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|  LONG TERM FORECAST Key Stage 2 Computing 2017-2019  |
| **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.
 | 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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|  | **Autumn** | **Spring** | **Summer** |
| **Year 3 Topic**  | Get BloggingWe Love Games | Young Coders | We are PublishersGoing for Gold |
| Y3 Assessment milestone | * Contribute to a blog moderated by teachers.
* Specify conditions to trigger events.
 | * Use IF THEN conditions to control events or objects.
 | * Use laptop and a Desk Top Publishing program to create an e-book combining appropriate text and images from a range of sources
* Record data and choose an appropriate way to present information
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| **Year 4 Topic**  | Heroes Back to the Future | Making Games | Interface DesignerWe’ve Got the Power |
| Y4 Assessment milestone | * Use variables to store a value
* Give examples of the risks posed by online communities
 | * Create conditions for actions by waiting for a user input (such as a response to a question like what is your number?)
 | * Understand how online services work.
* Understand that comments made online that are hurtful or offensive are the same as bullying.
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|  | **Autumn** | **Spring** | **Summer** |
| **Year 5 Topic**  | Cars | News RoomEarth and Space | Social Networking\*Interactive Art Exhibition |
| Y5 Assessment milestone | * Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions
 | * Choose the most suitable applications and devices for the purposes of communication
* Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.
 | * Collaborate with others online on sites approved and moderated by teachers.
* Understand and demonstrate knowledge that it is illegal to download copyrighted material without written permission.
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| **Year 6 Topic**  | Heroes and VillainsSocial Networks\* | The Ministry of Crazy CodingHistory Alive\* | Building Battle Bots |
| Y6 Assessment milestone | * Set IF conditions for movements. Specify types of rotation giving the number of degrees.
* Understand the effect of online comments and show responsibility and sensitivity when online.
 | * Use IF THEN ELSE conditions to control events or objects.
* Use advanced features in order to create high quality, professional or efficient communications.
 | * Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner
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