**Computing Overview 2020-2021**

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| **Year Group** | **Autumn 1** | **Autumn 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| 1 | **Children should be taught:*****Communication*****C1.1** To use letters, basic punctuation, spacebar and enter key to type words and sentences quickly**C1.2** To use backspace to make corrections**C1.3** To use shift key for punctuation**C1.4** Starting to use two hands when typing | **Children should be taught:*****Programming*****P1.1** To explain what an algorithm is, and give everyday examples**P1.2** To write a simple algorithm (using symbols)**P1.3** To follow a sequence of instructions (symbols)**P1.4** To write a sequence of instructions to move a programmable toy (symbols)**P1.5** To explore the outcome when instructions are given in different orders | **Children should be taught:*****Multimedia*****M1.1** To paint with different colours using undo or eraser to correct mistakes**M1.2** To use different tools such as brush, pen, line, shape and fill**M1.3** To use a digital still camera to take a picture**M1.4** To understand the need to frame the image and keep the camera still**M1.5** To record an audio recording**M1.6** To play back an audio recordingDiscovery with 3 Mobile Network Workshop – Multimedia | **Children should be taught:*****Data*****D1.1** To sort items into groups**D1.2** To make pictograms, and I know that computers help me to make pictograms more quickly**D1.3** To make changes to the information in my pictograms**D1.4** To that if I put the wrong numbers in my charts my pictograms will also be wrong**D1.5** To use my pictograms to help me answer questions | **Children should be taught:*****Digital Literacy & Research*****R1.1** To explore a website using buttons, menus and hyperlinks**R1.2** To use the ‘back’ button**R1.3** To read words, look at pictures and watch videos on a website to find information***Safer Internet Day*****R1.4** To know what to do if I see something online that makes me uncomfortable**R1.5** To know what things count as personal information and who I can share it with | **Children should be taught:*****Communication (consolidation)*****C1** To explore technology around us and explain its uses **C1** To identify a computer and its main parts **C1** To use a mouse in different ways**C1** To use a keyboard to type**C1** To use a keyboard to edit text**C1** To create rules for using technology responsibly |

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| 2 | **Children should be taught:*****Communication*****C2.4** To recognise the features and uses of technology**C2.5** To identify IT in the home**C2.6**To identify technology beyond school**C2.7**To explain how technology benefits us**C2.8** To show how to use information technology safely**C2.9** To recognise that choices are made when using information technology | **Children should be taught:*****Digital Literacy & Research*****R2.4** I know what to do if I find something inappropriate online, & where to go for help**R2.5** I know how to stay safe by going to age-appropriate websites**R2.1** I can navigate to a website via favourites and typing in address, to find out information**R2.2** I know that some things found on the internet will not be true, useful or safe**R2.3** I can use a search engine to find facts using key word search (e.g. Great Fire, London Burning) |  **Children should be taught:*****Programming*****P2.1** I can read and follow written algorithms**P2.2** I know there may be more than one algorithm to do the same task**P2.3** I can predict the outcome of a simple program**P2.4** I can write a sequence of instructions for a specific task**P2.5** I can identify the problem in order to debug a simple program**P2.6** I can describe ways computers and other devices are used outside school***Safer Internet Day*****R2.6** I know how to behave safely and respectfully online**R2.7** I know that not everyone online is who they say they are | **Children should be taught:*****Data*****D2.1** I can sort items into groups by asking yes / no questions (e.g. Guess Who games)**D2.2** I can use a branching database to sort and identify items**D2.3** I can search a prepared database to answer simple questions**D2.4** I can collect a set of data and present it as a simple graph**D2.5** I can save, open and edit my workDiscovery with 3 Mobile Network Workshop – Multimedia |  **Children should be taught:*****Google Docs*****C2.1/G2.1** I can access Google Classroom using a classroom code**C2.2/G2.2** I can edit and improve my work by changing, adding or removing words (C2.1)**C2.3/G2.3** I can change the font size, colour and style to change my work (C2.2)**G2.4** I can use an image within a document (M2.2)**G2.5** I can recognise that other people’s work belongs to them, and I should not change their work unless asked to | **Children should be taught:*****Multimedia*****M2.1** I can discuss the quality of my images and make decisions e.g. delete a blurred image**M2.2** I can use a photograph within a document**M2.3** I can combine a set of photographs to tell a story**M2.4** I can capture video **M2.5** I understand the need to frame the image and move the camera carefully**M2.6** I can play back a video recording |

