>App Design unit:</p>	<p>Internet, communication, collaboration, responsibility, internet device/address, website, networks, public, private</p> <p>Website, page layout, HTML, copyright free, fair use, preview, evaluate, navigation path, hyperlink, user experience</p>



	<p><b>NC:</b> Appreciate how (search) results are selected and ranked and be discerning in evaluating digital content</p> <p><b>Key skills as Y5 +</b>          Can make a list with bullet points          Can align text          Can check spelling and grammar          Can insert and format a table          Can copy and paste from the internet          Group and ungroup objects</p>	<p><a href="https://www.ilearn2.co.uk/appdesignteacher.html">https://www.ilearn2.co.uk/appdesignteacher.html</a></p> <p>Image editing unit:  <a href="#">Year 6 Image Editing - iLearn2   Primary Computing. Made Easy.</a> Pupil code EPY3</p>	<p>PowerPoint, app design, software, background, size, digital device, text, image, crop, rotate, icons, navigation, duplicate, hyperlinks,</p> <p>Colour, brightness, contrast, crop, screenshot, layers, import, resize, eraser</p>
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	People	Link
Computer Science	<ul style="list-style-type: none"> <li>Encouraging girls – scroll down to videos at bottom of page: <b>Inspire a girl</b></li> <li>Anyone can code! - scroll down to videos: <b>Computer Science intro</b></li> <li>Encouraging aspirations – scroll down to videos: <b>What most schools don't teach</b> (more suitable for KS2)</li> <li>Encouraging girls/other backgrounds into CS – scroll down to videos: <b>My name is Aracely</b> (Y5/6)</li> <li>Career aspirations in CS – scroll down to videos: <b>Careers in Tech: My name is Tess and My name is Brina</b></li> </ul>	<p><a href="https://code.org/minecraft">https://code.org/minecraft</a></p> <p><a href="https://code.org/careers-in-tech">https://code.org/careers-in-tech</a></p>
Information Technology	<p><b>Influential Tech Leaders:</b>  <b>Elon Musk</b> – Co-founder of PayPal, chairman of Tesla</p> <p><b>Jack Dorsey</b> – CEO of Twitter</p> <p><b>Steve Jobs</b> – Co-founder of Apple</p> <p><b>Tim Berners-Lee</b> – inventor World Wide Web and HTML.</p> <p><b>Female role models who changed the tech world</b> – inc. Ada Lovelace</p>	<p><a href="https://kids.britannica.com/students/article/Elon-Musk/623517">https://kids.britannica.com/students/article/Elon-Musk/623517</a></p> <p><a href="https://kids.kiddle.co/Jack_Dorsey">https://kids.kiddle.co/Jack_Dorsey</a>  <a href="https://en.wikipedia.org/wiki/Jack_Dorsey">https://en.wikipedia.org/wiki/Jack_Dorsey</a></p> <p><a href="https://kids.britannica.com/kids/article/Steve-Jobs/399513">https://kids.britannica.com/kids/article/Steve-Jobs/399513</a>  <a href="https://kids.kiddle.co/Steve_Jobs">https://kids.kiddle.co/Steve_Jobs</a></p> <p><a href="https://kids.kiddle.co/Tim_Berners-Lee">https://kids.kiddle.co/Tim_Berners-Lee</a>  <a href="https://kidsknect.com/people/tim-berners-lee/">https://kidsknect.com/people/tim-berners-lee/</a></p> <p><a href="https://www.globalapptesting.com/blog/the-women-who-changed-the-tech-world">https://www.globalapptesting.com/blog/the-women-who-changed-the-tech-world</a></p>
Digital Literacy	<p><b>12 year old app developer</b></p> <p><b>Talk from young Kenyan inventor</b></p>	<p><a href="https://www.ted.com/talks/thomas_suarez_a_12_year_old_app_developer?referrer=playlist-ted_under_20">https://www.ted.com/talks/thomas_suarez_a_12_year_old_app_developer?referrer=playlist-ted_under_20</a></p> <p><a href="https://www.ted.com/talks/richard_turere_my_invention_that_made_peace_with_lions?referrer=playlist-ted_under_20#t-424764">https://www.ted.com/talks/richard_turere_my_invention_that_made_peace_with_lions?referrer=playlist-ted_under_20#t-424764</a></p>



(Both suitable for Y5/6)

