

## Computing-Long Term Plan

<b>Nursery and Reception</b>	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Skills ( <a href="#">Sheffield elearning Service</a> )	Ensure children's ' <b><i>school readiness</i></b> ' and ' <b><i>give them a broad range of knowledge and skills that provide the right foundation for good future progress through school and life</i></b> ' - Statutory Framework for EYFS September 2021. Computational Thinking ideas Rationale from Barefoot Computing <a href="#">here</a>					
	<b>Programmable toys</b>					
<ul style="list-style-type: none"> <li>- Use different digital devices.</li> <li>- Recognise that you can access content on a digital device.</li> <li>- Use a mouse, touchscreen or appropriate access device to target and select options on screen.</li> <li>- Recognise a selection of digital devices.</li> <li>- Recognise the basic parts of a computer, e.g. mouse, screen,</li> </ul>	<b>Barefoot Computing- <a href="#">Awesome Autumn</a></b>  <b>Technology around us</b>  <a href="https://www.ilearn2.co.uk/computerdiscoveryfree.html">https://www.ilearn2.co.uk/computerdiscoveryfree.html</a>  <a href="http://code-it.co.uk/wp-content/uploads/2015/05/bankplan.pdf">http://code-it.co.uk/wp-content/uploads/2015/05/bankplan.pdf</a>	<b>Barefoot Computing- <a href="#">Winter Warmers</a></b>	<b>Barefoot Computing- <a href="#">Busy Bodies</a></b>  <b>Music creation</b>  <a href="https://www.ilearn2.co.uk/freeyear1musiccreation.html/">https://www.ilearn2.co.uk/freeyear1musiccreation.html/</a>  <a href="https://springroll-tc.pbskids.org/music-maker/d0f261dff-c3c8f713fa5a22-bb99d7f9afd04cb56/release/index.html">https://springroll-tc.pbskids.org/music-maker/d0f261dff-c3c8f713fa5a22-bb99d7f9afd04cb56/release/index.html</a>	<b>Barefoot Computing - <a href="#">Springtime</a></b>  <b>Cooking</b>  Jam sandwich <a href="http://swaygrant.ham.co.uk/wp-content/uploads/2016/09/JamSandwichAlgorithm.pdf">http://swaygrant.ham.co.uk/wp-content/uploads/2016/09/JamSandwichAlgorithm.pdf</a>  Pizza <a href="https://www.barefootcomputing.org/docs/default-">https://www.barefootcomputing.org/docs/default-</a>	<b>Barefoot Computing- <a href="#">Summer Fun</a></b>  <b>Other ideas</b> <a href="#">Lego Building</a> Steam Park  <a href="#">Crazy Characters</a>  <a href="#">Head, Shoulder, Knees and Toes</a>	<b>Barefoot Computing- <a href="#">Boats Ahoy</a></b>  <b>Art</b>  <a href="https://www.j2e.com/jit5">https://www.j2e.com/jit5</a>  <a href="#">Art and algorithms</a>

keyboard. - Select a digital device to fulfil a specific task, e.g. to take a photo.	<a href="http://code-it.co.uk/wp-content/uploads/2015/05/supermarketplan.pdf">http://code-it.co.uk/wp-content/uploads/2015/05/supermarketplan.pdf</a>  <a href="http://www.crickweb.co.uk/Early-Years.html">http://www.crickweb.co.uk/Early-Years.html</a>  <a href="https://www.nurseryworld.co.uk/News/article/ict-in-role-play-check-it-out">https://www.nurseryworld.co.uk/News/article/ict-in-role-play-check-it-out</a>		<a href="#">x.html</a>  <a href="https://musiclab.chromeexperiments.com/Voice-Spinner/">https://musiclab.chromeexperiments.com/Voice-Spinner/</a>	<a href="#">source/at-home/pizza_party_activity.pdf?sfvrsn=154d91ea_2</a>		
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Key Stage 1	NC Objectives
	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instruction</li> <li>• create and debug simple programs</li> <li>• use logical reasoning to predict the behaviour of simple program</li> <li>• use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• recognise common uses of information technology beyond school</li> </ul>

