

# Brompton and Sawdon: Long term Computing curriculum plan



Class 1 Year 1	A1	A2	SP1	SP2	SU1	SU2
Area		Computing systems and networks	Programming 1	Creating media	Programming 2	Online safety
		Improving mouse skills	Algorithms unplugged	Digital Imagery	Bee-Bot	Online safety
		3 lessons (1-3)	(4 lessons: 1, 2, 4, 5)	(3 lessons: 1-3 only)	(4 lessons: 1, 3, 4 and 5 only)	All
		<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/improving-mouse-skills/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/improving-mouse-skills/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/algorithms-unplugged/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/algorithms-unplugged/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/new-unit-page-creating-media-digital-imagery/digital-imagery/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/new-unit-page-creating-media-digital-imagery/digital-imagery/</a> <a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/new-unit-page-creating-media-digital-imagery/digital-imagery/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/new-unit-page-creating-media-digital-imagery/digital-imagery/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/programming/programming-beebot/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/programming/programming-beebot/</a>  Virtual Bee-bot: <a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/programming/virtual-bee-bot/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/programming/virtual-bee-bot/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/online-safety/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/online-safety/</a>
Key Knowledge to be taught		<p>know that "log in" and "log out" means to begin and end a connection with a computer</p> <p>know that a computer and mouse can be used to click, drag, fill and select and also add backgrounds, text, layers, shapes and clip art.</p> <p>know that passwords are important for security.</p>	<p>understand that an algorithm is when instructions are put in an exact order.</p> <p>know that decomposition means breaking a problem into manageable chunks and that it is important in computing.</p> <p>know that we call errors in an algorithm 'bugs' and fixing these 'debugging'.</p>	<p>understand that holding the camera or device still and considering angles and light are important to take good pictures.</p> <p>know that you can edit, crop and filter photographs.</p> <p>know how to search safely for images online.</p>	<p>understand the basic functions of a Bee-Bot.</p> <p>know that you can use a camera/tablet to make simple videos.</p> <p>know that algorithms move a Bee-Bot accurately to a chosen destination</p>	<p>know that the internet is many devices connected to one another</p> <p>know what to do if you feel unsafe or worried online –trusted adult</p> <p>know that people you do not know on the internet (online) are strangers and are not always who they say they are.</p> <p>know to stay safe online it is important to keep personal information safe</p> <p>know that 'sharing' online means giving something specific to someone else via the internet and 'posting' online means placing information on the internet</p>
Vocabulary		Log in/out Mouse click Keyboard Screen Password Account Ctrl Right click Menu Drag Drop Undo Cursor	Algorithm Bug Code Debug Decompose Directions Input Order Output Programming	Background Blurred Crop Delete Edit Filter Image Import Resize Save as Visual effects	Algorithm Bee-Bot Code Debug Instructions Pause Predict Program	Communicate Connect Internet safety Personal information Posting Sharing Strangers Trust Wired Wireless
Links to EY curriculum	<u>Understanding the World</u> <ul style="list-style-type: none"> <li>Explore and know how things work</li> </ul> <u>Physical Development</u> <ul style="list-style-type: none"> <li>Develop small motor skills so that they can use a range of tools competently, safely and confidently.</li> </ul>		<u>Personal, Social and Emotional Development</u> <ul style="list-style-type: none"> <li>Be confident to try new activities, and show independence, resilience and perseverance in the face of challenge.</li> <li>Know and talk about the factors that support their overall wellbeing – sensible amounts of 'screen time'.</li> </ul>		<u>Expressive Arts and Design</u> <ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> </ul> <u>Personal, Social and Emotional Development</u> <ul style="list-style-type: none"> <li>Explain the reason for rules, know rights from wrong and try to behave accordingly.</li> </ul>	
	<u>All work in EYFS is underpinned by Communication and Language development</u> <ul style="list-style-type: none"> <li>Learn new vocabulary</li> <li>Make comments about what they have heard and ask questions to clarify their understanding.</li> <li>Articulate their ideas and thoughts in well-formed sentences.</li> <li>Describe events in some detail.</li> <li>Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</li> </ul> Use new vocabulary in different contexts.					

