**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 recording  Discovery 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 work  Discovery 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 animation  Discovery 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 |