



## KS1 Markland Hill Computing Curriculum – Key Stage 1 YEAR A

| <b>KS1 Computing Curriculum</b><br><b>Significant people in computing: Sir Tim Berners-Lee</b>                                                                                                                                  |                                                                                                                     |                                                                                                                                                              |
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| <b>Computer Science</b><br><i>(How computers and computer systems work and how they are designed and programmed)</i>                                                                                                            | <b>Information Technology</b><br><i>(the purposeful use of existing programs to develop products and solutions)</i> | <b>Digital Literacy</b><br><i>(the skills, knowledge and understanding needed in order to participate fully and safely in an increasingly digital world)</i> |
| <b>A- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</b>                                                  |                                                                                                                     |                                                                                                                                                              |
| <b>B- create and debug simple programs</b>                                                                                                                                                                                      |                                                                                                                     |                                                                                                                                                              |
| <b>C- use logical reasoning to predict the behaviour of simple programs</b>                                                                                                                                                     |                                                                                                                     |                                                                                                                                                              |
| <b>D- use technology purposefully to create, organise, store, manipulate and retrieve digital content</b>                                                                                                                       |                                                                                                                     |                                                                                                                                                              |
| <b>E- recognise common uses of information technology beyond school</b>                                                                                                                                                         |                                                                                                                     |                                                                                                                                                              |
| <b>F- 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</b> |                                                                                                                     |                                                                                                                                                              |

|                          | Autumn 1                                                                                                   | Autumn 2                                                                                                                                                                                                                      | Spring 1                                                                                                                                               | Spring 2                                                                                                                                                                                                                                                                                                 | Summer 1                                                                                                                                                                                                                                                                          | Summer 2                                                                                                                                                                                                                                                                           |
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| <b>Computing Science</b> | <u><b>Computer Systems and Networks</b></u><br><br>Teach Computing 2.1<br>Information technology around us |                                                                                                                                                                                                                               | <u><b>Programming A</b></u><br><br>Moving a robot (1.3)<br>Teach Computing<br>Beebots                                                                  |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                   | <u><b>Programming B</b></u><br><br>Scratch Junior                                                                                                                                                                                                                                  |
| <b>IT</b>                |                                                                                                            | <u><b>Creating Media</b></u><br><br>Digital writing (1.5)<br>Teach Computing                                                                                                                                                  |                                                                                                                                                        | <u><b>Creating Media</b></u><br><br>Digital painting 1.2<br>Teach Computing                                                                                                                                                                                                                              | <u><b>Data and information</b></u><br><br>Pictograms                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                    |
| <b>NC objectives</b>     | <b>DEF</b>                                                                                                 | <b>DF</b>                                                                                                                                                                                                                     | <b>ABC</b>                                                                                                                                             | <b>D</b>                                                                                                                                                                                                                                                                                                 | <b>DE</b>                                                                                                                                                                                                                                                                         | <b>ABC</b>                                                                                                                                                                                                                                                                         |
| <b>Key Vocabulary</b>    | <b>Key Vocabulary:</b><br>Information technology (IT), computer, barcode, scanner/scan                     | <b>Key Vocabulary:</b><br>Word processor, keyboard, keys, letters, Microsoft Word, Google Docs, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, cursor, select, font, undo, | <b>Key Vocabulary:</b><br>Forwards, backwards, turn, clear, go, commands<br>Instructions, directions<br>Left, right,<br>Plan, algorithm, program Route | <b>Key Vocabulary:</b><br>paint program, tool, paintbrush, erase, fill, undo<br>Piet Mondrian, primary colours, shape tools, line tool, Henri Matisse, Wassily Kandinsky, feelings, colour, brush style<br>Georges Seurat, Pointillism, brush size, Pictures, painting, computers, like, prefer, dislike | <b>Key Vocabulary:</b><br>Pictogram, Data, Collate<br>More than, less than, most, least, organise, data, object, tally chart, votes, total, enter, compare, count, more common, least common<br>Attribute, group, same, different, popular, least popular, conclusion<br>sharing, | <b>Key Vocabulary:</b><br>ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area<br>Block, joining, start block, run, program, background, delete, reset, algorithm, predict<br>Effect, change, value, Instructions, appropriate, design, programming blocks. |

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|  | -I can identify rules to keep us safe and healthy when we are using technology in and beyond the home<br>-I can recognise technology beyond the school<br>-I can explain how information technology benefits us<br>-I can identify a computer and its main parts<br>*I can use a mouse in different ways<br>*I can use a keyboard to type on a computer<br>*I can use the keyboard to edit text | -I can use a computer to write<br>-I can add and remove text on a computer<br>-I can identify that the look of text can be changed on a computer<br>-I can make careful choices when changing text<br>-I can explain why I used the tools that I chose<br>-I can compare writing on a computer with writing on paper | -I can explain what a given command will do<br>-I can act out a given word<br>-I can combine four direction commands to make sequences<br>-I can plan a simple program<br>-I can use logical reasoning to predict the outcome of a program<br>-I can find more than one solution to a problem<br>-I can debug a program | -I can describe what different freehand tools do<br>-I can use the shape tool and the line tools<br>-I can make careful choices when painting a digital picture<br>-I can explain why I chose the tools I used<br>-I can use a computer on my own to paint a picture<br>-I can compare painting a picture on a computer and on paper | -I can label objects<br>-I can identify that objects can be counted<br>-I can recognise that objects can be represented as pictures<br>-I can create a pictogram<br>-I can select objects by attribute and make comparisons<br>-I can recognise that people can be described by attributes<br>-I can explain that we can present information using a computer | -I can choose a command for a given purpose<br>-I can add sprites and backgrounds<br>-I can turn dance moves into a dance algorithm then a program<br>-I can create a program using a given design<br>-I can change a given design<br>-I can decide how my project can be improved |
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### Computing End Points for KS1

- Develop the basic skills of computer science in order to create simple programmes which employ the use of algorithms with an understanding of what algorithms are.
- Pupils will be able to find errors in their programmes and predict outcomes.
- As digital citizens, pupils will know how to keep themselves safe online in a range of ways including how to respond to inappropriate contact and content. They will also understand how to keep their information private and also be able to identify cyber-bullying, knowing what actions to take if they encounter it.
- Pupils will have a secure understanding and range of information technology skills. They will be able to locate and handle information from a range of digital sources including the online world.