Although our EYFS is centred on play-based, child-led learning, we also recognise the ever increasing important and influence of Computing on the lives of our pupils, something we which recognise will only increase. We know that this already impacts on our ETFS pupils. Therefore, the following units allow our EYFS pupils to start to develop the building blocks of knowledge to thrive in this subject.

			Computing systems and networks	Programming	Programming 2	Data Handling
			Using a computer	All about instructions	Exploring hardware	Introduction to data
			5 sessions	5 sessions	4 sessions	4 sessions
			<a href="https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/using-a-computer/">https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/using-a-computer/</a>	<a href="https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/all-about-instructions/">https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/all-about-instructions/</a>	<a href="https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/exploring-hardware/">https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/exploring-hardware/</a>	<a href="https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/an-introduction-to-data/">https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/an-introduction-to-data/</a>
			<b>What is a keyboard</b> <b>How do we log in and out</b> <b>What is a mouse</b> <b>How can we use a mouse</b>	<b>can we follow instructions</b> <b>can we give instructions</b> <b>Can we spot where an instruction doesn't work</b> <b>Can we put instructions in order</b> <b>Can we predict what will happen</b>	<b>What is hardware</b> <b>How can we use a camera</b> <b>Where is technology used in school / at home</b>	<b>How can we sort things</b> <b>How can we sort people</b> <b>How can we use a pictogram</b> <b>What is a database</b>



Class 2 Year A	A1	A2	Sp1	Sp2	Su1	Su2
	<b>Anglo Saxons</b>		<b>Search for the Ring of Fire</b>		<b>Ancient Egypt</b>	
<b>Area</b>	Computing systems and networks 1	<b>Online Safety revision</b>	Computing systems and networks 3	Data Handling	Programming	<b>Online Safety</b>
	What is a computer? (3 lessons: 1, 2 and 5 only)		Journey inside a computer (3 lessons: 1, 2 and 5 only)	International Space Station (3 lessons: 1, 3 and 5 only)	Programming: Scratch 4 lessons: 1, 2, 3, and 5	<b>Online Safety</b> (4 lessons: combine 3 and 4)
	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/what-is-a-computer/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/what-is-a-computer/</a>		<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/journey-inside-a-computer/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/journey-inside-a-computer/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/international-space-station/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/international-space-station/</a>	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/programming-scratch/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/programming-scratch/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/online-safety/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/online-safety/</a>
Key Knowledge to be taught  YEAR 2 OBJ YEAR 3 OBJ	<p>know the difference between a desktop and laptop computer</p> <p>know that people control technology.</p> <p>know some input devices that give a computer an instruction about what to do (output).</p> <p>know that computers often work together</p>		<p>know the roles that inputs and outputs play on computers.</p> <p>know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together.</p> <p>know what a tablet is and how it is different from a laptop/desktop computer</p>	<p>understand that you can enter simple data into a spreadsheet.</p> <p>understand what steps you need to take to create an algorithm.</p> <p>know what data to use to answer certain questions.</p> <p>know that computers can be used to monitor supplies.</p>	<p>know that Scratch is a programming language and some of its basic functions.</p> <p>understand how to use loops to improve programming.</p> <p>understand how decomposition is used in programming.</p> <p>understand that you can remix and adapt existing code</p>	<p>understand the difference between online and offline.</p> <p>understand what information I should not post online.</p> <p>know what the techniques are for creating a strong password.</p> <p>know that you should ask permission from others before sharing about them online and that they have the right to say 'no.'</p> <p>understand that not everything I see or read online is true</p>
Vocabulary	Battery Computer Desktop Device Digital Function Input Keyboard Laptop Monitor Mouse Output Scanner Screen System Tablet Technology		Algorithm CPU (central processing unit) Data Storage Disassemble GPU (graphics processing unit) Hard drive HDD (hard disk drive) Memory Microphone Program QR Code RAM (random access memory) ROM (read only memory)	Algorithm Data Digital Digital content Interactive map Monitor Sensor	Algorithm Animation Application Code Code block Coding application Debug Decompose Interface Loop Predict Program Remixing code Repetition code Review Scratch	Accept Comment Consent Content Deny Emojis Offline Online Password Permission Personal information Pop ups Pressure Terms and conditions Trusted adult

