Year 2	Overview	Knowledge	Vocabulary	Cross-curricular links
What is a computer? (5 lessons) Children explore what a computer is, learning about inputs and outputs, how computers are used in the wider world and designing an invention Go to unit	**Computational Thinking** Learning about inputs and outputs and how they are used in algorithms. **Computers and Hardware** Understanding what a computer is and the role of individual components.	Different types of technology – cameras, phones, torches, microwave, alarm clock, remote control Inputs e.g. keyboard, mouse Outputs e.g. monitor, speakers, printers	• battery • buttons • computer • desktop • device • electricity • invention • laptop • technology • wire	D&T Science
Word processing (5 lessons) Using their developing word processing skills, pupils write simple messages to friends and learn why we must be careful about who we talk to online Go to unit	**Digital Literacy and Online Safety** Using word processing software to type and reformat text. Understanding the importance of staying safe online.	Word processing – fonts, bold, italics, underline, highlight Keyboard skills – delete, enter, spacebar E-books and e-documents	• backspace • copyright • image • import • keyboard character • paste • undo/redo • touch typing	PSHE
Programming: ScratchJr (5 lessons) Using 'ScratchJr', pupils programme a familiar story and an animation, make their own musical instruments and follow an algorithm to record a joke Go to unit	**Computational Thinking** Creating and debugging simple programs. Using logical reasoning to predict the behaviour of simple programs. Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. **Digital Literacy and Online Safety** Using technology purposefully to create, organise, store, manipulate and retrieve digital content.	Coding – Scratch Jr, code blocks, algorithms, sprites/speeds, repeat and loop control blocks, start/finish, direction Blocks – triggering, motion, looks, sound, end, control	• animation • bug • code • debug • icon • imitate • instructions • sequence	

Year 2 continued.	Overview	Knowledge	Vocabulary	Cross-curricular links
Algorithms and debugging **(5 lessons)** Identifying problems with code using both 'unplugged' and 'plugged' systems to debug (identify and correct) errors in an algorithm Go to unit	**Computational Thinking** Creating and debugging simple programs. Using logical reasoning to predict the behaviour of simple programs. Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Zooming in and out of maps on Planet Earth Unplugged algorithms and instructional writing Abstraction/key information Decomposition/smaller chunks	• artificial intelligence (AI) • bug • correct • data • debug • decompose • error • key features • loop • predict • unnecessary	
International Space Station **(5 lessons)** Building on their understanding of how computers sense the world around us, pupils learn how data is collected and used to keep astronauts safe on the I.S.S Go to unit	**Digital Literacy and Online Safety** Using technology to create and label images and to put data into a spreadsheet. **Computational Thinking** Consider inputs and outputs to understand how sensors work.	International Space Station – Node 1,2,3, Zvezda, Zarya, Destiny, Columbus, Kibo, survival items, growing plants in space	• approximate • astronaut • data • digital content • experiment • interactive map • laboratory • monitor (verb) • satellite • sensor • space • survival • thermometer	Science
Stop motion **(5 lessons)** Pupils create simple animations, storyboarding their ideas then decomposing it into small parts of action to be captured. Go to unit: • Option 1 • Option 2 • Option 3	**Digital Literacy and Online Safety** Using technology purposefully to create, organise, store, manipulate and retrieve digital content. **Computers and Hardware** Understanding how to use tablets or computers to take photos.	Animations – how still images become moving images Use of animation software Sketching and planning	• animator • storyboard • contraption • upload • decompose • design • download • film review • filming • import • image • plan • sketch • software • stop-motion	English

Year 2 *continued.*	Overview	Knowledge	Vocabulary	Cross-curricular links
Online safety **(4 lessons)** Pupils learn about how to keep personal information safe online, including their right to give or deny permission for information to be shared online [Go to unit](#)	Digital Literacy and Online Safety Identifying how to keep personal information private. Using technology respectfully by asking for permission before sharing about others online.	The difference between 'online' and 'offline.' How to create a strong password. Tell a trusted adult about any online safety concerns	• accept • consent • content • offline • online • password • permission • personal information • terms and conditions • trusted adult	RSE