

Coverage against 2015 Scheme of Work – Rising Stars Switched on Computing

### Year A & B overviews - Skills progression - Computing

Pupils are taught the knowledge, understanding and skills needed to engage in Computer learning Below are the skills and end points for each phase.

### KS1- Y1/2

| Year A (2022-2023) |                      |                    |                    |                  |                    |                    |  |  |
|--------------------|----------------------|--------------------|--------------------|------------------|--------------------|--------------------|--|--|
| Term               | Autumn 1             | Autumn 2           | Spring 1           | Spring 2         | Summer 1           | Summer 2           |  |  |
|                    | 2.3 We are           | 2.5 We are         | 1.5 We are TV      | 2.2 We are games | 2.4 we are         | 1.6 We are         |  |  |
| Units              | photographers        | detectives         | chefs              | testers          | researchers        | Gardeners          |  |  |
|                    | (Joournalists)       |                    |                    |                  | (Animation)        |                    |  |  |
| Area of            | Digitally Literate - | Digitally Literate | Digitally Literate | Computer Science | Digitally Literate | Digitally Literate |  |  |
| curriculum         | Creative skills      | - Creative skills  | - Creative skills  | - programming    | - Creative skills  | - Creative skills  |  |  |

|                       | Year B (2023-2024)   |   |   |   |   |   |  |  |
|-----------------------|--|---|---|---|---|---|--|--|
| Term                  | Autumn 1   | Autumn 2                                | Spring 1                                | Spring 2                                | Summer 1                                | Summer 2                                |  |  |
| Units                 | 1.1 We are<br>treasure hunters.<br>Basic skills: word<br>processing &<br>imaging | 1.5 We are<br>storytellers              | 1.2 Woodland<br>Documentaries           | 1.3 We are<br>painters                  | 2.4 We are time<br>travellers           | 1.4 We are<br>personal trainers         |  |  |
| Area of<br>curriculum | Computer Science<br>- programming<br>Digitally Literate<br>- Creative skills     | Digitally Literate<br>- Creative skills | Digitally Literate<br>- Creative skills | Digitally Literate<br>- Creative skills | Digitally Literate<br>- Creative skills | Digitally Literate<br>- Creative skills |  |  |



### KS2- Y3/4

|            | Year A (2022-2023) |                    |                    |                  |                  |                    |  |  |
|------------|--------------------|--------------------|--------------------|------------------|------------------|--------------------|--|--|
| Term       | Autumn 1           | Autumn 2           | Spring 1           | Spring 2         | Summer 1         | Summer 2           |  |  |
|            | 4.6 We are         | 3.6 We are opinion | 4.3 We are         | 3.4 we are       | 4.1 We are       | 4.2 We are toy     |  |  |
| Units      | meteorologists     | pollsters          | musicians          | vloggers         | software         | designers          |  |  |
|            | -                  |                    |                    |                  | developers       | -                  |  |  |
| Area of    | Digitally Literate | Communication      | Digitally Literate | Communication    | Computer Science | Digitally Literate |  |  |
| curriculur | - Creative skills  | Technology incl.   | - Creative skills  | Technology incl. | - programming    | - Creative skills  |  |  |
| curriculur |                    | online Safety      |                    | online Safety    |                  |                    |  |  |

|                       | Year B (2023-2024)                                 |  |                                   |                                   |  |   |  |  |  |
|-----------------------|--|--|-----------------------------------|-----------------------------------|--|---|--|--|--|
| Term                  | Autumn 1   | Autumn 2   | Spring 1                          | Spring 2                          | Summer 1   | Summer 2                                |  |  |  |
| Units                 | Basic Computer<br>skills                           | 4.4 We are HTML<br>editors<br>4.5 We are co-<br>authors                      | 3.1 We are<br>programmers         | 3.2 We are bug<br>fixers          | 3.5 We are<br>communicators                        | 3.3 We are<br>presenters                |  |  |  |
| Area of<br>curriculum | Communication<br>Technology incl.<br>online Safety | Computer Science<br>- programming<br>Digitally Literate<br>- Creative skills | Computer Science<br>- programming | Computer Science<br>- programming | Communication<br>Technology incl.<br>online Safety | Digitally Literate<br>- Creative skills |  |  |  |