**Ongoing opportunities throughout the curriculum:** At Brompton and Sawdon we intend for our pupils to regularly use/develop core computing and ICT skills through ongoing opportunities to:

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Save and retrieve their work</li> <li>• Research topics to support learning across the curriculum</li> </ul> | <ul style="list-style-type: none"> <li>• Develop typing and editing skills on MS Word</li> <li>• Present their findings in MS Powerpoint and MS Publisher</li> </ul> | <ul style="list-style-type: none"> <li>• Use technology to efficiently check or improve word choices and spelling</li> <li>• Develop their ability to be creative through use of art programs (See Art Long Term Planning)</li> <li>• Develop mouse and keyboard (laptop) skills (such as drag, drop, selections, menu systems)</li> </ul> |
|---|--|--|



Class 2 YearB	A1	A2	Sp1	Sp2	Su1	Su2
	Around the World in 80 days		Robots and Inventors		Stone Age	
Area	Computing systems and networks 1	<b>Online safety revision</b>	Programming 1	Creating Media	Programming 2	Online Safety
	Networks and the internet 3 lessons: 1, 3 and 5 only)		Algorithms and debugging (4 lessons: 1, 2, 4 and 5 only)	Video trailers 4 lessons 1-4	Scratch Jn 4 lessons 1, 2, 4 and 5	Online Safety (All 4 lessons)
	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/computing-systems-and-networks-1-networks-and-the-internet/networks-and-the-internet/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/computing-systems-and-networks-1-networks-and-the-internet/networks-and-the-internet/</a>		<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/algorithms-and-debugging/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/algorithms-and-debugging/</a>	If using devices other than iPads: <a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/digital-literacy-2/digital-literacy/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/digital-literacy-2/digital-literacy/</a> If using iPads: <a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/digital-literacy-2/digital-literacy-using-ipads/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/digital-literacy-2/digital-literacy-using-ipads/</a>	<a href="https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/programming-scratch-jr/">https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/programming-scratch-jr/</a>	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/year-3-online-safety/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/year-3-online-safety/</a>
Key Knowledge to be taught	understand what a network is and how a school network might be organised  know that a server is central to a network and responds to requests made.  YEAR 2 OBJ YEAR 3 OBJ know that a router connects us to the internet.  know how the internet uses networks to share files.  know what a packet is and why it is important for website data transfer		understand what machine learning is and how it enables computers to make predictions.  know that loops in programming are where you set a certain instruction (or instructions) to be repeated multiple times  know that abstraction is the removing of unnecessary detail to help solve a problem	know that different types of camera shots can make my photos or videos look more effective.  know that I can edit photos and videos using film editing software.  understand that I can add transitions and text to my video	know that coding is writing in a special language so that the computer understands what to do.  understand that the character in ScratchJr is controlled by the programming blocks.  know that you can write a program to create a musical instrument or tell a joke	know that not everything on the internet is true: people share facts, beliefs and opinions online  understand that the internet can affect your moods and feelings  know that privacy settings limit who can access your important personal information, such as your name, age, gender etc.  know what social media is and that age restrictions apply.
Vocabulary	Cables Component Connection Corrupted Data Desktop Device File Internet Laptop Network Network map Network switch Radio waves Router Server The Cloud Web server Website trackers WiFi		Abstraction Algorithm Artificial intelligence Bug Clear Data Debug Decompose Error Loop Predict	Camera angle Clip Cross blur Cross fade Cross zoom Directional wipe Edit editing software Graphics Import Recording Sound effects Storyboard Time code Trailer Transition Video Voiceover	Algorithm Animation Bug CGI Computer code Code Debug Icon Imitate Instructions Loop Programming Repeat Sequence	Age-restricted Autocomplete Beliefs Block Fact Fake news Opinion Password Privacy settings Report Requests Search engine Security questions Sharing Smart devices Social media platforms

**Ongoing opportunities throughout the curriculum: At Brompton and Sawdon we intend for our pupils to regularly use/develop core computing and ICT skills through ongoing opportunities to:**