	<ul style="list-style-type: none"> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>
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Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Skills (Sheffield elearning Service)	<b>IT-What is a computer</b>  (Keep it short, select most relevant parts of unit. Add E-safety)	<b>Programming-Physical</b>	<b>IT-digital imagery (Cross curricular)</b>	<b>Programming-Unplugged</b>	<b>IT-Presentation(Cross curricular)</b>	<b>IT- Data-(Cross curricular)</b>
- Recognise a range of digital devices. - Select a digital device to fulfil a specific task, e.g. to take a photo. - Name a range of digital devices, e.g. laptop, phone, games console. - Log on to the school computer / unlock the school tablet with support. - Identify the basic	<b>Technology Around Us</b> <a href="https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us">https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us</a>  <a href="https://www.abcya.com/games/find-the-tech">https://www.abcya.com/games/find-the-tech</a>  Hello Ruby	<b>Moving a robot</b> <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4</a>  <a href="https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot">https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot</a>  Beebot emulator  App <a href="#">Beebot</a>	<b>Digital Painting</b> <a href="https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting">https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting</a>  <a href="https://www.i2e.com/jit5">https://www.i2e.com/jit5</a>  <a href="#">Tuxpaint.org</a>  <a href="https://www.tate.org.uk/kids/games-quizzes/tate-paint">https://www.tate.org.uk/kids/games-quizzes/tate-paint</a>	<b>Barefoot Computing-dancing</b> <a href="https://curriculum.code.org/hoc/unplugged/4/">https://curriculum.code.org/hoc/unplugged/4/</a>  <a href="https://www.barefootcomputing.org/resources/dance-move-algorithms">https://www.barefootcomputing.org/resources/dance-move-algorithms</a>  <a href="https://www.barefootcomputing.org/resources/deco">https://www.barefootcomputing.org/resources/deco</a>	<b>Digital Writing</b> <a href="https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing">https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing</a>  Combine image and text <a href="https://www.i2e.com/jit5#mix">https://www.i2e.com/jit5#mix</a>  Book creator  Typing skills	<b>IT-Pictograms-Cross curricular</b> <a href="https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms">https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms</a>  <a href="https://www.ilearn2.co.uk/free-year-2-data-handling.html">https://www.ilearn2.co.uk/free-year-2-data-handling.html</a>  <a href="https://toytheater.com/fruit-fall/">https://toytheater.com/fruit-fall/</a>

<p>parts of a computer, e.g. mouse, keyboard, screen.</p> <ul style="list-style-type: none"> <li>- Use a suitable access device (mouse, keyboard, touchscreen, switch) to access and control an activity on a computer.</li> <li>- Open key applications independently.</li> <li>- Save and open files with support.</li> <li>- Add an image to a document from a given folder/source with support.</li> </ul>	<p>keyboard <a href="https://www.helloruby.com/play/12">https://www.helloruby.com/play/12</a></p> <p>Paper computer <a href="http://www.helloruby.com/play/29">http://www.helloruby.com/play/29</a></p> <p>Project Evolve</p>	<p>Barefoot Computing <a href="https://www.barefootcomputing.org/resources/bee-bots-basics-activity">https://www.barefootcomputing.org/resources/bee-bots-basics-activity</a></p>	<p>Mouse skills</p>	<p><a href="#">mposition-unplugged-activity-k</a></p> <p><a href="https://curriculum.code.org/csf-18/coursea/3/">https://curriculum.code.org/csf-18/coursea/3/</a></p>	<p>Project Evolve</p>	
<p>DL-<a href="https://projectevolve.co.uk/toolkit/years/year-one/">https://projectevolve.co.uk/toolkit/years/year-one/</a></p>						
<b>Year 2</b>	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Key Skills (Sheffield elearning Service)</p>	<p><b>IT-Technology in the world</b></p> <p><i>(Select most useful parts and keep it as a</i></p>	<p><b>Programming-Robot algorithms-</b></p> <p><b>Lego Spike</b></p>	<p><b>IT-Digital Photographs</b></p> <p><i>Cross curricular-</i></p>	<p><b>IT-Making music</b> <i>Cross curricular</i></p>	<p><b>Programming-Introduction to Animation-Scratch Jr</b></p>	<p><b>IT-Create an ebook linked to topic-Book creator</b></p>

