**Cambois Primary Computing Long term Plan 2022-24**

**First 1 or 2 lessons of each ½ term to involve key skills from progression document**

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| ***Nursery and Reception*** | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Key Skills Strand 0([Sheffield elearning Service](http://sheffieldclc.net/sheffield-primary-computing-progression-framework/)) | Ensure children’s ‘***school readiness***’ and ‘***give them a broad range of knowledge and skills that provide the right foundation for good future progress through school and life’*** - Statutory Framework for EYFS September 2021. Computational Thinking ideas Rationale from Barefoot Computing [here](https://www.barefootcomputing.org/docs/default-source/default-document-library/computational-thinking-overview-eng6672ffdbdcfc6c779083ff0100ba3f46.pdf?sfvrsn=438e93ea_0)  |
| - Use different digital devices.- Recognise that you can accesscontent on a digital device.- Use a mouse, touchscreen orappropriate access device to targetand select options on screen.- Recognise a selection of digitaldevices.- Recognise the basic parts of acomputer, e.g. mouse, screen,keyboard.- Select a digital device to fulfil aspecific task, e.g. to take a photo. | **Barefoot Computing-**[Awesome Autumn](https://www.barefootcomputing.org/earlyyears)**Technology around us**<https://www.ilearn2.co.uk/computerdiscoveryfree.html><http://code-it.co.uk/wp-content/uploads/2015/05/bankplan.pdf><http://code-it.co.uk/wp-content/uploads/2015/05/supermarketplan.pdf><http://www.crickweb.co.uk/Early-Years.html><https://www.nurseryworld.co.uk/News/article/ict-in-role-play-check-it-out> | **Barefoot Computing-**[Winter Warmers](https://www.barefootcomputing.org/earlyyears) | **Barefoot Computing-**[Busy Bodies](https://www.barefootcomputing.org/earlyyears)**Music creation**<https://www.ilearn2.co.uk/freeyear1musiccreation.html/><https://springroll-tc.pbskids.org/music-maker/d0f261dffc3c8f713fa5a22bb99d7f9afd04cb56/release/index.html><https://musiclab.chromeexperiments.com/Voice-Spinner/> | **Barefoot Computing -**[Springtime](https://www.barefootcomputing.org/earlyyears)**Cooking**Jam sandwich<http://swaygrantham.co.uk/wp-content/uploads/2016/09/JamSandwichAlgorithm.pdf>Pizza<https://www.barefootcomputing.org/docs/default-source/at-home/pizza_party_activity.pdf?sfvrsn=154d91ea_2> | **Barefoot Computing-**[Boats Ahoy](https://www.barefootcomputing.org/earlyyears)**Art**<https://www.j2e.com/jit5>[Art and algorithms](http://www.helloruby.com/play/16) | **Barefoot Computing-**[Summer Fun](https://www.barefootcomputing.org/earlyyears)**Other ideas**[Lego Building](https://www.barefootcomputing.org/resources/lego-building-algorithm-activity) [Crazy](https://www.barefootcomputing.org/resources/crazy-character-algorithms) [Characters](https://www.barefootcomputing.org/resources/crazy-character-algorithms)[Head, Shoulder, Knees and Toes](https://www.barefootcomputing.org/resources/head-shoulders-knees-and-toes-algorithms) |

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| KS1 | NC Objectives |
|  | Pupils should be taught to:* understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instruction
* create and debug simple programs
* use logical reasoning to predict the behaviour of simple program
* use technology purposefully to create, organise, store, manipulate and retrieve digital content
* recognise common uses of information technology beyond school
* 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.