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Save and retrieve their work</li> <li>• Research topics to support learning across the curriculum</li> </ul> | <ul style="list-style-type: none"> <li>• Develop their typing and editing skills on MS Word</li> <li>• Present their findings in MS Powerpoint and MS Publisher</li> </ul> | <ul style="list-style-type: none"> <li>• Use technology to efficiently check or improve word choices and spelling</li> <li>• Develop their ability to be creative through use of art programs (See Art Long Term Planning)</li> <li>• Develop mouse and keyboard (laptop) skills (such as drag, drop, selections, menu systems)</li> </ul> |
|---|--|--|





Class 3 Year A	A1	A2	Sp1	Sp2	Su1	Su2
	<b>Vikings &amp; Dragons</b>		<b>Lights, Camera, Action</b>		<b>Keen to be Green</b>	
<b>Area</b>	Computing systems and networks	Data Handling	Creating Media	<b>Online Safety</b>	Programming	
	Collaborative learning 4 lessons: 1, 3, 4 and 5)	Big data 1 4 lessons: 1, 3, 4 and 5)	Stop Motion Animation 4 lessons 1-4	<b>Online Safety</b> <b>All</b>	Computational thinking 4 lessons 1-4	
	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/collaborative-learning/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/collaborative-learning/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/big-data-1/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/big-data-1/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/stop-motion-animation-2/stop-motion-animation/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/stop-motion-animation-2/stop-motion-animation/</a>  <a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/stop-motion-animation-2/new-stop-motion-animation-option-2-with-cameras/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/stop-motion-animation-2/new-stop-motion-animation-option-2-with-cameras/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/online-safety-year-6/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/online-safety-year-6/</a>	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/computational-thinking/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/computational-thinking/</a>	
<b>Key Knowledge to be taught</b> YR4 OBJ YR5 OBJ YR6 OBJ	<p>understand that software can be used collaboratively online to work as a team.</p> <p>know what type of comments and suggestions on a collaborative document can be helpful.</p> <p>know that you can use images, text, transitions and animation in presentation slides.</p>	<p>know that data contained within barcodes and QR codes can be used by computers.</p> <p>know that infrared waves are a way of transmitting data</p> <p>know that Radio Frequency Identification (RFID) is a more private way of transmitting data.</p> <p>know that data is often encrypted so that even if it is stolen it is not useful to the thief</p>	<p>know that decomposition of an idea is important when creating stop-motion animations.</p> <p>know that stop motion animation is an animation filmed one frame at a time using models, and with tiny changes between each photograph.</p> <p>know that editing is an important feature of making and improving a stop motion animation</p>	<p>know that a digital footprint means the information that exists on the internet as a result of a person's online activity.</p> <p>know what steps are required to capture bullying content as evidence</p> <p>know that it is important to manage personal passwords effectively.</p> <p>understand what it means to have a positive online reputation.</p> <p>know some common online scams</p>	<p>know that combining computational thinking skills can help you to solve a problem.</p> <p>understand that pattern recognition means identifying patterns to help them work out how the code works.</p> <p>understand that algorithms can be used for a number of purposes e.g. animation, games design etc</p>	
<b>Vocabulary</b>	Animations Email account Format Icon Insert Link Multiple choice Numerical data Pie chart Presentations Slides Software Spreadsheets	Algorithms Barcode Binary Brand Chips Contactless Encrypted Infrared Privacy QR code QR scanner Radio waves RFID Signal Systems/data analyst Transmission Wireless	Animation Animator Decomposition Edit Frames Onion skinning Stop motion Storyboard Thaumatrope Zoetrope	Anonymity Antivirus Biometrics Block and report Consent Digital footprint Digital personality Hacking Malware Online reputation Phishing Privacy settings Scammers Screenshot	Abstraction Algorithm Code Computational thinking Decomposition Input Output Script Sequence Variable	

**Ongoing opportunities throughout the curriculum:** At Brompton and Sawdon we intend for our pupils to regularly use/develop core computing and ICT skills through ongoing opportunities to:

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Save and retrieve their work</li> <li>• Research topics to support learning across the curriculum</li> </ul> | <ul style="list-style-type: none"> <li>• Develop typing and editing skills on MS Word</li> <li>• Present findings in MS Powerpoint and MS Publisher</li> </ul> | <ul style="list-style-type: none"> <li>• Use technology to efficiently check or improve word choices and spelling</li> <li>• Develop their ability to be creative through use of art programs (See Art Long Term Planning)</li> <li>• Develop mouse and keyboard (laptop) skills (such as drag, drop, selections, menu systems)</li> </ul> |
|---|--|--|



