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| **Computing Year 5** | **Autumn** | **Spring** | **Summer** |
| **Scientific Enquiry Objectives**   * Pupils should be taught to: * design, write and debug programs that accomplish specific goals, including controlling * or simulating physical systems; solve problems by decomposing them into smaller * parts * use sequence, selection, and repetition in programs; work with variables and various * forms of input and output * use logical reasoning to explain how some simple algorithms work and to detect and * correct errors in algorithms and programs * understand computer networks including the internet; how they can provide multiple * services, such as the world wide web; and the opportunities they offer for * communication and collaboration * use search technologies effectively, appreciate how results are selected and ranked, * and be discerning in evaluating digital content * select, use and combine a variety of software (including internet services) on a range of * digital devices to design and create a range of programs, systems and content that * accomplish given goals, including collecting, analysing, evaluating and presenting data * and information * use technology safely, respectfully and responsibly; recognise * acceptable/unacceptable behaviour; identify a range of ways to report concerns about   content and contact. |  | | |
| **Online Safety (5.2)**  To gain a greater understanding of the  impact that sharing digital content can  have.  • 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 a  consideration for the reliability of the  results of sources to check validity and  understand the impact of incorrect  information.  To ensure reliability through using  different methods of communication.  Databases (5.4)  To learn how to search for information  in a database.  • To contribute to a class database.  • To create a database around a chosen  topic. | **Coding (5.1)**  To begin to simplify code.  • To create a playable game.  • To understand what a simulation is.  • To program a simulation using 2Code.  • To know what decomposition and  abstraction are in computer science.  • To a take a real-life situation, decompose it and think about the level of abstraction.  To understand how to use friction in code.  To begin to understand what a function is and how functions work in code.  • To understand what the different variables types are and how they are used differently.  • To understand how to create a string.  • To understand what concatenation is and how it works. | **3D Modelling (5.6)**  To be introduced to 2Design and Make and the skills of computer aided design.  • To explore the effect of moving points when designing.  • To design a 3D Model to fit certain  criteria.  • To refine and print a model.  **Concept Maps (5.7)**  To understand the need for visual  representation when generating and  discussing complex ideas.  • To understand the uses of a 'concept map'.  • To understand and use the correct  vocabulary when creating a concept  map.  • To create a concept map.  • To understand how a concept map can be used to retell stories and information.  • To create a collaborative concept map and present this to |
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