### KS2- Y5/6

|                       | Year A (2022-2023)                                 |  |                                   |  |   |                                   |  |  |
|-----------------------|--|--|-----------------------------------|--|---|-----------------------------------|--|--|
| Term                  | Autumn 1   | Autumn 2   | Spring 1                          | Spring 2   | Summer 1                                  | Summer 2                          |  |  |
| Units                 | Basic skills:<br>Word, etc                         | 6.3 We are<br>market<br>researchers                | 5.1 We are game<br>developers     | 5.5 We are<br>bloggers                             | 5.2 We are<br>cryptographers<br>(Scratch) | 6.1 We are APP<br>planners        |  |  |
| Area of<br>curriculum | Communication<br>Technology incl.<br>online Safety | Communication<br>Technology incl.<br>online Safety | Computer Science<br>- programming | Communication<br>Technology incl.<br>online Safety | Computer Science<br>- programming         | Computer Science<br>- programming |  |  |

|            | Year B (2023-2024) |                    |                    |                    |                  |                  |  |  |
|------------|--------------------|--------------------|--------------------|--------------------|------------------|------------------|--|--|
| Term       | Autumn 1           | Autumn 2           | Spring 1           | Spring 2           | Summer 1         | Summer 2         |  |  |
|            | 5.3 We are         | 6.6 We are         | 5.6 We are         | 6.4 We are         | 6.5 We are APP   | 5.4 We are web   |  |  |
| Units      | artists            | marketeers         | architects         | interface          | developers       | developers       |  |  |
|            |                    |                    |                    | designers          |                  | -                |  |  |
| Area of    | Digitally Literate | Digitally Literate | Digitally Literate | Digitally Literate | Computer Science | Computer Science |  |  |
| curriculum | - Creative skills  | - Creative skills  | - Creative skills  | - Creative skills  | - programming    | - programming    |  |  |



### **EYFS**

Children at the expected level of development will:

• Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

|                                      | Year1/2  | Year 3/4  | Year 5/6   |
|--------------------------------------|--|---|--|
| Computer<br>Science<br>(programming) | <ul> <li>I am beginning to understand that<br/>sequence (order) is important when<br/>devising algorithms and programming<br/>devices. 1.1</li> <li>I can describe what actions are needed<br/>for a particular task and begin to use the<br/>word algorithm. 2.1</li> <li>I am able to predict what will happen in<br/>an algorithm or program. 2.1, 2.2</li> <li>I can understand why algorithms are<br/>useful for solving a wide range of<br/>problems and that we use algorithms<br/>every day. 2.1</li> <li>I can describe what I expect to happen<br/>while programming a robot. 1.1</li> <li>I am beginning to understand that<br/>sequence (order) is important when<br/>devising algorithms and programming<br/>devices. 1.1</li> <li>I can execute a program, observe the<br/>results. 1.1</li> </ul> | <ul> <li>I can work with a partner to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. 3.1, 3.2, 4.1,4.2</li> <li>I am beginning to solve problems, by decomposing them into smaller parts. 3.1, 4.1</li> <li>I can use sequence in programs. 3.1, 4.1</li> <li>I am beginning to work with variables. 3.1, 4.1</li> <li>I can work with various forms of input and output with support. 3.3</li> <li>I am beginning to use logical reasoning to explain how some simple algorithms work. 3.1, 4.1</li> <li><i>I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</i> 3.1, 4.1, 4.2</li> <li><i>I can solve problems by decomposing them into smaller parts.</i> 3.1, 4.1</li> <li><i>I can use sequence in programs.</i> 3.1, 4.1</li> <li><i>I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i> 3.1, 3.2, 4.1</li> </ul> | <ul> <li>I can explain and program each of the steps in my algorithm. 5.1</li> <li>I can review and amend the original algorithm while programming. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. 5.1</li> <li>I can recognise when a variable is needed to achieve a required result. 5.1</li> <li>I can program a sprite to add to the score on a certain action. 5.1</li> <li>I can evaluate the effectiveness and efficiency of an algorithm, continually testing the programming of that algorithm. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can write programs that include variables (e.g. a scoring system in a game) 5.1</li> <li>I can explain and program each of the steps in my algorithm. 5.1</li> <li>I can review and amend the original algorithm while programming. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can design algorithms and programs that use repetition. 5.1, 5.3, 5.4, 5.5</li> <li>I can explain and program each of the steps in my algorithm. 5.1</li> <li>I can review and amend the original algorithm while programming. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can review and amend the original algorithm while programming. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can review and amend the original algorithm while programming. 5.1, 5.2, 5.3, 6.2, 6.4, 6.5</li> <li>I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program for a device or onscreen activity. 5.1</li> <li>I can recognise when a variable is needed to achieve a required result. 5.1</li> </ul> |
|                                      |  |   | <ul> <li>I can program a sprite to add to the score on a certain action. 5.1</li> </ul>  |



