**Long Term Sequence of Computing EYFS - Year 6**

| **BIG IDEAS - SUBSTANTIVE CONCEPTS** |
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| **Computer Science** | **Information Technology** | **Digital Literacy** |

| **DISCIPLINARY KNOWLEDGE**  |
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| Computing systems and networks | Programing | Data and information | Creating Media |

| **Computing Overview** |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
|  | Technology around usDigital paintingMoving a robotGrouping dataDigital writingProgramming animations  | Information technology around usDigital photographyRobot algorithmsPictogramsDigital musicProgramming quizzes | Connecting computersStop-frame animationSequencing soundsBranching databasesDesktop publishingEvents and actions in programs | The internetAudio productionRepetition in shapesData loggingPhoto editingRepetition in games | Systems and searchingVideo productionSelection in physical computingFlat-file databasesVector graphicsSelection in quizzes | Communication and collaborationWebpage creationVariables in gamesIntroduction to spreadsheets3D modellingSensing movement |



| **NATIONAL CURRICULUM PROGRAMMES OF STUDY**  |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
|  | **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
 | **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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