	<b>short unit)</b>					
<ul style="list-style-type: none"> <li>- Recognise what a computer is (input &gt; process &gt; output).</li> <li>- Recognise that a range of digital devices contain computers, e.g. phone, games console, smart speaker.</li> <li>- Explain what the basic parts of a computer are used for.</li> <li>- Identify and use input devices, e.g. mouse, keyboard; and output devices, e.g. speakers, screen.</li> <li>- Open key applications independently.</li> <li>- Save and open files to/from a given folder.</li> <li>- Add an image to a document from a given folder/source.</li> <li>- Resize an image in a document.</li> <li>- Highlight text and use the arrow</li> </ul>	<a href="https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us">https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us</a>  <a href="https://projectevolve.co.uk/toolkit/resources/content/privacy-and-security/early-years-7/i-can-explain-how-some-people-may-have-devices-in-their-homes-connected-to-the-internet-and-give-examples-e-g-lights-fridges-toys-televisions/?from=y ears">https://projectevolve.co.uk/toolkit/resources/content/privacy-and-security/early-years-7/i-can-explain-how-some-people-may-have-devices-in-their-homes-connected-to-the-internet-and-give-examples-e-g-lights-fridges-toys-televisions/?from=y ears</a>	<a href="https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms">https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms</a>	<a href="https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography">https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography</a>  <a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/digital-imagery/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/digital-imagery/</a>  <b>Web Book Creator</b> free  App free if already purchased	<a href="https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music">https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music</a>  <a href="#">Song Maker</a>  <a href="#">Incredibox</a>  <a href="http://www.isleoftune.com/">http://www.isleoftune.com/</a>	<a href="https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation">https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation</a>  <b>Scratch Jr</b> Barefoot Computing Tinkering in Scratch Jr <a href="https://www.barefootcomputing.org/resources/scratchjr-tinkering-activity">https://www.barefootcomputing.org/resources/scratchjr-tinkering-activity</a>  Scratch Jr Knock Knock <a href="https://www.barefootcomputing.org/resources/scratchjr-knock-knock-joke-activity">https://www.barefootcomputing.org/resources/scratchjr-knock-knock-joke-activity</a>  <a href="#">Scratch Jr twinkl planning</a>	<b>Searching effectively and safely</b>  <a href="https://swiggle.org.uk/">https://swiggle.org.uk/</a>  Digital Literacy <a href="https://projectevolve.co.uk/toolkit/resources/years/year-two/managing-online-information/">https://projectevolve.co.uk/toolkit/resources/years/year-two/managing-online-information/</a>  <b>Book Creator- Cross curricular</b>  <a href="https://www.commonsense.org/education/lesson-plans/using-technology-to-enhance-an-all-about-me-book#1">https://www.commonsense.org/education/lesson-plans/using-technology-to-enhance-an-all-about-me-book#1</a>  <a href="https://www.commonsense.org/education/lesson-plans/creating-nonfiction-books-about-animals-in-book-creator">https://www.commonsense.org/education/lesson-plans/creating-nonfiction-books-about-animals-in-book-creator</a>

keys. - Capture media independently (e.g. take photos, record audio).						
<a href="https://projectevolve.co.uk/toolkit/resources/years/year-two/">https://projectevolve.co.uk/toolkit/resources/years/year-two/</a>						

Key Stage 2	NC Objectives
	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>• use sequence, selection, and repetition in programs; work with variables and various forms of input and out</li> <li>• use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>• 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</li> <li>• use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>• 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 collecting, analysing, evaluating and presenting data and information</li> </ul>