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| **Yr 1 and 2****Cycle A** | **Technology Around Us (Y1)** **Logging on**<https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us><https://www.abcya.com/games/find_the_tech>Hello Ruby keyboard<https://www.helloruby.com/play/12>Paper computer<http://www.helloruby.com/play/29> | **Digital Painting (Y1)** <https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting><https://www.j2e.com/jit5> Y1)<https://www.tate.org.uk/kids/games-quizzes/tate-paint>[Tuxpaint.org](http://www.tuxpaint.org/) (Y2) | **Introduction to Animation (Y1)**[**https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation**](https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation)**Scratch Jr**Barefoot Computing Scratch Jr<https://www.barefootcomputing.org/resources/scratchjr-tinkering-activity>Scratch Jr Knock Knock<https://www.barefootcomputing.org/resources/scratchjr-knock-knock-joke-activity>**An introduction to quizzes(Y2)**<https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes> | **Book Creator(Linked to topic)**<https://www.commonsense.org/education/lesson-plans/using-technology-to-enhance-an-all-about-me-book#1><https://www.commonsense.org/education/lesson-plans/creating-nonfiction-books-about-animals-in-book-creator>**Digital Writing****(Y1) (Cross curricular)**<https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing>Web[-https://www.j2e.com/jit5](https://www.j2e.com/jit5)Project Evolve<https://projectevolve.co.uk/toolkit/resources/years/year-one/copyright-and-ownership/> | **Moving a robot (Y1) (Cross curricular with Beebots)** <https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4><https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot>Plus Lesson 1, 2 and 3<https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms>Barefoot Computing<https://www.barefootcomputing.org/resources/bee-bots-basics-activity>**Apps**<https://apps.apple.com/gb/app/bee-bot/id500131639>Web<https://beebot.terrapinlogo.com/> | **Pictograms (Y2)(Cross Curricular)** <https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms><https://www.ilearn2.co.uk/free--year-2-data-handling.html><https://toytheater.com/category/math-games/graphing/> |
| [**Project Evolve Year 1/2 units**](https://projectevolve.co.uk/) |
| **Yr 1 and 2****Cycle B** | **IT Around Us (Y2)** **Logging on**<https://www.abcya.com/games/find_the_tech><https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us>or PM- Unit 1.9 Technology Outside School | **Making Music** (Y2)<https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music><https://www.ilearn2.co.uk/freeyear1musiccreation.html>[Song Maker](https://musiclab.chromeexperiments.com/Song-Maker/)[Incredibox](https://www.incredibox.com/demo/v4)<http://www.isleoftune.com/> | **Moving a robot** (Y1) (Cross curricular and ideally with an alternative to Beebots such as ozobots, Clementoni Mind robots or Rugged robots)<https://teachcomputing.org/curriculum/key-stage-1/programming-a-moving-a-robot>Plus Lesson 1, 2 and 3<https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms>**Apps**A.l.E.X | **Book Creator(Linked to topic)**<https://www.commonsense.org/education/lesson-plans/using-technology-to-enhance-an-all-about-me-book#1><https://www.commonsense.org/education/lesson-plans/creating-nonfiction-books-about-animals-in-book-creator>**Focus on****Digital Photographs (Y2) (Cross curricular)**<https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography>**Digital Writing****(Y1) (Cross curricular)**<https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing>Web[-https://www.j2e.com/jit5](https://www.j2e.com/jit5) | **Programming****Dance****Unplugged**-[https://curriculum.code.org/hoc/unplugged/4/](https://l.facebook.com/l.php?u=https%3A%2F%2Fcurriculum.code.org%2Fhoc%2Funplugged%2F4%2F%3Ffbclid%3DIwAR2rgsYBNpDD9QScqpv5lXHVFa5pBt0YjReqFN-e2b670mhfWBR3ySF-NAo&h=AT17w3QZ_pbbn9r4cWCDqMEb-211IeGOa8V7tAIF4WUyVe82goKo5ZQw2TTC8oBUwHdmbUMeERwRz8yCerpjoFSGbxDCNnTVvyf0Ep3p5Be3JbsGzOK6-M0FFS7qBEncVZLBLnV8gS7CcWbGqDdMHpprDRdalr9OVK8I6G99jQ8) Dance Unplugged -[https://www.barefootcomputing.org/resources/dance-move-algorithms](https://www.barefootcomputing.org/resources/dance-move-algorithms?fbclid=IwAR2omEt1-pLQ6NZYK_fFl2UDSeHDUmK9vQqDBWRThsiB8Fh5TAkuc-dkSBw)and Computational Thinking -[https://www.barefootcomputing.org/resources/decomposition-unplugged-activity-ks1](https://www.barefootcomputing.org/resources/decomposition-unplugged-activity-ks1?fbclid=IwAR2kPlRQpCdYfaSujyHKdyZZklH8aYLe-YK3b7IsG2HOFocvFNQaWUHDgvc)or PM Unit 1.7: Coding/ Unit 2.1: Coding | **Pictograms (Y2)(Cross Curricular)** PM- Unit 1.3 - Pictograms  |
| [**Project Evolve Year 1/2 units**](https://projectevolve.co.uk/) |
| KS2 | NC Objectives |
|  | Pupils should be taught to:* design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
* use sequence, selection, and repetition in programs; work with variables and various forms of input and out
* use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
* understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