### We all love, learn and grow together. Mark izg zove oper neighbour as yearsof zove

|  | <ul> <li>I am beginning to write programs successfully to create movement onscreen. 1.1</li> <li>I am beginning to use different kinds of inputs in programming (key press, mouse click tap on a sprite, automated start condition) 1.1</li> <li>I can describe clearly what I expect to happen while programming a robot. 1.1</li> <li>I can understand that programs respond to inputs to carry out actions. 2.1</li> <li>I can use different kinds of inputs in programming (key press, mouse click tap on a sprite, automated start condition) 2.1</li> </ul> |   | <ul> <li>I can evaluate the effectiveness and efficiency of<br/>an algorithm, continually testing the<br/>programming of that algorithm. 5.1, 5.2, 5.3, 6.2,<br/>6.4, 6.5</li> <li>I can link errors in a program to a problem in the<br/>algorithm on which it is based. 5.1, 5.2, 5.3, 6.2,<br/>6.4, 6.5</li> <li>I can write programs that include variables (e.g. a<br/>scoring system in a game) 5.1</li> <li>I can design algorithms and programs that use<br/>repetition. 5.1, 5.3, 6.4, 6.5</li> </ul> |
|--|---|---|--|
| Computer<br>Science<br>(computers and<br>networks) | <ul> <li>I am aware of obvious uses of IT in and beyond school. 1.5, 2.2</li> <li>I have a growing awareness of things in and beyond the home that have some kind of computer in them (microwave, car etc.) 1.5</li> <li>With support I can save and retrieve my work. 1.3</li> <li>I can understand some of the things that people do with computers at work and at home. 1.5, 2.2</li> <li>I can log on to a computer network.</li> <li>I understand how to save and retrieve my work from a shared drive. 2.3, 2.4, 2.5, 2.6</li> </ul>                        | <ul> <li>I understand that the Internet is a collection of computers (servers) joined together across the world. 3.4, 4.4</li> <li>I know there is a difference between the internet and the world wide web. 3.5</li> <li>I am aware of the basic structure of the school network, how it is connected (physical wiring, wireless) and the services that are a part of it (printing, scanning, internet via server) 3.4</li> <li>I can save my work to a variety of locations on the school network, online and locally to a device. 3.4</li> <li><i>I understand that the Internet is a collection of computers (servers) joined together across the world. 3.4, 4.4</i></li> <li><i>I understand the differences between the internet and the world wide web. 3.5</i></li> <li><i>I understand the basic structure of the school network, how it is connected (physical wiring, wireless) and the services that are a part of it (printing, scanning, internet via server) 3.4</i></li> <li><i>I can save (and successfully retrieve!) their work to a variety of locations on the school network, online and locally to a device. 3.4</i></li> </ul> | <ul> <li>I know that the internet provides different services and be able to describe some (email, www) 5.2, 5.4, 5.5, 6.1</li> <li>I know that information is passed around the internet) 5.2, 5.4, 5.5, 6.1</li> <li>I can explain that the internet provides different services and be able to describe some (email, www file transfer protocol, video conferencing) 5.2, 5.4, 5.5, 6.1</li> </ul>  |





| Information<br>Technology<br>(multimedia) | <ul> <li>I can use a painting app to create a picture to communicate ideas. 1.3</li> <li>I can use a camera or camcorder to take a picture or record my work. 1.2</li> <li>I can begin to edit digital photographs. 1.3</li> <li>I understand the differences between a graphics apps and traditional art activities. 1.3</li> <li>I can talk about my use of a painting app and my choice of tools. 1.3</li> <li>I can experiment with a range of devices that create and record sound. 1.5</li> <li>I can understand that devices have record and playback functions. 1.5</li> <li>I can access different information using a range of equipment (apps, website, TV, DVD etc.) 1.4</li> <li><i>I can use brush and pen tools, create lines and textures and use the flood fill spray and stamp tools. 1.2, 1.3</i></li> <li><i>I can demonstrate good control when using still and video cameras understanding the need to frame an image or scene and keep the camera still. 2.3</i></li> <li><i>I am beginning to discuss the quality of my image and make decisions (e.g. delete a blurred image) 2.3</i></li> </ul> | <ul> <li>I can use different font effects, layout, format, graphics and illustrations. 3.3</li> <li>I can use editing tools. 3.3</li> <li>I can log on to an email account or forum. 3.5</li> <li>I can capture "footage" from different devices into simple movie editing software. 3.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can select sound files in sound editing software / app. 4.3</li> <li>I can use music software or app to experiment with sound patterns. 4.3</li> <li>I can use music software / app to create a simple composition. 4.3</li> <li>I can use different font effects, layout, format, graphics and illustrations to communicate for a given audience. 3.3</li> <li>I can use appropriate editing tools to ensure my work is clear and error free. 3.3</li> <li>I can create a short-animated sequence from captured images. 3.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use different fort effects and performs out of from a given audience. 3.3</li> <li>I can use appropriate editing tools to ensure my work is clear and error free. 3.3</li> <li>I can log on to an email account or forum, open emails, create and send appropriate replies, use attachments. 3.5</li> <li>I can create a short-animated sequence from captured images. 3.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use IT to select and record voice and sounds. 4.3</li> <li>I can use music software / app. 4.3</li> <li>I can use music software / a</li></ul> | <ul> <li>I can independently create, send and respond to emails, blogs and forums. 5.5</li> <li>I can independently create, send and respond to email, blogs and forums. 5.5</li> </ul> |
|---|---|--|---|
| Information<br>Technology                 | • I can entertext into a search engine to find specific given web sites. 1.3, 1.4   | I can develop key questions and key words to<br>search for specific information. 4.5   | <ul> <li>I can use strategies for finding information. 5.4, 6.1</li> <li>I understand the possible impact of using incorrect data. 5.4, 6.1</li> </ul>                                  |



