

| EYFS     |                                    |                               |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|------------------------------------|-------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | EYFS                               | Key area                      | Software                                                                         | Equipment/Additional hardware                                                                                                                                                                                                                                                                                                                                                   |
| Autumn 1 | All about Instructions (5 Lessons) | Programming                   |                                                                                  | <p>With the exception of the unit: Using a computer, all lessons can be carried out in the classroom or outdoor area, with no need for access to a computing suite or a class set of laptops. The play-based lessons focus on un-plugged skills (those learnt away from a computer) and build a strong foundation of knowledge needed for computing lessons in Key stage 1.</p> |
| Autumn 2 |                                    |                               |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                 |
| Spring 1 | Introduction to data (5 lessons)   | Data handling                 |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                 |
| Spring 2 | Exploring hardware (5 Lessons)     | Computer systems and networks |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                 |
| Summer 1 | Programming Bee-Bots (5 Lessons)   | Programming                   | Bee-bots<br>(ideally 6) We have 7 in school – can be loaned from teach computing |                                                                                                                                                                                                                                                                                                                                                                                 |
| Summer 2 | Using a Computer (5 Lessons)       | Computer systems and networks | LAPTOPS Needed                                                                   |                                                                                                                                                                                                                                                                                                                                                                                 |

**Cycle A**

|          | <b>Year 1/2</b>                                          | Usual Curriculum Year | Key area       | Software                                                                         | Equipment/Additional hardware                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------|----------------------------------------------------------|-----------------------|----------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Autumn 1 | Digital Imagery                                          | Year 1                | Creating Media | Microsoft photos<br>Sketchpad<br>(Paint or JIT5 as an alternative)               | <ul style="list-style-type: none"> <li>• A selection of small people toys and animals/dinosaurs.</li> <li>• Picture book (optional).</li> <li>• Small world play characters – one person and one animal per group.</li> <li>• Digital cameras/tablets – maximum of one, per groups of four pupils.</li> </ul>                                                                                                                                        |
| Autumn 2 | Bee-Bots                                                 | Year 1                | Programming    | Bee-bots<br>(ideally 6) We have 7 in school – can be loaned from teach computing | <ul style="list-style-type: none"> <li>• Building blocks.</li> <li>• Charged Bee-Bots or Blue-Bots (ideally six) – if you only have one then the pupils can take turns.</li> <li>• Fully charged digital recording devices, to record visuals and sound (digital cameras, tablets, laptops with webcams).</li> <li>• A large space, the school hall or playground.</li> <li>• Several coloured cones, depending on the size of the space.</li> </ul> |
| Spring 1 | Introduction to data<br>+ Online safety Lesson 1         | Year 1                | Data Handling  | Jit5 – pictograms<br>Sketchpad                                                   | <ul style="list-style-type: none"> <li>• Counting apparatus e.g. cubes, lolly sticks etc.</li> <li>• Tablet or digital camera (more if you want children to take photos of their own work).</li> <li>• Clipboards – one per group of three or four pupils.</li> </ul>                                                                                                                                                                                |
| Spring 2 | Introduction to Block coding<br>+ Online safety Lesson 2 | Year 2                | Programming    | Scratch JR<br>(free just need to download it to laptops)<br>Makecode - Microbits | <ul style="list-style-type: none"> <li>• Camera/recording device to record children's progress (optional).</li> <li>• Suitable age-appropriate joke books or jokes printed from online (optional).</li> <li>• Whiteboards and pens.</li> <li>• Scissors and glue sticks.</li> <li>• Strips of paper.</li> <li>• A4 paper.</li> </ul>                                                                                                                 |
| Summer 1 | Stop Motion<br>+ Online safety Lesson 3                  | Year 2                | Creating Media | Microsoft photos                                                                 | <ul style="list-style-type: none"> <li>• Digital cameras.</li> <li>• Devices with 'Microsoft Photos' installed.</li> <li>• Sticky notes – nine/ten per pupil (optional).</li> <li>• Digital cameras or tablets (children can work in small groups or pairs depending on how many devices you have available).</li> </ul>                                                                                                                             |
| Summer 2 | International space station<br>+ Online safety Lesson 4  | Year 2                | Data handling  | Sketchpad<br>(Paint or JIT5 as an alternative)                                   | <ul style="list-style-type: none"> <li>Put a thermometer in at least five different places around the school – preferably areas that will have different temperatures.</li> </ul>                                                                                                                                                                                                                                                                    |

