

## Sandon Primary Academy – Computing: Year 2

Curriculum Definition: Where we improve our knowledge and understanding of technology in a safe way.		
Autumn Term	Spring Term	Summer Term
<p><b>Computer Science: Programming</b></p> <p>Exploring what 'blocks' do, using the app 'ScratchJr,' by carrying out an informative cycle of predict &gt; test &gt; review. Programming a familiar story and an animation of an animal, children make their own musical instrument by creating buttons and recording sounds as well as following an algorithm to record a joke.</p>	<p><b>Computer Science: Computer Systems and Networks</b></p> <p>Learning about word processing and how to stay safe online as well developing touch-typing skills. Introducing important keyboard shortcuts, as well as simple editing tools within a word processor including: bold, italics, underline and font colour as well as how to import images.</p>	<p><b>Information Technology: Creating Media</b></p> <p>Storyboarding and simple animation creation using either tablet devices or devices with cameras.</p>
<p><b>Key Objectives:</b></p> <p><b>Lesson 1: Online Safety: Health and Wellbeing</b></p> <ul style="list-style-type: none"> <li>I can say how those rules / guides can help anyone accessing online technologies</li> </ul> <p><b>Lesson 2: To Explore a New Application: Using Scratch Jr</b></p> <ul style="list-style-type: none"> <li>I know that ScratchJr is a coding application</li> <li>I can predict what I think something new will do</li> <li>I can explore something independently</li> <li>I can explain what I found using ScratchJr</li> </ul> <p><b>Lesson 3: To Create an Animation: Creating an Animation</b></p> <ul style="list-style-type: none"> <li>I can use the programming blocks I've learned about for a purpose</li> <li>I can recognise a loop in programming</li> <li>I can think about how animals move</li> <li>I can use my programming skills creatively to represent an animal moving using code</li> </ul> <p><b>Lesson 4: To Use Characters as Buttons: Making a Musical Instrument</b></p> <ul style="list-style-type: none"> <li>I can design a musical instrument</li> <li>I can program code to run 'on tap'</li> <li>I can select appropriate blocks for my purpose</li> </ul> <p><b>Lesson 5: To Follow an Algorithm: Programming a Joke</b></p> <ul style="list-style-type: none"> <li>I can use an algorithm to help me with my programming</li> <li>I can sequence the blocks appropriately</li> <li>I can explain what each block in the program does</li> </ul> <p><b>Lesson 6: To Plan and Use Code to Create an Algorithm: Three Little Pigs Algorithm</b></p> <ul style="list-style-type: none"> <li>I can explain what an algorithm is</li> <li>I can choose the code to match my algorithm</li> </ul> <p>I can use an algorithm to write a computer program</p>	<p><b>Key Objectives:</b></p> <p><b>Lesson 1: Online Safety: Online Bullying</b></p> <ul style="list-style-type: none"> <li>I can explain what bullying is, how people may bully others and how bullying can make someone feel.</li> </ul> <p><b>Lesson 2: To Begin to Learn to Touch Type: Getting to know the Keyboard</b></p> <ul style="list-style-type: none"> <li>I can find keys on a computer keyboard</li> <li>I can identify the home keys on a computer</li> <li>I understand how to type capital letters using 'shift'</li> </ul> <p><b>Lesson 3: To Understand How to Use a Word Processor: Getting started with Word Processing</b></p> <ul style="list-style-type: none"> <li>I can type a sentence into a word processor</li> <li>I can select all of the text and make it bold or italics</li> <li>I can explain how to make other changes using a word processor</li> </ul> <p><b>Lesson 4: To Create a Poetry Nook Using Resources From the Internet: Poetry Book</b></p> <ul style="list-style-type: none"> <li>I understand how to use text styles to create headings and subtitles</li> <li>I can copy and paste text into a document</li> <li>I understand the importance of crediting source materials</li> </ul> <p><b>Lesson 5: To Understand How to Add Images to a Text Document: Newspaper Writer – Adding an Image (Part 1)</b></p> <ul style="list-style-type: none"> <li>I can search for an appropriate image.</li> <li>I can import an image in a document.</li> <li>I can alter an image in a document.</li> </ul> <p><b>Lesson 6: To Understand How to Type and Format Text: To Newspaper Writer (Part 2)</b></p> <ul style="list-style-type: none"> <li>I can use keyboard shortcuts to alter text</li> </ul> <p>I can type a sentence into a word processor</p>	<p><b>Key Objectives:</b></p> <p><b>Lesson 1: Online Safety: Online Reputation</b></p> <ul style="list-style-type: none"> <li>I can describe how anyone's online information could be seen by others.</li> </ul> <p><b>Lesson 2: To Understand What Animation Is: What is Animation?</b></p> <ul style="list-style-type: none"> <li>I understand and explain what animation means</li> <li>I understand how to create a short animation using a flip book</li> <li>I can talk about how animation began</li> </ul> <p><b>Lesson 3: To Understand What Stop Motion Is: What is Stop Motion?