Class 3 Year B	A1	A2	Sp1	Sp2	Su1	Su2
	Space & Engineering		The Americas		World Cup/Olympics	
Area	Computing systems and networks	Data Handling	Online Safety	Programming	Creating Media	
	Search engines (4 lessons: 1-4)	Mars Rover (3 lessons: 1, 2 and 4)	Online Safety	Programming music	History of Computers	
	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/computing-systems-and-networks-search-engines/microsoft-search-engines/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/computing-systems-and-networks-search-engines/microsoft-search-engines/</a>  <a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/search-engines/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/search-engines/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/mars-rover-1/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/mars-rover-1/</a>	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/year-4-online-safety/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/year-4-online-safety/</a>	Option 1 (Sonic Pi): <a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/programming-music/sonic-pi/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/programming-music/sonic-pi/</a> Option 2(Scratch): <a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/programming-music/sonic-pi/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/programming-music/sonic-pi/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/history-of-computers/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/history-of-computers/</a>	
Key Knowledge to be taught	<p>know how search engines work.</p> <p>understand that anyone can create a website and therefore we should take steps to check the validity of websites.</p> <p>YR 4 OBJ</p> <p>YR 5 OBJ</p> <p>YR6 OBJ</p> <p>know that web crawlers are computer programs that crawl through the internet.</p> <p>understand what copyright is</p>	<p>know Mars Rover is a motor vehicle that collects data from space by taking photos and examining samples of rock.</p> <p>know what numbers using binary code look like and be able to identify how messages can be sent in this format.</p> <p>understand that RAM is Random Access Memory and acts as the computer's working memory.</p> <p>know what simple operations can be used to calculate bit patterns.</p>	<p>understand some of the methods used to encourage people to buy things online.</p> <p>understand that technology can be designed to act like or impersonate living things</p> <p>understand that technology can be a distraction and identify when someone might need to limit the amount of time spent using technology.</p> <p>understand what behaviours are appropriate in order to stay safe and be respectful online</p>	<p>know that a soundtrack is music for a film/video and that one way of composing these is on programming software.</p> <p>understand that using loops can make the process of writing music simpler and more effective.</p> <p>know how to adapt their music while performing</p>	<p>know that radio plays are plays where the audience can only hear the action so sound effects are important.</p> <p>know that sound clips can be recorded using sound recording software.</p> <p>know that sound clips can be edited and trimmed.</p>	
Vocabulary	Algorithm Copyright Credit Data leak Index Keywords Network Rank Search engine TASK Web crawler Website	Binary code Boolean Byte Communicate CPU Data transmission Input Numerical data Output Radio signal RAM	Advertisements Bot Chatbot Hashtag In-app purchases Influencer Opinion Program Screen time Snippets Sponsored	Beat Bugs Coding Command Debug Decompose Error Loop Output Programming Repeat Soundtrack	Byte Computer Devices File Gigabyte Graphics Hard drive Hardware Kilobytes Megabyte Memory storage Operating system Processor RAM ROM Script Smartphone	

**Ongoing opportunities throughout the curriculum:** At Brompton and Sawdon we intend for our pupils to regularly use/develop core computing and ICT skills through ongoing opportunities to:

- Save and retrieve their work
- Research topics to support learning across the curriculum
- Develop typing and editing skills on MS Word
- Present their findings in MS Powerpoint and MS Publisher
- Use technology to efficiently check or improve word choices and spelling
- Develop their ability to be creative through use of art programs (See Art Long Term Planning)
- Develop mouse and keyboard (laptop) skills (such as drag, drop, selections, menu systems)



