Horton Grange Computing Curriculum 2019-20 https://www.ilearn2.co.uk/curriculumks1-414247.html

Digital Literacy Information Technology Computer Science

							Reviewed September 2019
	Autumn 1 (i)	Autumn 1 (ii)	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 Coding should be non-PC based - making a sandwich etc Link here	**E-Safety** Explain where to go for help when something on the internet worries me . Think You Know https://www.thinkuknow.co.uk/ https://www.saferinternet.org.uk/pupil-powered-e-safety Objectives Use technology safely and respectfully, keeping personal information private	**Log on independently - non-negotiable/ every child** **Digital Literacy** Recognise common uses of information tech in the home and school environment https://www.abcya.com/games/find_the_tech	**Information Technology** **Mouse and keyboard skills** Type my name Mouse and keyboard skills; move, mouse, left/right click, drag and drop. Touch typing; home row http://www.crickweb.co.uk/Early-Years.html http://www.softschools.com/dot_to_dot/games/duck.jsp http://www.citycreator.com/ https://www.bbc.com/bitesize/articles/z3c6tfr	**Use technology purposefully to create digital content** Texts and images Add and resize images. Add text to label and describe images. https://school360.co.uk/classview/index.php http://www.tuxpaint.org/	**Music Creation** Design and create content that accomplish given goals Coding **What will the pupils learn?** To create music using digital tools and learn about scales, chords, arpeggios, rhythm, tempo, mixing, making music with code and multi-tracking. https://musiclab.chromeexperiments.com/Song-Maker/ https://www.incredibox.com/demo/v4 https://www.beepbox.co/#7n31s0k0l00e03t2mm0a7g0fj7i0r1o3210T0v0u10q0d0f8y0z1C2w2c0h0T1v0u35q1d5f6y2ziC1c0A6F0B0V1Q05c0Pa660E0061T1v0u63q1d5f7y1z7C1c0A1F1B4V1Q50b0Pea3bE0181T2v0u15q0d1f8y0z1C2w0b4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4p1fDpFEZqW1ds00000	**Digital Art** Add a variety of shapes (outlines and fill) and label them with text Use select, copy and paste to duplicate elements to improve accuracy and speed. Flip and rotate elements to create interesting effects, such as symmetry. Use zoom tools to add more detail. Add and edit images Store and retrieve work www.google.draw.com Mondrian examples Foldify App	**Computer Science** Programming Lessons 1 - 4 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Write and debug simple programs and use logical reasoning to predict simple programs Code-a-pillar app https://www.google.com/logos/2017/logo17/logo17.html?hl=en_GB .

Year 2 Scratch Jr	**E-Safety** Think You Know Use technology respectfully. https://www.thinkuknow.co.uk/ https://www.saferinternet.org.uk/pupil-powered-e-safety Objectives Use technology safely and respectfully, keeping personal information private	**Log on independently - non-negotiable/every child** Recognise and talk about common uses of information technology beyond school **Introduction to Animation** Add a background and objects to a frame. Copy/clone a frame and move objects to create an animation. Create an animation with multiple objects moving simultaneously.	**Data handling** - Label a pictogram and add data to each column. - Edit a table with correct titles and numbers to create a bar chart and pie chart. - Explain what a pictogram and bar chart shows. (1-2 lessons) https://www.j2e.com/jit5 **Touch Typing - BBC Dance Mat** Type and edit text for purpose with accuracy https://www.bbc.com/bitesize/articles/z3c6tfr	**Use technology purposefully to create digital content and retrieve digital content** **Comic Creation** Add, resize and organise colour or picture backgrounds Add, resize, organise characters/objects to different panels. Add narration using text and direct speech using speech bubbles. https://www.makebeliefscomix.com/Comix/	**Computer Science** Programming Lessons 5 - 8 Use technology purposefully to create digital content comparing the benefits of different programs https://www.google.com/logos/2017/logo17/logo17.html?hl=en_GB	**Computer Science** Programming **Scratch Jr** Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Write and debug simple programs and use logical reasoning to predict simple programs. Scratch Jr App	**Computer Science** **Control Physical Devices** Programme physical inputs,outputs, loops and variables **Sphero**
Year 3 Scratch Jr/Scratch	**E-Safety** Think You Know Understand what personal information is and that it should not be posted on the internet. Understand the need for rules to stay safe online https://www.thinkuknow.co.uk/ https://beinternetlegends.withgoogle.com/en_uk	**Log on independently - non negotiable/every child** **Document Creation** Pupils can learn to create and edit a document. Including; - Copy and paste. - Find and replace words in different ways. - Change appearance of text. **Word Processing** Type to achieve a specific goal, including accurate punctuation.	**Comic Creation** Comic creation covers a wide range of objectives including: Add, resize and organise colour or picture backgrounds Add, resize, organise characters/objects to different panels. Add narration using text and direct speech using speech bubbles. **Touch Typing - BBC Dance Mat** https://www.makebeliefscomix.com/Comix/ https://www.bbc.com/bitesize/articles/z3c6tfr	**Ebook Creation** With support select and use a variety of software to accomplish goals Skills covered/Objectives/Outcomes - Add page colour and style - Add, position and format text on different pages - Add and position images from camera/web - Add audio, including hiding it behind an object. - Add hyperlinks to text and images	Recognise familiar forms of input and output devices and how they are used. Make efficient use of familiar forms of input and output devices. Scratch Junior Programming Lesson 1 - 3	**Programming in Scratch** **https://www.ilearn2.co.uk/previewscratchunit.html** Objectives/outcomes 1. Write a simple program with text outputs and movement 2. Write a program with repetition (loops) 3. Write programs using different inputs 4. Program musical outputs 5. Add conditions (if statements) to a program 6.Debug Programs (separate tasks) 7. Program conditions with	**Digital Music** Activities 1 and 2 Pupils can learn to create music using free online tools. Skills taught are: - Scales, chords, pitch, arpeggios, melody, tempo and rhythm. - Mixing samples of music. - Creating music with code using variables. - Multi-tracking. - Mini- GarageBand for iPad project with video tutorials. https://musiclab.chromeexperiments.com/Song-Maker/ https://www.incredibox.com/demo/v4 https://www.beepbox.co/#7

