Computing

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	• *Give commands, instructions when using simple hardware* • *Make choices about the buttons/icons to press, touch or click on when using simple software/hardware.*	• *Understand algorithms as sequences of instructions in everyday contexts* • *Plan a sequence of steps to solve real-world problems* • *Create a Bee Bot program using a number of steps in order before pressing the go button* • *Explain what they think a program will do*	• *Understand algorithms as sequences of instructions or sets of rules in everyday contexts* • *Program on screen using sequences of instructions to implement an algorithm* • *Create a simple program on screen, correcting any errors* • *Give logical explanations for what they think a program will do*	• *Design and write a program using a block language, without user interaction* • *Explore simulations of physical systems on screen* • *Plan a project* • *Use a sequence in programs* • *Write a program to produce an output on screen* • *Explain a simple sequence based algorithm in their own words* • *use logical reasoning to detect errors in programs* • *Understand that computer networks transmit information in a digital (binary) format* • *Understand that email and video conferencing are made possible through the internet* •	• *Design and write a program using a block language to a given brief, including simple interaction.* • *Develop their own simulation of a simple physical system on screen.* • *Work with others to plan a project.* • *Use sequence and repetition in programs* • *Write a program that accepts keyboard input and produces on-screen output.* • *Explain an algorithm using sequence and repetition in their own words.* • *Use logical reasoning to detect and correct errors in programs* • *Understand that the internet transmits information as packets of data.* • *Understand how the internet makes the web possible.*	• *Design, write and debug a program using a block language based on their own ideas.* • *Can experiment with computer control applications* • *Plan a solution to a problem using decomposition.* • *Use sequence, selection and repetition in programs.* • *Write a program that accepts keyboard and mouse input and produces output on screen and through speakers.* • *explain a rule-based algorithm in their own words* • *Use logical reasoning to detect errors in algorithms* • *Understand how data routing works on the internet.* • *Understand how web pages are created and transmitted.*	• *Design, write and debug a program using a second programming language based on their own ideas.* • *Design, write and debug their own computer control application.* • *Solve problems using decomposition, tackling each part separately.* • *Use sequence, selection, repetition and variables in programs.* • *Write a program that accepts inputs other than keyboard and mouse and produces outputs other than screen or speakers.* • *Give clear and precise logical explanations of a number of algorithms.* • *Use logical reasoning to detect and correct errors in algorithms (and programs).* • *Understand how mobile phone or other networks operate.* • *Understand how domain names are converted into IP addresses on the internet.*

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Digital Literacy	• *Recognise technology that is used at home and in school. Understand what a computer is and the different uses of computers i.e. learning, communicating, finding information, playing games etc.*	• *keep themselves safe while using digital technology* • *Understand that information on the internet can be seen by others* • *Understand what to do if they see disturbing content on line at home or at school* *Show an awareness of how IT is used for communication beyond school*	• *Keep safe and show respect to others using digital technology* • *understand they should not share personal information online* • *Understand what to do if they have concerns about content or contact online* • *Show an awareness of how IT is used for communication beyond school* •	• *use digital technology safely and show respect for others when working online* • *Recognise unacceptable behaviour when using digital technology* • *Know who to talk to about concerns and inappropriate behaviour in school* • *Decide whether a webpage is relevant to a given purpose or question* • *Use email and videoconferencing in class*	• *Demonstrate that they can act responsible when using computers.* • *Understand the difference between acceptable and unacceptable behaviours when using digital technology.* • *Know who to talk to about concerns and inappropriate behaviour at home or in school.* • *Decide whether digital content is relevant for a given purpose or question.* • *Work collaboratively with classmates on a shared wiki.*	• *Demonstrate that they can act responsibly when using the internet.* • *Discuss the consequences of particular behaviours when using digital technology.* • *Know how to report concerns and inappropriate behaviour in a range of contexts* • *Decide whether digital content is reliable and unbiased* • *Work collaboratively with classmates on a class website or blog.*	• *Show that they can think through the consequences of their actions when using digital technology.* • *Identify principles underpinning acceptable use of digital technologies.* • *Know a range of ways to report concerns and inappropriate behaviour in a variety of contexts.* • *Form an opinion about the effectiveness of digital content.* • *Use online tools to plan and carry out a collaborative project.*

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Information Technology	• *Experience simple apps and software* • *Input commands using the space bar, backspace, enter, letters and numbers on a keyboard on any device (including on a tablet)* • *Manage a device by correctly closing websites or apps and safely turning on and off*	• *Use digital technology to store a retrieve content* • *create original content using digital technology*	• *Store, organise and retrieve content on digital devices for a given purpose* • *create and edit original content for a given purpose using digital technology* •	• *Use a range of programs on a computer* • *Design and create content on a computer* • *Collect and present information* • *Search for information within a single site* • *Understand that search engines select pages according to keywords found in the content*	• *Use and combine a range of programs on a computer.* • *Design and create content on a computer in response to a given goal.* • *Collect and present data.* • *Use a standard search engine to find information.* • *Understand that search engines rank pages according to relevance.*	• *Use and combine a range of programs on multiple devices.* • *Design and create programs on a computer in response to a given goal.* • *Analyse and evaluate information.* • *Use filters to make more effective use of a standard search engine.* • *Understand that search engines use a cached copy of the crawled web to select and rank results.*	• *Select, use and combine a range of programs on multiple devices.* • *Design and create systems in response to a given goal.* • *Analyse and evaluate data.* • *Make use of a range of search engines appropriate to finding information that is required.* • *Appreciate that search engines rank pages based on the number and quality of in-bound links.*