* use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
* 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
* use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
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| **Yr 3/4****Cycle A****Sheffield** http://sheffieldclc.net/sheffield-primary-computing-progression-framework/ | **Be internet legends live assembly – focus on an area****Project Evolve internet safety****Key skills from Sheffield progression document linked to topic/literacy** | **Programming- Sequence in music (Y3)**<https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music>Start with some tutorials <https://scratch.mit.edu/projects/editor/?tutorial=getStarted>Y4 Include a repeat or forever block or try the below tutorial<https://projects.raspberrypi.org/en/projects/butterfly-garden> | **Creating media- desktop publishing****Adobe Creative Express/ Canva****(Cross curricular)(Y3)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing> | **Programming- events and actions(Y3)**<https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions>[**https://studio.code.org/s/coursec-2020/stage/15/puzzle/1**](https://studio.code.org/s/coursec-2020/stage/15/puzzle/1)Y4 Include a repeat or forever block or try the below tutorial | **Creating media- photo editing (Cross curricular)(Y4)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing>[**https://pixlr.com/x/**](https://pixlr.com/x/) | **Creating media- stop-frame animation (Cross curricular)(Y3)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation>Could use PM 2Animate |
| [**Project Evolve Year 3/4 units**](https://projectevolve.co.uk/) |
| **Yr 3/4****Cycle B** | **Systems and networks- The internet (Y4)**<https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-the-internet><http://code-it.co.uk/netintsearch> | **Programming-Repetition****All do a tutorial(****Y3-Animate a name. Y4 any)**<https://scratch.mit.edu/projects/editor/?tutorial=getStarted><https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games> | **Creating media- desktop publishing****Canva****(Cross curricular)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing>**Y4 skills** | **Programming- Repetition**<https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes>Using PM- 2Logo | **Creating media-Audio editing (Cross curricular)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing>Using Garage Band or BandLab | **Creating media--****Comic Creation (Cross curricular)**<https://www.ilearn2.co.uk/comiccreationteacherfree.html><https://www.makebeliefscomix.com/Comix/> |
| [**Project Evolve Year 3/4 units**](https://projectevolve.co.uk/) |
| **Yr 5 and 6 Cycle A** | **Be internet legends live assembly – focus on an area****Selection in quizzes(Y5)**[**https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes**](https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes)<https://projects.raspberrypi.org/en/projects/dodgeball> | **Systems and networks- Communication (Y5) (Cross curricular) Word/Google Docs**<https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information> (Lessons 4, 5 and 6)Project evolve<https://projectevolve.co.uk/toolkit/resources/years/5/managing-online-information/> | **Creating media-video editing (Cross curricular)(Y5)**[**https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing**](https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing) | **Creating media-3D Modelling (Cross curricular)(Y6)**[**https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling**](https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling) | **Selection using Crumble (Cross curricular) (Y5)**<https://teachcomputing.org/curriculum/key-stage-2/programming-a-selection-in-physical-computing> | **Data and information- Spreadsheets (Y6)**<https://teachcomputing.org/curriculum/key-stage-2/data-and-information-spreadsheets> |
| [**Project Evolve Year 5/6 units**](https://projectevolve.co.uk/) |
| **Yr 5 and 6 Cycle B** | **Programming- Selection (Y5)**[**https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes**](https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes)**and Variables(Y6)**<https://teachcomputing.org/curriculum/key-stage-2/programming-a-variables-in-games> | **Creating media-Flat file databases(Y5)**<https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases><https://www.canyoucompute.co.uk/uploads/1/4/2/4/14249012/1_top_trumps_hw.pdf>or PM-Database 5.4  | **Creating media-Web page design (Cross curricular)(Y6)**[**https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation**](https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation) | **Programming- Variables using Crumble (Cross curricular)(Y6)****Year 5- Focus on selection (Use a switch)**<https://teachcomputing.org/curriculum/key-stage-2/programming-b-sensing> (Adapt units from here for the crumble) | **Creating media-Vector drawing (Y5)**<https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing> | **App design**https://www.ilearn2.co.uk/appdesignfree.html/ |
| [**Project Evolve Year 5/6 units**](https://projectevolve.co.uk/) |