| Cycle B  |                                                    |                       |                                |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|----------------------------------------------------|-----------------------|--------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Year 1/2                                           | Usual Curriculum Year | Key area                       | Software                                       | Equipment/Additional hardware                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Autumn 1 | Improving mouse skills<br>+ Online safety Lesson 1 | Year 1                | Computing systems and networks | Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>• Mirrors or photography software.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Autumn 2 | Algorithms unplugged<br>+ Online safety Lesson 2   | Year 1                | Programming                    |                                                | <ul style="list-style-type: none"> <li>• Dressing up clothes and accessories, for example, scarves and hats.</li> <li>• Dice (one per pair of children).</li> <li>• Selection of reading books for sorting.</li> <li>• 2D shapes for drawing around.</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| Spring 1 | Rocket to the moon<br>+ Online safety Lesson 3     | Year 1                | Skills showcase                | Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>• Sturdy paper or firm card – two sheets per group.</li> <li>• A copy of the book Moonshot: The Flight of Apollo 11 by Brian Floca – copies can be found at bookstores and/or online.</li> <li>• Card.</li> <li>• Tape.</li> <li>• Cardboard boxes.</li> <li>• Plastic bottles – one per group.</li> <li>• Other materials such as foil, plastic packaging, felt tips, coloured paper, sequins, tissue paper etc.</li> <li>• Trundle wheels or metre sticks.</li> <li>• Foam javelin or your own bottle rocket to model launching a rocket.</li> </ul> |
| Spring 2 | What is a computer?<br>+ Online safety Lesson 4    | Year 2                | Computing systems and networks | Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>• Sticky notes for each table group – approximately 10 per group.</li> <li>• Clipboards – one per group of four pupils.</li> <li>• Tablets or digital cameras – one per group of four pupils.</li> <li>• 5 cameras or tablets for filming.</li> <li>• 10 whiteboards.</li> </ul>                                                                                                                                                                                                                                                                       |
| Summer 1 | Algorithms and debugging                           | Year 2                | Programming                    | Scratch                                        | <ul style="list-style-type: none"> <li>• Lego or building blocks.</li> <li>• Digital camera (optional).</li> <li>• Mini figures.</li> <li>• A3 paper to draw plan views.</li> <li>• Coloured pencils for any colour.</li> <li>• Partition wall, such as a piece of cardboard.</li> <li>• Flat surface, such as a desk.</li> </ul>                                                                                                                                                                                                                                                             |
| Summer 2 | Word processing                                    | Year 2                | Computer systems and networks  | Microsoft word                                 | <ul style="list-style-type: none"> <li>• Pupils to select a book they like from the library or classroom.</li> <li>• A copy of 'The Gingerbread Man' or another well-known tale.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |