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| 3 | **Children should be taught:*****Communication*****C3** To explain how digital devices function**C3** To identify input and output devices**C3** To recognise how digital devices can change the way we work**C3** To explain how a computer network can be used to share information**C3** To explore how digital devices can be connected**C3** To recognise the physical components of a network | **Children should be taught:*****Data*****D3.1**I can create a branching database to sort and organise items   **D3.2**I can filter and sort records in a database to answer questions  **D3.3**I can design a form to collect information  **D3.4**I can display information in a graph   **D3.5**I can display information in a table   | **Children should be taught:*****Multimedia*****M3.1** I can use the print screen function to capture an image**M3.2** I can select and use a certain area of an image**M3.3** I can zoom in and out on subjects appropriately**M3.4** I can download the video files from the video camera**M3.5** I can combine video clips to create a video**M3.6** I can add simple titles and credits***Safer Internet Day*****R3.5** I know why we need to keep passwords safe and secure**R3.6** I can recognise the effect my writing or images might have on others | **Children should be taught:*****Communication*****C3** To understand how the internet can provide multiple services, such as the World Wide Web and how they offer communication and collaboration**C3** To understand how the WWW offers online communication and collaboration**C3.6** I can send and reply to online messages, such as email, respectfully**C3.7** I can add and open attachments**C3.8** I know not to open messages and attachments from strangers**R3.2** I can search online for images and information safely**R3.4** I can present the information I have found and share it with others  | **Children should be taught:*****Google Forms*****G3.1** I can access and navigate Google Classroom using a classroom code **G3.2**I can use a variety of question types to a given criteria (C3.1- Google Forms) **G3.3**I can use an image/video within a document (M3.2 - Google Forms) **G3.4**I can change the font size, colour and style to change my work (C3.2 - Google Forms) **G3.5**I can publish a quiz for others to use (Google Forms)  | **Children should be taught:*****Programming*****P3.2** I can adapt a program for a new task**P3.3** I can spot simple patterns in code or an algorithm (e.g. leading to repeat loop)**P3.4** I can create a simple repeat loop (e.g. repeat 4 times) and use within a program**P3.6** To understand the crumble kit as another physical system used in programming**P3.1** Ican write a sequence of instructions for a program using crumble kits**P3.5** I can explore a simulation and explain how to control it and to know the difference between reality and simulation**P3.7** To evaluate my work   |
| 4 | **Children should be taught:*****Data*****D4.5**I can add text (e.g. for headings) and numbers to spreadsheet cells  **D4.6**I can add formulae to a spreadsheet to perform simple calculations (+-\*/)  **D4.7**I can change the appearance of cells, e.g. size, borders and colours  **D4.1**I can present data in a graph, selecting the most appropriate layout  **D4.2**I understand the difference between discrete and continuous data  **D4.3**I can answer questions relating to graphs, and pose my own questions  **D4.4**I can use my graph in a document / presentation to share findings with others **D4.4** I can use my graph in a document / presentation to share findings with others | **Children should be taught:*****Digital Research and Google Slides*****R4.1** I can use more complex search criteria to narrow down my search **R4.2** I know that information on websites may not be accurate or reliable and can check information using different sites**R4.3** I can make notes from information found on websites to present my findings **R4.4** I know what plagiarism is and when I can use the work of others **G4.1** I can access Google slides via Google classroom**G4.2** I can edit and improve my work by changing, adding or removing words (C2.1)**G4.3** I can change the font size, colour and style to change my work **G4.4** I can use an image within a document **G4.5** I can recognise that other people’s work belongs to them, and I should not change their work unless asked to | **Children should be taught:*****Multimedia (Animation)*****M4.3** I can crop and / or rotate an image where needed**M4.4** I can adjust the colours on a photo**M4.5** I can plan an animation using a storyboard**M4.6** I can shoot frames to combine into an animation**M4.7** I can edit an animation to improve it / make it more realistic**M4.8** I can put sounds over an animation**M4.9** I can add titles and photos into an animationDiscovery with 3 Mobile Network Workshop – 3D Animation***Safer Internet Day*****R4.5** I know how and why to keep my personal information private**R4.6** I know how to deal with cyberbullying, if it affects me or my friends | **Children should be taught:*****Programming -Pt 1 (Crumble Kits)*****P4.1** I can explore a working program and decompose its elements**P4.2** I can use simple inputs to control on or off**P4.3** I can create a simple repeat loop, e.g. 4 times to use within a program (ext. nested loop)**P4.4** To use a simple condition (if… then) within a program and evaluate an algorithm/program to suggest improvements | **Children should be taught:*****Communication + Google Slides (consolidation)*****R4.3** I can make notes from information found on websites to present my findings with confidence**G4.1** I can access Google slides via Google classroom with confidence**C4.1** I can use different layouts and effects (such as text box, columns, tables, justification, borders, background colour) to refine and improve my work with confidence**G4** To present a collaborative project to the class and evaluate others | **Children should be taught:*****Programming – Pt. 2*** ***(Scratch)*****P4.1** I can explore a working program and decompose its elements**P4.3** I can create a continuous loop (repeat forever) and use within a program**P4.4** I can use a simple condition (if… then) within a program to design and create an animation using scratch with confidence**P4.5** I can evaluate an algorithm / program and suggest improvements  |