</b></p> <ul style="list-style-type: none"> <li>I can explain what 'stop motion' means</li> <li>I understand how to create a short animation using animation software</li> <li>I understand what 'onion skinning' is and how animators use it</li> <li>I can use onion skinning to make small changes to my object to make my animation smooth</li> </ul> <p><b>Lesson 4: To Create a Stop Motion Animation: My First Animation</b></p> <ul style="list-style-type: none"> <li>I understand how to create a short animation using Stop Motion Studio</li> <li>I can use onion skinning to make small changes to my object to make my animation smoother</li> </ul> <p><b>Lesson 5: To Plan my Stop Motion Animation: Planning my Project</b></p> <ul style="list-style-type: none"> <li>I can work collaboratively with others to plan an animation</li> <li>I can think carefully about keeping my idea simple and easy to animate</li> <li>I can decompose my story into smaller parts</li> </ul> <p><b>Lesson 6: To Create my Stop Motion Animation: Creating my Project</b></p> <ul style="list-style-type: none"> <li>I can use my planning sheet to structure my animation</li> <li>I can work collaboratively</li> <li>I can create an animation of at least 10 frames</li> </ul>
<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li><b>Algorithm</b> – clear instructions to carry out a task</li> <li><b>Animation</b> – pictures/photographs in a sequence to give the illusion of movement.</li> <li><b>Bug</b> – an error or mistake in computer code</li> <li><b>Code (computer)</b> – a set of instructions written in programming language that tell a computer what to do</li> <li><b>Code (verb)</b> – to write in programming language</li> <li><b>Debug</b> – to fix the error in code</li> <li><b>Icon</b> – a small image which represents something/someone</li> <li><b>Imitate</b> – copy</li> <li><b>Instructions</b> – a list of command and directions on how to do something</li> <li><b>Loop</b> – a repeated sequence of instructions</li> <li><b>Repeat</b> – to do the same again</li> <li><b>Scratch JR</b> – a block-based coding application.</li> <li><b>Sequence</b> – a set order/pattern for something to follow</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li><b>Backspace</b> – a key to move the cursor backwards</li> <li><b>Copyright</b> – the law that protects other people's work from being copied or used without permission</li> <li><b>Delete (text)</b> – a button on the keyboard which deletes text</li> <li><b>Image</b> – a picture</li> <li><b>Import</b> – to place another file into a document</li> <li><b>Keyboard</b> – an input device made up of button that creates letters, numbers and symbols as well as perform other functions</li> <li><b>Keyboard Character</b> – any letter, symbols, space, number or punctuation mark that can be input with a keyboard</li> <li><b>Paste (text)</b> – to insert copies or cut text</li> <li><b>Redo</b> – to step forwards to the next edit</li> <li><b>Space bar</b> – a button on a keyboard to insert room between letters</li> <li><b>Touch typing</b> – using a keyboard will all your fingers, without looking at the keyboard</li> <li><b>Undo</b> – to step backward to the previous edit</li> <li><b>Word processing</b> – a program used for creating text documents of a computer</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li><b>Animation</b> – pictures in a sequence to give the illusion of movement</li> <li><b>Animator</b> – someone who specialises in creating animations</li> <li><b>Contraption</b> – old-fashioned device</li> <li><b>Decompose</b> – to break something down into smaller chunks</li> <li><b>Design</b> – to make, draw or write plans for something</li> <li><b>Device</b> – equipment created for a purpose/job</li> <li><b>Download</b> – saving files from the internet.</li> <li><b>Film review</b> – writing your opinion about a film</li> <li><b>Filming</b> – using a video recorder to capture moving images</li> <li><b>Import Image</b> – place a picture into a document</li> <li><b>Plan</b> – an idea about how to do something</li> <li><b>Sketch</b> – rough drawing to help you plan</li> <li><b>Software</b> – series of instructions written for a computer to follow</li> <li><b>Stop Motion</b> – sequence of images used to create an animation</li> <li><b>Storyboard</b> – sequence of sketches that show what you plan to make for an animation/video</li> <li><b>Upload</b> – send files from one device to another.</li> </ul>
<p><b>Resources (IT):</b></p> <ul style="list-style-type: none"> <li>Online Safety: <a href="https://projectevolve.co.uk/sign-in/">https://projectevolve.co.uk/sign-in/</a> Username: <a href="mailto:icolclough@sandonprimary.org.uk">icolclough@sandonprimary.org.uk</a> Password: Sandon123456! (Lesson 1)</li> </ul>	<p><b>Resources (IT):</b></p> <ul style="list-style-type: none"> <li>Online Safety: <a href="https://projectevolve.co.uk/sign-in/">https://projectevolve.co.uk/sign-in/</a> Username: <a href="mailto:icolclough@sandonprimary.org.uk">icolclough@sandonprimary.org.uk</a> Password: Sandon123456! (Lesson 1)</li> </ul>	<p><b>Resources (IT):</b></p> <ul style="list-style-type: none"> <li>Online Safety: <a href="https://projectevolve.co.uk/sign-in/">https://projectevolve.co.uk/sign-in/</a> Username: <a href="mailto:icolclough@sandonprimary.org.uk">icolclough@sandonprimary.org.uk</a> Password: Sandon123456! (Lesson 1)</li> </ul>

