

The Little School with the Big Heart

‘With God All Things are Possible’ Matthew 19:26

**Computing Skills and Knowledge Progression (Cycle B)**

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|  | **KS1** | **KS2** |
|  | Class 1 (EYFS/Year 1) | Class 2(Year 1/Year 2) | Class 3(Year 2/year3) | Class 4(Year 4/year 5) | Class 5(year 5/year 6) |
| Computer Science | Lego Builders-To compare the effects of adhering strictly to instructions to completing tasks without instructions-To follow and create simple instructions on the computer-To consider how the order of instructions affects the result | Coding-To understand what an algorithm is-To design algorithms and then code them-To compare different objects-To use the repeat command-To use the timer command-To know what debugging is and debug programmesMaze Explorers-To understand the functionality of the direction keys-To understand how to create and debug a set of instructions (algorithm)-To use the additional direction keys as part of an algorithm-To understand how to change and extend the algorithm list-To create a longer algorithm for an activity-To set challenges for peers-To access peer challenges set by the teacher as 2dos |  Coding-To understand what an algorithm is-To design algorithms and then code them-To compare different objects-To use the repeat command-To use the timer command-To know what debugging is and debug programmes | Coding-To represent a programme design and algorithm-To create a programme that simulates a physical system using decomposition-To explore string and text variable types so that the most appropriate can be used in programs-To launch the command in 2code gorilla-To program a playable game with timers and scorepadGame Creator-To set the scene-To create the game environment-To create the game quest-To finish and share the game-To evaluate their peers’ gamesOnline Safety-To gain a greater understanding of the impact that sharing digital content can haveLogo-To learn the structure of the coding language of logo-To input simple instructions in logo-To use 2logo to create letter shapes-To use the repeat function in logo to create shapes-To use and build procedures in logo | Coding-To represent a programme design and algorithm-To create a programme that simulates a physical system using decomposition-To explore string and text variable types so that the most appropriate can be used in programs-To launch the command in 2code gorilla-To program a playable game with timers and scorepadGame Creator-To set the scene-To create the game environment-To create the game quest-To finish and share the game-To evaluate their peers’ gamesOnline Safety-To gain a greater understanding of the impact that sharing digital content can haveNetworks-To learn about what the internet consists of-To find out what a LAN and WAN are-To find out how the internet is accessed in school-To research and find out about the age of the internet-To think about what the future might holdText Adventures-To find out what a text adventure is-To plan a story adventure-To make a story-based adventure-To introduce map-based text adventures-To code a map-based text adventure |
| Information Technology | Spreadsheets-To know what a spreadsheet programme looks like-How to open 2Calculate in Purple Mash-How to enter data into spreadsheet cells-To use 2Calculate image tools to add clipart to cells-To use 2Calculate control tools: lock, move cell, speak and countGrouping and Sorting-To sort items using a range of criteria-To sort items on the computer using the ‘Grouping’ activities in Purple MashPictograms-To understand that data can be represented in picture format-To contribute to a class pictogram-To use a pictogram to record the results of an experiment | Spreadsheets-To know what a spreadsheet programme looks like-How to open 2Calculate in Purple Mash-How to enter data into spreadsheet cells-To use 2Calculate image tools to add clipart to cells-To use 2Calculate control tools: lock, move cell, speak and countEffective Searching-To understand the terminology associated with searching-To gain a better understanding of searching on the internetPictograms-To understand that data can be represented in picture format-To contribute to a class pictogram-To use a pictogram to record the results of an experimentCreating Pictures-To learn the functions of the 2Paint picture tool-To learn about and recreate the impressionist style of art-To recreate Pointillist art and look at the work of Pointillist artists-To learn about the work of Piet Mondrian and recreate the style using the lines template-To learn about the work of William Morris and recreate the style using the patterns templatePresenting Ideas-To explore how a story can be presented in different ways-To make a quiz about a story or class topic-To make a fact file on a non-fiction topic-To make a presentation to the class | Spreadsheets-To use the symbols more than, less than and equal to, to compare values-To use 2Calculate to collect data and produce a variety of graphs-To use the advanced mode of 2Calculate to learn about cell referencesEffective Searching-To understand the terminology associated with searching-To gain a better understanding of searching on the internetTyping-To introduce typing terminology-To understand the correct way to sit at the keyboard-To learn how to use the home, top and bottom row keys-To practice typing