				- Add and format shapes - Use hyperlinks for navigation - Add audio to pages Embed content such as maps/Youtube videos		data variables (quiz) 8. Work with lists to create random actions 9. Program random variables to add unpredictability	n31s0k0l00e03t2mm0a7g0fj7i0r1o3210T0v0u10q0d0f8y0z1C2w2c0h0T1v0u35q1d5f6y2ziC1c0A6F0B0V1Q05c0Pa660E0061T1v0u63q1d5f7y1z7C1c0A1F1B4V1Q50b0Pea3bE0181T2v0u15q0d1f8y0z1C2w0b4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4p1fDpFEZqW1ds00000
Year 4 Scratch	**E-Safety** Think You Know Recognise acceptable and unacceptable online behaviour / content Identify a range of ways to report concerns about contacts and content. https://www.thinkuknow.co.uk/ https://beinternetlegends.withgoogle.com/en_uk	**Document editing and creation.** With support select and use a variety of software on range of digital devices. Type to achieve a specific goal, including accurate punctuation recognise how errors are identified - introduction to spell check **Touch Typing - BBC Dance Mat** **https://docs.google.com/document/d/1RUywUvpgENnh29aZm3GbC086Oz27f-cqq4ayVtKktv0/edit** https://www.bbc.com/bitesize/articles/z3c6tfr	**Internet research** 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. https://swiggle.org.uk/ https://www.kiddle.co/ https://www.alarms.org/kidrex/ https://www.dkfindout.com/uk/	**Programming in Scratch** **https://www.ilearn2.co.uk/previewscratchunit.html** **https://scratch.mit.edu/** Objectives/outcomes 1. Write a simple program with text outputs and movement 2. Write a program with repetition (loops) 3. Write programs using different inputs 4. Program musical outputs 5. Add conditions (if statements) to a program 6.Debug Programs (separate tasks) 7. Program conditions with data variables (quiz) 8. Work with lists to create random actions 9. Program random variables to add unpredictability	**Programming in Scratch** **https://www.ilearn2.co.uk/previewscratchunit.html** **https://scratch.mit.edu/** Objectives/outcomes 1. Write a simple program with text outputs and movement 2. Write a program with repetition (loops) 3. Write programs using different inputs 4. Program musical outputs 5. Add conditions (if statements) to a program 6.Debug Programs (separate tasks) 7. Program conditions with data variables (quiz) 8. Work with lists to create random actions 9. Program random variables to add unpredictability	**3D CAD Design** **Objectives/outcomes** **Use 3D Computer Aided Design software to build a 3D town/village using 3D shapes.** Pupils can learn to build a 3D town/village using free online tools. Includes: - Interactive pupil activity pack with video tutorials, questions, challenges and more. - Teacher notes with downloadable assessment grid. A great way to teach 3D shapes in Numeracy combined with Computer Aided Design skills. https://www.tinkercad.com/	**3D CAD Design** **Objectives/outcomes** **Use 3D Computer Aided Design software to build a 3D town/village using 3D shapes.** Pupils can learn to build a 3D town/village using free online tools. Includes: - Interactive pupil activity pack with video tutorials, questions, challenges and more. - Teacher notes with downloadable assessment grid. A great way to teach 3D shapes in Numeracy combined with Computer Aided Design skills. https://www.tinkercad.com/