### Cross-Curricular Links:

**Autumn:** Literacy: Instructions / Retell Story  
: Speaking/Listening  
Maths: Position and Direction  
Music: Instruments

**Spring:** Literacy: Newspaper Report  
: Poetry

**Summer:** Literacy: Story Sequencing  
DT: Planning/Designing

### Enrichment:

**Autumn:** Creating a virtual 'joke book'.

**Spring:** Creating a class poetry book which will be used during whole-class reading.

**Summer:** Showcasing Animations using QR codes.

### Key Computing Skills which can be revisited throughout other Subject Areas:

- Information Technology: logging in and out, using a mouse/mouse pad, developing typing skills and use of copy and paste.
- Digital Literacy: e-safety, collaboration, creativity, critical thinking and evaluation, functional skills.

### Online Safety:

**Autumn:** Health and Wellbeing

**Spring:** Online Bullying

**Summer:** Online Reputation

### Key Computing Days:

- National Coding Week - September
- Safer Internet Day – February

- iPads – Scratch Jr App (Lesson 2-6)

- Laptop – Microsoft Word (Lesson 2-6)
- Website: <https://www.typingclub.com/sportal/program-3.game> (Lesson 2-6)
- Website: <https://poetry4kids.com/> (Lesson 4)
- Website: <https://www.bbc.co.uk/newsround> (Lesson 5/6)

- iPads (Lesson 2-3, 6)
- <https://www.j2e.com/jit5#animate> (Lesson 2)
- Stop Motion Studio App (Lesson 4, 6)

**National Curriculum: By the end of KS1, pupils will be able to:**

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- 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.