with the left and right handBranching Databases-To sort objects using just ‘yes’ or ‘no’ questions-To complete a branching database using 2Question-To create a branching database of the children’s choice | Spreadsheets-Using the formula wizard to add a formula to a cell to automatically make a calculation in that cell-To copy and paste within 2Calculate-Using 2calculate tools to test a hypothesis-To add a formula to a cell to automatically make a calculation in that cell-Using a spreadsheet to model a real-life situation and answer questionsEffective Searching-To locate information on the search results page-To use search effectively to find out information-To assess whether an information source is true and reliableAnimation-To discuss what makes a good animated film or cartoon-To learn how animations are created by hand-To find out how 2Animate can be created in a similar way using the computer-To learn about onion skinning in animation-To be introduced to ‘stop motion’ animation-To share an animation on the class display board and by bloggingConcept Maps-To understand the need for visual representation when generating and discussing complex ideas-To understand and use the correct vocabulary when using a concept map-To understand how a concept map can be used to retell stories and present information-To create a collaborative concept map and present this to an audience | Spreadsheets-To use a spreadsheet to investigate the probability of the results of throwing many dice-Using the formula wizard to add a formula to a cell to automatically make a calculation that cell-To create graphs showing the data collected-To type in a formula for a cell to automatically make a calculation that cell-Using a spreadsheet to create computational models and answer questionsConcept Maps-To understand the need for visual representation when generating and discussing complex ideas-To understand and use the correct vocabulary when using a concept map-To understand how a concept map can be used to retell stories and present information-To create a collaborative concept map and present this to an audience |
| Digital Literacy | Online Safety-To log in safely-To learn how to find saved work in the online work area and find teacher comments-To learn how to search Purple Mash to find resources-To become familiar with the icons and types of resources available in the topics section-To start to add pictures and texts to work-To explore the tools and games section of Purple Mash-To learn how to open, save and print-To understand the importance of logging outTechnology Outside School-To walk around the local community and find examples of where technology is used-To record examples of technology outside | Online Safety-To know how to refine searches using the search tool-To use digital technology to share work on Purple Mash to communicate and connect with others locally-To have some knowledge and understanding about sharing more globally on the internet-To introduce email as a communication tool using 2Respond simulations-To understand how we should talk to others in an online situation-To open and send simple online communications in the form of email-To understand that information put online leaves a digital footprint or trail-To identify the steps that can be taken to keep personal data and hardware secureTechnology Outside School-To walk around the local community and find examples of where technology is used-To record examples of technology outsideEffective Searching-To create a leaflet to help someone search for information on the internet | Online Safety-To know how to refine searches using the search tool-To use digital technology to share work on Purple Mash to communicate and connect with others locally-To have some knowledge and understanding about sharing more globally on the internet-To introduce email as a communication tool using 2Respond simulations-To understand how we should talk to others in an online situation-To open and send simple online communications in the form of email-To understand that information put online leaves a digital footprint or trail-To identify the steps that can be taken to keep personal data and hardware secureEmail-To think about different methods of communication-To open and respond to an email using an address book-To learn how to use email safely-To add an attachment to an email-To explore a simulated email scenarioEffective Searching-To create a leaflet to help someone search for information on the internet | Online Safety-To review sources of support when using technology and children’s responsibility to one another in their online behaviour-To know how to maintain secure passwords-To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this-To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online-To learn about how to reference sources in their work-To search the internet with consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information | Online Safety-To review sources of support when using technology and children’s responsibility to one another in their online behaviour-To know how to maintain secure passwords-To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this-To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online-To learn about how to reference sources in their work-To search the internet with consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information |