



Year 4			
Subject	Knowledge	Skills	Key Vocabulary
<p><b>Computational Thinking</b> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>Computer Hardware and Digital Literacy</b> 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</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>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</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><b>E Safety</b></p> <ul style="list-style-type: none"> <li>• I choose a secure password and screen name when I am using a website.</li> <li>• I can talk about the ways I can protect myself and my friends from harm online.</li> <li>• I use the safety features of websites as well as reporting concerns to an adult.</li> <li>• I know that anything I share online can be seen by others.</li> <li>• I choose websites, apps and games that are appropriate for my age.</li> <li>• I can help my friends make good choices about the time they spend online.</li> <li>• I can talk about why I need to ask a trusted adult before downloading files and games from the Internet.</li> <li>• I comment positively and respectfully online and through text messages.</li> </ul> <p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts.</li> <li>• I can use an efficient procedure to simplify a program.</li> <li>• I can use a sensor to detect a change which can select an action within my program.</li> <li>• I know that I need to keep testing my program while I am putting it together.</li> <li>• I can use a variety of tools to create a program.</li> <li>• I can recognise an error in a program and debug it.</li> <li>• I recognise that an algorithm will help me to sequence more complex programs.</li> </ul> <p>I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.</p> <p><b>Handling Data</b></p> <ul style="list-style-type: none"> <li>• I can organise data in different ways.</li> <li>• I can collect data and identify where it could be inaccurate.</li> <li>• I can plan, create and search a database to answer questions.</li> <li>• I can choose the best way to present data to my friends.</li> <li>• I can use a data logger to record and share my readings with my friends.</li> </ul> <p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• I can use photos, video and sound to create an atmosphere when presenting to different audiences.</li> <li>• I am confident to explore new media to extend what I can achieve.</li> <li>• I can change the appearance of text to increase its effectiveness.</li> <li>• I can create, modify and present documents for a particular purpose.</li> <li>• I can use a keyboard confidently and make use of a spellchecker to write and review my work.</li> <li>• I can use an appropriate tool to share my work and collaborate online.</li> </ul>	<p><b>Computer Science</b></p> <p><b>Hardware</b> Learning about the purpose of routers</p> <p><b>Networks and Data Representation</b></p> <ul style="list-style-type: none"> <li>• Consolidating understanding of the key components of a network</li> <li>• Understanding that websites &amp; videos are files that are shared from one computer to another</li> <li>• Learning about the role of packets</li> <li>• Understanding that computer networks provide multiple services, such as the World Wide Web, and opportunities for communication and collaboration</li> </ul> <p><b>Computational Thinking</b></p> <ul style="list-style-type: none"> <li>• Solving unplugged problems by decomposing them into smaller parts</li> <li>• Using decomposition to understand the purpose of a script of code</li> <li>• Using decomposition to help solve problems</li> <li>• Identifying patterns through unplugged activities</li> <li>• Using past experiences to help solve new problems</li> <li>• Using abstraction to identify the important parts when completing both plugged and unplugged activities</li> <li>• Creating algorithms for a specific purpose</li> </ul> <p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Understanding that websites can be altered by exploring the code beneath the site</li> <li>• Coding a simple game</li> <li>• Using abstraction and pattern recognition to modify code</li> </ul> <p><b>Information technology</b></p> <p><b>Using Software</b> Building a web page and creating content for it</p> <ul style="list-style-type: none"> <li>• Designing and creating a webpage for a given purpose</li> <li>• Use Google online software for documents, presentations, forms and spreadsheets.</li> <li>• Work collaboratively with others</li> </ul> <p><b>Using Data</b></p> <ul style="list-style-type: none"> <li>• Designing a weather station which gathers and records sensor data</li> </ul> <p><b>Digital Literacy</b></p> <p><b>Wider Use of technology</b></p> <ul style="list-style-type: none"> <li>• Understanding that software can be used collaboratively online to work as a team</li> <li>• Recognising what appropriate behaviour is when collaborating with others online</li> <li>• Recognising that information on the Internet might not be true or correct and that some sources are more trustworthy than others</li> </ul>	



I can give constructive feedback to my friends to help them improve their work and refine my own work.

**Technology in Our Lives**

- I can tell you whether a resource I am using is on the Internet, the school network or my own device.
- I can identify key words to use when searching safely on the World Wide Web.
- I think about the reliability of information I read on the World Wide Web.
- I can tell you how to check who owns photos, text and clipart.
- I can create a hyperlink to a resource on the World Wide Web.
- I can recognise that websites use different methods to advertise products