Class 3 Year C	A1	A2	Sp1	Sp2	Su1	Su2
	<b>Witches &amp; Wizards</b>		<b>War: What is it Good For?</b>		<b>Brompton &amp; Beyond</b>	
<b>Area</b>	<b>Data Handling</b>	<b>Programming</b>	<b>Computing systems and networks</b>	<b>Online Safety</b>	<b>Programming</b>	
	Investigating Weather 3 lessons: 1, 3, 4 and 5)	Further coding with Scratch 3 lessons 2-4	Bletchley Park 3 lessons: 1-3)	<b>Online Safety</b> All	Intro to Python 4 lessons 1-4	
	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/data-handling-investigating-weather/investigating-weather/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/data-handling-investigating-weather/investigating-weather/</a> <a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/data-handling-investigating-weather/microsoft-data-handling-investigating-weather/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/data-handling-investigating-weather/microsoft-data-handling-investigating-weather/</a>	<a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/further-scratch/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/further-scratch/</a> <a href="https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/new-unit-page-programming-1-further-coding-with-scratch/microsoft-office-365-programming-1-further-coding-with-scratch/">https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/new-unit-page-programming-1-further-coding-with-scratch/microsoft-office-365-programming-1-further-coding-with-scratch/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/search-engines/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/search-engines/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/year-5-online-safety/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/year-5-online-safety/</a>	<a href="https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/intro-to-python/">https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/intro-to-python/</a>	
<b>Key Knowledge to be taught</b>  YR4 OBJ YR5 OBJ YR6 OBJ	<b>know that computers can use different forms of input to sense the world around them so that they can record and respond to data ('sensor data').</b>  <b>know that a weather machine is an automated machine that respond to sensor data.</b>  <b>understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films</b>	<b>understand that a variable is a value that can change (depending on conditions) and know that you can create them in Scratch.</b>  <b>know what a conditional statement is in programming.</b>  <b>understand that variables can help you to create a quiz on Scratch</b>	<b>understand the importance of having a secure password and what "brute force hacking" is.</b>  <b>know that the first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2.</b>  <b>know about some of the historical figures that contributed to technological advances in computing.</b>  <b>understand what techniques are required to create a presentation using appropriate software.</b>	<b>Identify possible dangers online and how to stay safe.</b>  <b>Evaluate the pros and cons of online communication.</b>  <b>Recognise that info on the Internet might not be true or correct and learn ways of checking validity.</b>  <b>Learn what to do if they experience bullying online.</b>  <b>Learn to use an online community safely</b>	<b>know that there are text-based programming languages such as Logo and Python.</b>  <b>know that nested loops are loops inside of loops.</b>  <b>understand the use of random numbers and remix Python code</b>	
<b>Vocabulary</b>	Script Sensor data Solar panel Tablet/Digital camera	Broadcast block Code blocks Conditional Coordinates Decomposition Orientation Parameters Program Script Variables	Brute force hacking Chip and pin system Cipher Code Password Scrambled Trial and error	permissions Application Apps Communication Emojis In-app purchases Memes Contributions Private Real world	Algorithm Code Command Import Indentation Input Loop Output Random Repeat	

**Ongoing opportunities throughout the curriculum:** At Brompton and Sawdon we intend for our pupils to regularly use/develop core computing and ICT skills through ongoing opportunities to:

- Save and retrieve their work
- Research topics to support learning across the curriculum
- Develop typing and editing skills on MS Word
- Present their findings in MS Powerpoint and MS Publisher
- Use technology to efficiently check or improve word choices and spelling
- Develop their ability to be creative through use of art programs (See Art Long Term Planning)
- Develop mouse and keyboard (laptop) skills (such as drag, drop, selections, menu systems)





## Enrichment in Computing at Brompton and Sawdon Community Primary School



To enhance their learning and enjoyment of computing, pupils also enjoy:

- Computer club (also the use of technologies in other clubs such as Science or Engineering Club)
- Spelling, Maths and Grammar homework all completed online
- Children and families interact with the school Dojos system, uploading and sharing content
- E. Safety week / Safer Internet Day celebrated every year
- E. Safety activities and assemblies throughout the year, in addition to timetabled topics
- Workshops (eg. Secondary school visits)
- Scarborough Engineering week visit – annual opportunity to see how local industries use new technology and get ‘hands-on’
- Opportunities throughout the art curriculum to develop digital pieces of art
- Pupils enjoy developing their own presentations and delivering these to whole-school assemblies
- Regular celebration and exploration of emerging and older technologies in assemblies, linked to our Ready to Fly Pillar.