	<ul style="list-style-type: none"> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>
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Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Key Skills (Sheffield elearning Service)	<b>IT-Presenting information-Desktop publishing</b> <i>Cross curricular links</i> Adobe Creative Express Canva	<b>Programming-Sequencing</b>	<b>E-Safety</b>	<b>Lego Spike</b>	<b>IT-Stop-frame animation-</b> <i>Cross curricular links</i>	<b>Programming-Events and actions</b>
- Describe what a computer is (input > process > output). - Explain the difference between input and output devices on a computer. - Know where to save and open files (e.g. in	<a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing">https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing</a>  <a href="https://projectevolve.co.uk/toolkit/resources/years/year-three/copyright-">https://projectevolve.co.uk/toolkit/resources/years/year-three/copyright-</a>	Screen free <a href="https://curriculum.code.org/csf-18/coursesec/4/">https://curriculum.code.org/csf-18/coursesec/4/</a>  Scratch Tutorials <a href="https://scratch.mit.edu/projects/editor/?tutorial=getStarted">https://scratch.mit.edu/projects/editor/?tutorial=getStarted</a>  <a href="https://csfirst.withgoogle.com/c/cs-">https://csfirst.withgoogle.com/c/cs-</a>			<a href="https://csfirst.withgoogle.com/c/cs-first/en/art/animation/introduction-to-animation.html">https://csfirst.withgoogle.com/c/cs-first/en/art/animation/introduction-to-animation.html</a>  <a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation">https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation</a>  <a href="https://www.commo">https://www.commo</a>	<a href="https://curriculum.code.org/csf-20/coursesec/14/">https://curriculum.code.org/csf-20/coursesec/14/</a>  <a href="https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions">https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions</a>  <a href="https://studio.code.org/s/coursesec-2020/stage/15/puzzl">https://studio.code.org/s/coursesec-2020/stage/15/puzzl</a>

<p>shared folder).</p> <ul style="list-style-type: none"> <li>- Save files with appropriate names.</li> <li>- Use a keyboard effectively to type in text.</li> <li>- Use left-, right- and double-click on the mouse.</li> <li>- Add an image to a document from the internet.</li> <li>- Resize and move an image in a document.</li> <li>- Use a search engine to find simple information.</li> <li>- Recognise that school computers are connected (if using PCs).</li> </ul> <p><a href="https://zty.pe">https://zty.pe</a></p>	<p><a href="#">and-ownership/</a></p> <p><a href="https://projectevolve.co.uk/toolkit/resources/years/year-three/managing-online-information/">https://projectevolve.co.uk/toolkit/resources/years/year-three/managing-online-information/</a></p>	<p><a href="#">first/en/animate-a-name/animate-a-name.html</a></p> <p><a href="https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music">https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music</a></p>			<p><a href="https://nsense.org/education/top-picks/websites-and-apps-for-making-videos-and-animation">nsense.org/education/top-picks/websites-and-apps-for-making-videos-and-animation</a></p> <p><a href="https://editor.wickeditor.com/">https://editor.wickeditor.com/</a></p> <p><a href="https://www.piskelapp.com/">https://www.piskelapp.com/</a></p> <p><a href="https://brush.ninja">https://brush.ninja</a></p> <p><a href="https://www.ilearn2.co.uk/freeyear4animation.html/">https://www.ilearn2.co.uk/freeyear4animation.html/</a></p>	<p><a href="#">e/1</a></p>
<p>DL-<a href="https://projectevolve.co.uk/toolkit/years/year-three/">https://projectevolve.co.uk/toolkit/years/year-three/</a></p>						

