Year 3

Subject	Knowledge	Skills	Key Vocabulary
Computational Thinking 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 **Computer Hardware and Digital Literacy** 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 Safety** • I can talk about what makes a secure password and why they are important. • I can protect my personal information when I do different things online. • I can use the safety features of websites as well as reporting concerns to an adult. • I can recognise websites and games appropriate for my age. • I can make good choices about how long I spend online. • I ask an adult before downloading files and games from the Internet. • I can post positive comments online. **Programming** • I can break an open-ended problem up into smaller parts. • I can put programming commands into a sequence to achieve a specific outcome. • I keep testing my program and can recognise when I need to debug it. • I can use repeat commands. • I can describe the algorithm I will need for a simple task. I can detect a problem in an algorithm which could result in unsuccessful programming. **Handling Data** • I can talk about the different ways data can be organised. • I can search a ready-made database to answer questions. • I can collect data help me answer a question. • I can add to a database. • I can make a branching database. I can use a data logger to monitor changes and can talk about the information collected. **Multimedia** • I can create different effects with different technology tools. • I can combine a mixture of text, graphics and sound to share my ideas and learning. • I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. • I can evaluate my work and improve its effectiveness. I can use an appropriate tool to share my work online. **Technology in our lives** • I can save and retrieve work on the Internet, the school network or my own device. • I can talk about the parts of a computer. • I can tell you ways to communicate with others online. • I can describe the World Wide Web as the part of the Internet that contains websites.	**Computer Science** **Hardware** • Understanding what the different components of a computer do and how they work together • Drawing comparisons across different types of computers • Learning what a server does **Networks and Data Representation** • Learning what a network is and its purpose • Identifying the key components within a network, including whether they are wired or wireless • Recognising links between networks and the internet • Learning how data is transferred **Computational Thinking** Using decomposition to explain the parts of a laptop computer • Using decomposition to explore the code behind an animation • Using repetition in programs • Understanding that computers follow instructions • Using an algorithm to explain the roles of different parts of a computer • Using logical reasoning to explain how simple algorithms work • Explaining the purpose of an algorithm • Forming algorithms independently **Programming** • Using logical thinking to explore more complex software; predicting, testing and explaining what it does • Incorporating loops to make code more efficient • Remixing existing code • Using a more systematic approach to debugging code, justifying what is wrong and how it can be corrected **Information technology** **Using Software** • Taking photographs and recording video to tell a story. • Using software to edit and enhance their video adding music, sounds and text on screen with transitions **Using Email and the Internet** • Learning to log in and out of an email account • Writing an email including a subject, 'to' and 'from'	

| | • I can use search tools to find and use an appropriate website.
I think about whether I can use images that I find online in my own work. | • Sending an email with an attachment
• Replying to an email

Using Data
• Understanding the vocabulary associated with databases: field, record, data
• Learning about the pros and cons of digital versus paper databases
• Sorting and filtering databases to easily retrieve information
• Creating and interpreting charts and graphs to understand data

Digital Literacy

Wider Use of technology
• Understanding the purpose of emails.
• Learning to be a responsible digital citizen; understanding their responsibilities to treat others respectfully and recognising when digital behaviour is unkind
• Learning about cyberbullying
• Learning that not all emails are genuine, recognising when an email might be fake and what to do about it. | |