(data handling) I am aware of responsible internet use I can use information purposefully to complete I can modify a search pattern in order to find • and the school's acceptable use policy. specific tasks. 3.6 specific information. 5.4, 5.6, 6.1, 6.6 1.3 I can use search engines for different media. 4.5 I can use strategies for finding information. 5.4, ٠ I can develop simple classification skills I understand a website has a unique address. 4.4 5.6, 6.1, 6.6 • • by carrying out simple sorting activities I can explain that some information found through *I recognise the impact of using incorrect* (probably away from the computer) 1.4 information in my work. 5.4, 5.6, 6.1, 6.6 searching is more relevant than others. 4.5 I can sort and classify a group of items by I understand the possible impact of using • I can collect appropriate information, enter it into ٠ asking simple yes / no questions. 1.4 incorrect data. 5.4, 5.6, 6.1, 6.6 a database or spreadsheet. 3.6 I can talk about the different ways I can generate and compare different charts and ٠ • technology can be used to collect graphs. 3.6 information, (e.g. camera, microscope or I can organise, present, analyse and interpret the • sound recorder). 1.2 data in tables, tally charts, charts / graphs. 3.6, 4.6 I can interpret graphs, discuss ٠ I am beginning to develop skills to identify what • information contained and answer data needs to be collected. 3.6 simple questions. 2.6 I can change the contents of cells in a spreadsheet. • I can use appropriate buttons, menus 3.6 and hyperlinks to navigate web sites for I can use a spreadsheet to record data. 3.6 stored information.1.3, 1.4, 2.4 I can use a spreadsheet to explore simple patterns. ٠ I can locate specific sites by typing a ٠ 4.6 website address (URL) into the address I can develop key questions and key words to • bar in a web browser. 1.3, 1.4, 2.4 search for specific information. 4.4 I am beginning to develop key questions ٠ I can use information purposefully to complete • to help find information. 2.4 specific tasks. 3.6 • I am aware of responsible internet use I can use search engines for different media. 4.5 • and the school's acceptable use policy. I understand a website has a unique address. 4.4 2.4 I can explain that some information found • I can use simple graphing programs to • through searching is more relevant than others. produce pictograms and other simple 4.5 graphs. 2.6 I can describe the process of finding specific ٠ I can use graphing software to change information. 4.5 the way a graph type (e.g. pictogram to • I can collect appropriate information, enter it into bar chart) 3.6 a database or spreadsheet and use this to answer ٠ I understand that IT can be used to simple questions. 3.6 create, display and change graphs quite I can generate and compare different charts and easily. 3.6 graphs (using graphing software / app, spreadsheet etc.) 3.6 I can organise, present, analyse and interpret the • data in tables, tally charts, charts / graphs, using IT where appropriate. 3.6



|  | <ul> <li>I am beginning to develop skills to identify what<br/>data needs to be collected and design a<br/>questionnaire or survey to aid its collection. 3.6</li> <li>I can use a spreadsheet to record data and<br/>produce graphs. 3.6</li> <li>I can use a spreadsheet to explore simple patterns<br/>(e.g. in a number square) 4.6</li> <li>I understand the need to structure information<br/>properly in a database or spreadsheet. 4.6</li> <li>I know, understand and use the vocabulary: file,<br/>record, field, data and information. 4.6</li> </ul> |
|--|--|
|--|--|