					Crumble?		
Year 5 Kodu	**E-Safety** Think You Know Respond to e-safety scenarios with sensible advice. Be discerning in evaluating digital content. https://www.thinkuknow.co.uk/ https://beinternetlegends.withgoogle.com/en_uk	Independently select and use appropriate software for a task Edit and improve on-screen writing, including spell check and thesaurus use. **Touch Typing - BBC Dance Mat** https://www.bbc.com/bitesize/articles/z3c6tfr	**Animation** .Animation Pupil Activity pack for Key Stage 2 with 7 challenges linked to different curriculum areas: - Stop Motion Animation in PowerPoint/Keynote/Google Slides. - Morph and Magic Move in PowerPoint/Keynote. - Motion Paths in PowerPoint/Keynote for animated navigation (Geography link) - Pulse animation in PowerPoint/Keynote (Science link) - Individual element stop motion animation in free online editor. https://alpha.wickeditor.com/ https://www.piskelapp.com/	**Music creation** Create music using free online tools. Skills taught are: - Scales, chords, pitch, arpeggios, melody, tempo and rhythm. - Mixing samples of music. - Creating music with code using variables. - Multi-tracking. - Mini- GarageBand for iPad project with video tutorials. https://www.incredibox.com/demo/v4 https://www.madewithcode.com/projects/music https://www.beepbox.co/#7n31s0k0l00e03t2mm0a7g0fj7i0r1o3210T0v0u10q0d0f8y0z1C2w2c0h0T1v0uabq1d3fay0z1C0c1AcF4B5V4Q2600Pdc00E0011T0v0ue6q3d7f8y6z5C0w5c0h2T2v0u15q0d1f8y0z1C2w0b4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4h4p16000000	**Virtual Reality** Virtual Reality Activity Pupil Pack helps build virtual reality environments using free, online software that works on all devices. Includes: - Video tutorials, challenges and tasks to build skills, including design, coding, animation, augmented reality and more. - An introduction to VR video. https://cospaces.io/edu/ (may need to upgrade to Pro)	**Programming in Kodu** Create a 3D place using various design tools Write a program to control a character using inputs Write a program with conditions to create an if statement (If the character touches an object it will disappear) Write a program with variables	**Programming in Kodu** Create a 3D place using various design tools Write a program to control a character using inputs Write a program with conditions to create an if statement (If the character touches an object it will disappear) Write a program with variables (scoring system) (4-6 Lessons)
Year 6 Python	**E-Safety** Think You Know Understand the concept of cyber bullying and what to do if they think it is occuring.	Independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information **Touch Typing - BBC Dance Mat**	**Image editing** Photographic art Edit and improve images using a free online editor that works on every device. Pupils will learn how about ratios, cropping, colour effects, filters, light effects, layers,	**Web Design** Design and create a range of programs, systems and content for a given audience. **HTML web programming**	**Web Design** Design and create a range of programs, systems and content for a given audience. **HTML web programming**	**Programming in Python** Introduce pupils to the programming language of Python (used by Facebook, Instagram, NASA, Youtube) with a series of challenges using free online Python editors. Teaches pupils	**Programming in Python** Introduce pupils to the programming language of Python (used by Facebook, Instagram, NASA, Youtube) with a series of challenges using free online Python editors. Teaches pupils how

	Explain the concept of a digital footprint and the problems it can create. https://www.thinkuknow.co.uk/ https://beinternetlegends.withgoogle.com/en_uk	https://www.bbc.com/bitesize/articles/z3c6tfr	annotations https://pixlr.com/x/ https://www.google.com/maps	**Google sites**	**Google sites**	how to: - Use variables - Program movements using Python Turtle - Print text - Use Python as a calculator - Program loops to repeat text - Program interactive inputs https://repl.it/languages/python_turtle https://repl.it/languages/python3	to: - Use variables - Program movements using Python Turtle - Print text - Use Python as a calculator - Program loops to repeat text - Program interactive inputs https://repl.it/languages/python_turtle https://repl.it/languages/python3