| Cycle A  |                                                       |                       |                                |                                                                   |                                                                                                                                                                                                                                                                                          |
|----------|-------------------------------------------------------|-----------------------|--------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Year 3/4                                              | Usual Curriculum Year | Key area                       | Software                                                          | Equipment/Additional hardware                                                                                                                                                                                                                                                            |
| Autumn 1 | Emailing                                              | Year 3                | Computing systems and networks | Microsoft Outlook                                                 |                                                                                                                                                                                                                                                                                          |
| Autumn 2 | Programming scratch                                   | Year 3                | Programming                    | Scratch                                                           |                                                                                                                                                                                                                                                                                          |
| Spring 1 | Investigating Weather<br>+ Online safety Lesson 1     | Year 4                | Data Handling                  | Microsoft Excel<br>Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>Recycled materials, such as plastic packaging, bottles, cardboard packaging.</li> <li>Tape.</li> <li>Split pins, pipe cleaners.</li> <li>Plastic or paper straws.</li> </ul>                                                                      |
| Spring 2 | Website design<br>+ Online safety Lesson 2            | Year 4                | Creating Media                 | Microsoft Sway<br>Microsoft Word                                  |                                                                                                                                                                                                                                                                                          |
| Summer 1 | Journey inside a computer<br>+ Online safety Lesson 3 | Year 3                | Computing systems and networks | Sketchpad<br>(Paint or JIT5 as an alternative)                    | <ul style="list-style-type: none"> <li>Pieces of string.</li> <li>Large sized paper – one piece per table.</li> <li>Felt tip pens – variety of colours on each table.</li> <li>Tablet or device with QR code scanner installed.</li> </ul>                                               |
| Summer 2 | Computational thinking<br>+ Online safety Lesson 4    | Year 4                | Programming                    | Scratch                                                           | <ul style="list-style-type: none"> <li>Prepare bead strings with repeated patterns.</li> <li>Prepare a short dance or hand clap sequence – long enough that the children won't be able to easily follow it.</li> <li>Plasticine (one per pair or small group).</li> <li>Dice.</li> </ul> |

| Cycle B  |                                                        |                       |                                |                                                      |                                                                                                                                                            |
|----------|--------------------------------------------------------|-----------------------|--------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Year 3/4                                               | Usual Curriculum Year | Key area                       | Software                                             | Equipment/Additional hardware                                                                                                                              |
| Autumn 1 | Networks and the internet<br>+ Online safety Lesson 1  | Year 3                | Computing systems and networks | Microsoft outlook                                    |                                                                                                                                                            |
| Autumn 2 | Video trailers<br>+ Online safety Lesson 2             | Year 3                | Creating Media                 | WeVideo<br><b>iMovie</b> (need to download)          | <ul style="list-style-type: none"> <li>• Access to a selection of books that the children will be familiar with.</li> <li>• Cameras or tablets.</li> </ul> |
| Spring 1 | Comparison cards databases<br>+ Online safety Lesson 3 | Year 3                | Data Handling                  | Microsoft Forms.<br>Microsoft Excel                  | <ul style="list-style-type: none"> <li>• Example of paper databases such as an Argos catalogue or a phone book (optional).</li> </ul>                      |
| Spring 2 | Collaborative Learning<br>+ Online safety Lesson 4     | Year 4                | Computing systems and networks | Microsoft Word<br>Microsoft Forms<br>Microsoft Excel |                                                                                                                                                            |
| Summer 1 | Further coding with Scratch                            | Year 4                | Programming                    | Scratch                                              |                                                                                                                                                            |
| Summer 2 | HTML                                                   | Year 4                | Skills showcase                | Trinket (free)                                       |                                                                                                                                                            |