| Digital Literacy | I can use technology saf  | ely. 1.3 •        | I make sensible decisions if content is  | I can demonstrate safe practice when selecting   |
|------------------|---|-------------------|--|--|
| (e-safety)       | I can identify where to g   |                   | inappropriate or upsetting. 3.4  | images or content for uploading to a personal  |
| · //             | support when I have cor   |                   | I can explain why we must keep personal  | profile. 5.2, 5.4, 5.5, 6.2, 6.3, 6.4, 6.6   |
|                  | content or contact on th  |                   | information and passwords private when   | I can explain the importance of appropriate online   |
|                  | other online technologi   |                   | communicating online. 3.5  | behaviour and that online bullying is unacceptable.  |
|                  | <ul> <li>I can recognise acceptate</li> </ul>                               | • • • •           | I can tell you how to deal with unpleasant   | 5.2, 5.4, 5.5, 6.2, 6.3, 6.4, 6.6  |
|                  | <ul><li>behaviour. 1.3</li><li>I know what to do wher</li></ul>             |                   | communications via mobile, text, chat rooms. 3.5                                   | I can demonstrate safe practice when selecting images or content for uploading to a personal |
|                  | <ul> <li>I know what to do when<br/>about content or being</li> </ul>       |                   | I know why it is important to respect others'<br>feelings and electronic work. 3.5 | profile. 5.2, 5.4, 5.5, 6.2  |
|                  | <ul> <li>I can recognise what is a</li> </ul>                               |                   |  | <ul> <li>I understand the importance of appropriate</li> </ul>                               |
|                  | unacceptable behaviour  | -                 | inappropriate or upsetting. 3.4  | online behaviour and that online bullying is   |
|                  | technologies and online   |                   | I can explain why we must keep personal  | unacceptable. 5.2, 5.4, 5.5, 6.2, 6.3, 6.4, 6.6  |
|                  | <ul> <li>I understand the import</li> </ul>                                 |                   | information and passwords private when   |  |
|                  | communicating safely a  |                   | communicating online. 3.5  |  |
|                  | online, and the need for  | keeping •         | I can tell you how to deal with unpleasant   |  |
|                  | personal information pr   | ivate. 1.3        | communications via mobile, text, chat rooms. 3.4,                                  |  |
|                  | <ul> <li>I can keep personal info</li> </ul>                                | ormation private. | 4.4, 4.5   |  |
|                  | 2.2   | •                 | I can choose when to use appropriate writing                                       |  |
|                  | • I can use technology res  |                   | conventions for electronic communication. 3.5                                      |  |
|                  | I can use technology res  |                   | I know why it is important to respect others'                                      |  |
|                  | <ul> <li>I can identify a range of</li> </ul>                               |                   | feelings and electronic work. 4.3  |  |
|                  | concerns about contact.   |                   |  |  |
|                  | <ul> <li>I am discerning in evalu<br/>content. 2.3, 2.4, 2.5, 2.</li> </ul> |                   |  |  |
|                  | <ul> <li>I understand the import</li> </ul>                                 |                   |  |  |
|                  | communicating safely a  | -                 |  |  |
|                  | online, and the need for  |                   |  |  |
|                  | personal information p  |                   |  |  |
|                  | • I can demonstrate use of  |                   |  |  |
|                  | safely and responsibly,   | knowing a range   |  |  |
|                  | of ways to report unacc   |                   |  |  |
|                  | and contact when onlin  | e. 2.3, 2.4, 2.5, |  |  |
|                  | 2.6   |                   |  |  |
|                  | I can demonstrate response  |                   |  |  |
|                  | technologies and online   |                   |  |  |
|                  | know a range of ways t  | -                 |  |  |
|                  | concerns. 2.3, 2.4, 2.5, 2  | 2.0               |  |  |



| Vocabulary | Computer | Action   | Debug       | Control    | Analyse  | Algorithms         |
|------------|----------|----------|-------------|------------|----------|--------------------|
|            | Device   | Арр      | Design      | Editing    | Avatar   | Collaboration      |
|            | Digital  | Content  | Information | Email      | Cropping | Communication      |
|            | Internet | Image    | Input       | Graphics   | Download | Copyright          |
|            | iPad     | Keyboard | Logon       | Repetition | E-safety | Cyberbullying      |
|            | Online   | Network  | Organise    | Retrieve   | Evaluate | Orientation        |
|            | Phones   | Program  | Output      | Selection  | Password | Photo-manipulation |
|            | Screen   | Save     | Table       | Sequence   | Resizing | Plagiarism         |
|            | Search   | Store    | Website     | Simulate   | Software | Processing         |
|            | Tablets  | Text     | Write       | Technology | Upload   | Spreadsheet        |