**St Minver 2014 National Curriculum long term overview**

**Subject: Computing**

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| **Aims** | The national curriculum for computing aims to ensure that all pupils:   can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation   can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems   can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems   are responsible, competent, confident and creative users of information and communication technology. |
| **Subject Content** | **Key stage 1**  Pupils should be taught to:   understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions   create and debug simple programs   use logical reasoning to predict the behaviour of simple programs   use technology purposefully to create, organise, store, manipulate and retrieve digital content   recognise common uses of information technology beyond school   use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.  **Key stage 2**  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**.** |

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| **Year** | **Topics covered/progression** |
| **1** | **Word processing - word**  **Coding– Espresso**  **Ipad Various topic related Apps** |
| **2** | **Word processing - word**  **Coding – Espresso**  **Ipad Various topic related Apps** |
| **3** | **\*Wordprocessing – Word/Publisher cc**  **- Combine texts/graphics**  **\* Data Base – Black cat/ Textease cc**  **\* Email – local schools**  **\* Backdrop TVcc**  **\* Manipulating Sound**  **\* Simulations**  **\* Inter NET research cc**  **\* Esafety**  **\* Programming -Espresso** |
| **4** | **\*Wordprocessing – Word/Publisher cc**  **- Combine texts/graphics**  **-Text boxes**  **-Copy and paste**  **- Text wrap**  **\* Imagine Logo**  **\*Branching databases cc – Textease**  **\* Backdrop TVcc**  **\* Repeating patterns – Revelation Art**  **- Print screen**  **- Croping**  **\* Inter NET research cc**  **\* Esafety**  **\* Programming -Espresso** |
| **5** | **\*Wordprocessing – Word/Publisher cc**  **- Combine texts/graphics**  **-Text boxes**  **-Copy and paste**  **- Text wrap**  **- Keyboard short cuts**  **- Insert symbols**  **- Alter box sizes**  **\*Powerpoint cc**  **\*Excel cc**  **\*Moviemaker cc**  **\*Data logging – log it live cc**  **\* Backdrop TVcc**  **\* Inter NET research cc**  **\* Esafety**  **\* Programming -Espresso** |
| **6** | **\*Wordprocessing – Word/Publisher cc**  **- Combine texts/graphics**  **-Text boxes**  **- resizing**  **-Copy and paste**  **- Text wrap**  **- Keyboard short cuts**  **- Insert symbols**  **- Alter box sizes**  **\* Backdrop TVcc**  **\* Powerpoint cc**  **\* Photostory 3 cc**  **\* Moviemaker cc**  **\* Inter NET research cc**  **\* Esafety**  **\* Programming -Espresso** |