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| 5 | **Children should be taught:*****Google Slides – Multimedia and Communication*****G5.1** I can make notes from information found on websites to present my findings**G5.2** To access Google slides via Google classroom and plan a presentation**G5.3** To access Google slides and use multimedia elements in my work (images, clips, maps, themes)**G5.4** To present a collaborative project to the class and evaluate others | **Children should be taught:*****Data*****Databases:**  **D5.1**I can create a data collection form to design a database  **D5.2**I can create a database by entering data accurately  **D5.3**I can interrogate a database using more complex searches  **Spreadsheets:**  **D5.4**I can use simple functions (e.g. SUM) in spreadsheets to solve problems  **D5.5**I can change data in a formula to answer ‘What if?’ questions  **D5.6**I can change the format of cells appropriately  **D5.7**I can create a graph from the calculations on my spreadsheet   | **Children should be taught:*****Programming (Crumble Kits)*****P5.4** To use an input and / or sensor to control or simulate a physical system (crumble kits)**P5.3** To storyboard a simulation, showing a loop (repeated action) with a condition (repeat until)**P5.5** To debug programming errors (repetition, selection, variables) **P5.1** I can create a variable to hold a number or word, and use within a program **P5.2** I can use multiple selection (if… then… else) within a program,Discovery with 3 Mobile Network Workshop – Vlogging (Space) | **Children should be taught:*****Google Forms*****G5.1** To navigate Google Classroom **G5.2** To use a variety of question types to a given criteria**G5.3** To use an image/video within a document (Google Forms) **G5.4** To change the font size, colour and style to change my work (Google Forms)**G5.5** To publish a quiz for others to use (Google Forms) | **Children should be taught:*****Multimedia -Part 1*****M5.4** I can edit the video; trimming and re-ordering clips **M5.5** I can add a voice-over and/or background music to a video **M5.6** I can add titles and credits to my video **M5.7** I can create an audio recording and add it to other software **M5.3** I can improve a photo with editing tools, e.g. blur, filters, add border  | **Children should be taught:*****Multimedia – Part 2*****M5.1**I can add and combine shapes to design a 3D model **M5.2**I can add detail to my 3D model **M5** I can add and manipulate 3D models  **M5** I can create a complex 3D model of my own design  **M5** I can evaluate my work  |

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| 6 | **Children should be taught:*****Communication*****M6.1**I can take photos for a given purpose and use them in my work **M6.2** I can create a consistent design for my presentation, and present to others**M6.5**I can select and use appropriate multimedia tools, and combine these for a given purpose with confidence **C6.1**I can discuss and evaluate my documents, and make amendments as needed  | **Children should be taught:*****Programming*****P6.1**I can plan a program by decomposing the problem / idea into parts and solving them separately  **P6.2**I can use more than one variable within a program  **P6.3**I can adapt / write a program for a specific person or group  **P6.4**I can evaluate the effectiveness of my program and debug if required  **P6.5** I can discuss and evaluate my documents, and make amendments as needed Discovery with 3 Mobile Network Workshop - Podcast | **Children should be taught:*****Data*****D6.1**I can use formulae and functions (e.g. AVERAGE) in spreadsheets to solve problems  **D6.2**I can use brackets to organise formulae  **D6.3**I can edit and change formulae when I want to change my spreadsheet model  **D6.4**I can create graphs from the calculations on my spreadsheets  **D6.5**I can design and create a spreadsheet for a specific purpose   | **Children should be taught:****(Carry across both terms as interrupted during SATs period)*****Digital Research + Literacy*****R6.1**I understand how computer networks work, including the internet **R6** To complete a refined web search to find specific information and compare results from different search engines**R6** To recognise the role of web-crawlers and indexing **R6** To understand how search results are ranked and selected**R6** To understand how we communicate and the use of the WWW in communicating   |  **Children should be taught:*****Google Slides*****R6.2**I can make notes from information found on websites to present my findings **G6.1** I can access Google Classroom using a classroom code **G6.2**I can add information (text, images, apps) to my slides, ensuring a consistent approach (C6.2) **G6.3**Add comments to others’ slides and collaborate over content (C6.1, 6.4) **G6.5**I can recognise that other people’s work belongs to them, and I should not change their work unless asked to  |