**Computing – Lessons and Outcomes**

| Term | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Computing Term 1** | **Computing Systems and Networks**<br>**Networks**<br><br>1. To recognise what a network is.<br>2. To demonstrate how a website works.<br>3. To identify the role of packet data. | **Microsoft Office 365; Website design –**<br><br>1. To explore the features of Microsoft Sway.<br>2. To plan content for a collaborative webpage.<br>3. To create an engaging webpage<br>4. To plan and create a website<br>5. To create and evaluate a website. | **Computing Systems and Networks**<br>**Search Engines**<br>1. To understand what a search engine is and how to use it.<br>2. To be aware that not everything online is true.<br>3. To search effectively<br>4. To create an informative poster. | **Computing Systems and Networks**<br>**Bletchley Park – History Of Computers**<br>**Lessons 1,2,3**<br><br>1. To understand there are many different types of secret codes<br>2. To understand the importance of having a secure password.<br>3. To recognise the importance of the history of computers and create a well-researched presentation. |
| **Online Safety Term 1** | • Introduction to SJS rules around the use of technology in school<br><br>1. I can describe simple strategies for creating and keeping passwords safe<br>2. To understand how the internet can be used to share beliefs, opinions and facts. | 1. Recall rules on use of technology in school<br>2. What happens when I search online?<br>3. How do companies encourage us to buy online? | 1. Recall SJS Rules on use of technology in school.<br>2. Online Protection<br>3. Online Communication | 1. Recall SJS Rules on use of technology in school.<br>2. Life Online –<br>3. Sharing Online |
| **Computing Term 2** | **Computing Systems and Networks**<br>**Journey Inside A Computer**<br>1. To recognise basic inputs and outputs<br>2. To identify the components in a laptop<br>3. To decompose a tablet computer | **Programming 1**<br>**Further Coding with Scratch**<br>**Lessons 1,3,4**<br><br>1. To explore how variables and if statements are used in Scratch by identifying their purpose in a game. .<br>2. To create a variable to keep a score. | **Data Handling**<br>**Mars Rover 1**<br>**Lessons 1,2 and 4**<br><br>1. To identify how and why data is collected from space.<br>2. To read and calculate numbers using binary code.<br><br>**3.** To understand how binary is used to store different types of data. | **Data Handling**<br>**Big Data 1**<br>**Lessons 1,3,4,5**<br><br>1. To identify how barcodes and QR codes work.<br>2. To recognise how RFID is used.<br>3. To input and analyse real-world data.<br>4. To analyse and evaluate data. |

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| | | 3. To combine variables, if statements and sensors to program a multiplication game. | | |
| **Online Safety Term 2** | 1. To explain what should be done before sharing information online.<br><br>2. To identify the effects that the internet can have on people's feelings. | • I can explain how my online identity can be different to my offline identity.<br>• I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them | • Online Reputation<br>• Online Bullying | • Creating a positive online reputation<br>• Capturing evidence |
| **Computing Term 3** | **Creating Media 1,2,3,4**<br><br>1. To plan a book trailer<br>2. To take photos or video that tell a story.<br>3. To edit a video<br>4. To add text and transitions to a video. | **Data Handling Investigating Weather Lessons 1,3,4**<br><br>1. To log data from online sources in a spreadsheet<br><br>2. To design an automated machine to respond to sensor data.<br><br>3. To understand how weather forecasts are made.<br>. | **Creating Media Stop Motion Animation Lessons 1,2,3,4**<br><br>1. To understand what animation is.<br>2. To understand what stop motion is.<br>3. To plan a stop motion video<br>4. To create a stop motion animation | **Computing Systems and Networks Exploring AI Lessons 1,2,5**<br><br>1. To explore the basics of AI.<br>2. To recognise how AI processes and responds to text prompts.<br>3. To debate the ethical implications of AI. |
| **Online Safety Term 3** | 1. To understand the importance of being kind online.<br>2. To recognise when an email is not genuine. | • To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true What is a bot? | • I can explain key concepts including information, reviews, fact, opinion, belief, validity, reliability and evidence.<br>• I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share | • I can identify, flag ad report inappropriate content |
| **Computing Term 4** | **Scratch 1,2,3,4,**<br>1. To explore a programming application | **Programming 2 Computational Thinking Lesson 1,2,3,4** | **Programming BBC Micro:bit – Lessons 1,2,3,4** | **Programming Intro To Python Lessons 1,2,3,4** |

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| | 2. To program a story by adding blocks<br>3. To plan a remix of an animation by altering existing code.<br>4. To remix an animation by altering the program's code. | 1. To apply decomposition and pattern recognition to solve problems.<br>2. To explain and apply abstraction by identifying key details in a problem.<br>3. To design an algorithm to support an everyday task.<br>4. To apply and reflect on computational thinking skills while creating a Scratch project. | 1. To explore the micro:bit and understand how to connect and test simple programs on a physical device.<br>2. To plan and create a simple animation<br>3. To create a program for the micro:bit using input, variables and conditions.<br>4. To create a real world program using a sensor, input and a conditional statement. | 1. To tinker with a new piece of software.<br>2. To understand nested loops.<br>3. To understand basic Python commands.<br>4. To use loops when programming. |
| **Online Safety Term 3** | 1. To understand the ways personal information can be shared on the internet.<br>2. I can explain what is meant by the term 'Identity' | 3. I can explain what is meant by fake news<br>4. When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to use it. | 5. I can explain how identity online can be copied, modified or altered. | 6. I can describe simple ways to increase privacy on apps and services that provide privacy settings.<br>7. I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). |
| **Computing Term 5** | | | | |
| **Online Safety Term 5** | 1. To understand the rules of Social Media Platforms | • I can give some simple examples of content I must not use without permission form the owner e.g. videos, music and images. | • I can assess and justify when it is acceptable to use the work of others.<br>• I can give examples of content that is permitted to be reused and know how this content can be found online | • I can demonstrate how to make references to and acknowledge sources I have used from the internet. |
| **Computing Term 6** | | | | |
| **Online Safety Term 6** | 2. I can explain why spending too much time using technology can sometimes have a negative impact on anyone. | • I can explain how using technology can be a distraction from other things, in both a positive and negative way. | • I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this | • I recognise and can discuss the pressures that technology can place on someone and how/when they could manage this. |

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| | 3. I can explain why some online activities have age restrictions . | • I can identify times or situations when someone may need to limit the amount of time they use on technology | with talking to trusted adults and professionals.<br>• I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing | • I can Assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise). |