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Key Skills (Sheffield elearning Service)	IT-Networks- The Internet  E-Safety	Programming- Repetition- Logo	Spike	Programming- Repetition Scratch	IT-Photo editing(Cross curricular) or Comic Creation	IT-audio editing (Could use GarageBand, Anchor FM or Band Lab for this)
<ul style="list-style-type: none"> <li>- Recognise that you can organise files using folders.</li> <li>- Explain what a good file name would look like.</li> <li>- Delete and move files.</li> <li>- Use key parts of a keyboard effectively, e.g. shift, arrow keys, delete).</li> <li>- Know how to copy and paste text or images in a document.</li> <li>- Crop an image and apply simple filters.</li> <li>- Use a search engine to find specific information.</li> <li>- Recognise that school computers are connected</li> </ul>	<p><a href="https://projectevolve.co.uk/toolkit/resources/years/4/managing-online-information">Computing systems and networks – The Internet</a> (Skip lesson 1)</p> <p><a href="https://projectevolve.co.uk/toolkit/resources/years/4/managing-online-information">https://projectevolve.co.uk/toolkit/resources/years/4/managing-online-information</a></p> <p>Fake websites</p> <p><a href="https://x-ray-goggles.mouse.org/">https://x-ray-goggles.mouse.org/</a> (Cross curricular)</p>	<p><b>Logo</b></p> <p><a href="https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes">https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes</a></p> <p><a href="https://www.caloramen.com/jslogo/">https://www.caloramen.com/jslogo/</a></p>		<p><a href="https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games">https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games</a></p> <p><a href="https://projects.raspberrypi.org/en/projects/flower-generator">https://projects.raspberrypi.org/en/projects/flower-generator</a></p> <p>or</p> <p><b>Rapid router</b></p> <p><a href="https://www.codelife.education/teach/materials/">https://www.codelife.education/teach/materials/</a></p> <p><a href="https://www.stem.org.uk/resources/e-library/resource/36164/session-one-recap-using-simple-repeat-loop">https://www.stem.org.uk/resources/e-library/resource/36164/session-one-recap-using-simple-repeat-loop</a></p> <p><b>Code.org</b></p> <p><a href="https://studio.code.org/s/coursec-2020/stage/7/puzzle/1">https://studio.code.org/s/coursec-2020/stage/7/puzzle/1</a></p>	<p><a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing">https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing</a></p> <p><a href="https://pixlr.com/x">https://pixlr.com/x</a></p> <p><b>Snapseed</b></p> <p><b>Adobe Photoshop</b></p> <p><a href="https://projectevolve.co.uk/toolkit/resources/content/managing-online-information/7-11/i-can-describe-how-to-search-for-information-within-a-wide-group-of-technologies-and-make-a-judgement-about-">https://projectevolve.co.uk/toolkit/resources/content/managing-online-information/7-11/i-can-describe-how-to-search-for-information-within-a-wide-group-of-technologies-and-make-a-judgement-about-</a></p>	<p><a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing">https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing</a></p> <p><a href="https://projectevolve.co.uk/toolkit/resources/years/year-three/copyright-and-ownership/">https://projectevolve.co.uk/toolkit/resources/years/year-three/copyright-and-ownership/</a></p> <p><a href="https://audiomas.s.co">https://audiomas.s.co</a></p> <p><a href="https://anchor.fm/">https://anchor.fm/</a></p> <p>Garageband</p>

					<a href="#">the-probable-accuracy-e-g-social-media-image-sites-video-sites/?from=years</a>  <b><u>Or</u></b>  <a href="https://www.ilearn2.co.uk/comiccreationteacherfree.html">https://www.ilearn2.co.uk/comiccreationteacherfree.html</a>  <a href="https://www.makebeliefscomix.com/Comix/">https://www.makebeliefscomix.com/Comix/</a>	
DL <a href="https://projectevolve.co.uk/toolkit/years/4/">https://projectevolve.co.uk/toolkit/years/4/</a> <a href="https://digital-literacy.org.uk/curriculum-overview/year4/year-4-sol-(1).aspx/">https://digital-literacy.org.uk/curriculum-overview/year4/year-4-sol-(1).aspx/</a>					<b>Self-image and identity</b> I can describe ways in which people might make themselves look different online. <b>Copyright and ownership</b> When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to	

					reuse it.	
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