| Cycle A  |                                                                        |                       |                                |                                                |                                                                                                                                                                                                                                                                                                                                                                 |
|----------|------------------------------------------------------------------------|-----------------------|--------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Year 5/6                                                               | Usual Curriculum Year | Key area                       | Software                                       | Equipment/Additional hardware                                                                                                                                                                                                                                                                                                                                   |
| Autumn 1 | Search Engines                                                         | Year 5                | Computing systems and networks | Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>• Non-fiction texts – at least one between three.</li> <li>• At least 15 each of the following – pencils, erasers, whiteboards and rulers (or other appropriate objects).</li> </ul>                                                                                                                                     |
| Autumn 2 | Programming 1: Music                                                   | Year 5                | Programming                    | Scratch                                        | <ul style="list-style-type: none"> <li>• Headphones (strongly recommended).</li> <li>• Headphone splitters (if pupils are sharing laptops).</li> <li>• Choose a story for the children to work with. Ideally, it should be something the children have been working on in English/Guided Reading, or you could choose a familiar, short picture book</li> </ul> |
| Spring 1 | Big data 1<br>+ Online safety Lesson 1                                 | Year 6                | Data Handling                  | Microsoft Excel                                | <ul style="list-style-type: none"> <li>• Range of working remotes (e.g. for an interactive whiteboard, television, stereo, etc) – ideally one per table.</li> <li>• Video recording devices, e.g. tablets, digital cameras or laptops with built-in cameras.</li> </ul>                                                                                         |
| Spring 2 | Big Data 2<br>+ Online safety Lesson 2                                 | Year 6                | Data Handling                  | Sketchpad<br>(Paint or JIT5 as an alternative) | <ul style="list-style-type: none"> <li>• Access to an outdoor space, lines marked on the ground approximately ten meters apart.</li> <li>• One tennis racket between three pupils.</li> </ul>                                                                                                                                                                   |
| Summer 1 | Micro:bits<br>+ Online safety Lesson 3                                 | Year 5                | Programming                    | Micro-bits                                     | <ul style="list-style-type: none"> <li>• BBC micro:bits and battery packs.</li> <li>• Micro USB cables if you're using laptops.</li> <li>• If you have no access to BBC micro:bits then use the online emulator available on the website.</li> </ul>                                                                                                            |
| Summer 2 | Bletchly Park and the history of computers<br>+ Online safety Lesson 4 | Year 6                | Computer systems and networks  | Scratch, Powerpoint tinkerCAD                  | <ul style="list-style-type: none"> <li>• Access to internal microphones or USB microphones for the computers you are using.</li> <li>• Provide headphones if possible.</li> <li>• Outdoor space or large hall for the start of the lesson.</li> </ul>                                                                                                           |

| Cycle B  |                                                   |                       |                                |                                                     |                                                                                                                                                                                                                                               |
|----------|---------------------------------------------------|-----------------------|--------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Year 5/6                                          | Usual Curriculum Year | Key area                       | Software                                            | Equipment/Additional hardware                                                                                                                                                                                                                 |
| Autumn 1 | Mars Rover 1<br>+ Online safety Lesson 1          | Year 5                | Data Handling                  |                                                     |                                                                                                                                                                                                                                               |
| Autumn 2 | Mars Rover 2<br>+ Online safety Lesson 3          | Year 5                | Data Handling                  | Microsoft Excel<br>TinkerCAD                        | <ul style="list-style-type: none"> <li>Squared or graph paper – one per pupil.</li> </ul>                                                                                                                                                     |
| Spring 1 | Stop motion animation<br>+ Online safety Lesson 3 | Year 5                | Creating Media                 | Microsoft photos                                    | <ul style="list-style-type: none"> <li>Plasticine to create objects/characters.</li> <li>Plastic containers or cellophane to wrap children's creations with.</li> <li>Cameras – one between four (minimum).</li> </ul>                        |
| Spring 2 | Exploring AI<br>+ Online safety Lesson 4          | Year 6                | Computing systems and networks | Kidgeni (website).<br>Trinket                       | <ul style="list-style-type: none"> <li>Devices with internet access (one between two).</li> <li>Blank paper (one each).</li> </ul>                                                                                                            |
| Summer 1 | Introduction to Python                            | Year 6                | Programming                    | Turtle academy,<br>trinket,<br>Scratch              |                                                                                                                                                                                                                                               |
| Summer 2 | Inventing a Product                               | Year 6                | Skills showcase                | Micro-bit<br>TinkerCAD<br>Microsoft sway<br>WeVideo | <ul style="list-style-type: none"> <li>BBC micro:bits and battery packs.</li> <li>Micro USB cables if you're using laptops.</li> <li>If you have no access to BBC micro:bits then use the online emulator available on the website</li> </ul> |