

Y6 Computing

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.

E = evidence work for computing book

| <u>Autumn 1 Spreadsheets using Microsoft Excel</u> |
|---|
| • Number operations – enter data and formulae into a spreadsheet |
| • Ordering and presenting data – order and present data based on calculations |
| • Add, edit and calculate data – add, edit and calculate data |
| • Solving problems – use a spreadsheet to solve problems |
| • Party plan budget – plan and calculate a spending budget E |
| • Design your own – design a spreadsheet for a specific purpose E |

Use Purple Mash unit 6.3 lessons 1-5 to enhance learning where appropriate

| <u>Autumn 2 Film Making</u> |
|---|
| • Writing a script – use appropriate software and other tools effectively to write a film script E |
| • Research and sources – locate and check appropriate digital content, and provide accurate crediting of sources |
| • Filming – use digital recording devices to film and import into video editing software |
| • Interviewing – plan, conduct and import video interview as part of a short film E |
| • Editing – use video editing software to create a short film |
| • Publishing – use video editing software to turn a film project into a finished movie and present it E = saved project on computer |

Spring 1 Online Safety

- Cyberbullying - find similarities and differences between in-person and cyberbullying and identify good strategies to deal with cyberbullying E
- Secure websites – identify secure websites by identifying privacy seals of approval
- People online – understand the benefits and pitfalls of online relationships and identify information that I should never share
- Girls and boys online - identify how the media play a powerful role in shaping ideas about girls and boys.
- SMARTbots – apply online safety knowledge to online activities.
- Online Safety: Let's go Quizzical! – use knowledge of online safety to create a multiple choice quiz E

Spring 2 Kodu Programming

- Code Investigator – investigate and evaluate the features of programming software E
- When and do instructions – program Kodu using 'when' and 'do' instructions
- Creating worlds – use tools and add features to create an original landscape in Kodu
- Deconstructing code – analyse and deconstruct code to work out its purpose
- Race track – program a character to be controlled around a custom track to reach a goal
- Racing game – program a character to follow an automatic path E

Summer 1 Scratch: Animated Stories

- Animate a scene – create appropriate animations for a story scene
- Broadcast a message – structure and control the timing of events E
- Show and hide – control when objects need to be visible
- Sequence a story – sequence events to create a story narrative
- Adding audio – add voice sounds to enhance an animated story
- Getting interactive – add interactive user features to a scene or story

Summer 2 Know Your Network

- What is a Computer Network? - know what computer networking is and understand the advantages and disadvantages of a computer network.
- Types of Computer Network - understand what LAN (local area network), MAN (metropolitan area network) and WAN (wide area network) are and understand what topology is and how topology networks work.
- Computer Network Connections - understand how computers connect to the Internet using protocols and understand how computers send and receive information using packets and routing.
- Internet, World Wide Web and Cloud Storage - know the differences between the Internet and World Wide Web and understand what cloud computing is.
- Broadband and Communicating Online - understand how broadband and online streaming are part of a network and are used as communication methods on the Internet.
- Types of Malware and Cyber Security - understand what malware is and how this can affect a computer network and to identify ways of minimising risks of cybersecurity threats.