Southbroom St James Academy

Southbroom St James Academy – Computing Intent

What is Computing?

Our computing curriculum will enable our children to embrace the challenges and opportunities they face in a life full of ever-changing technology. In doing so they will develop their knowledge around how to be safe online and computer literate. They will understand the importance of respecting themselves and others and know their responsibility to ensure mental wellness of all.

Our children will build the skills to confidently and competently use different interfaces and programs to communicate, problem solve and collect information.

How will the curriculum be delivered? The implementation.

The overarching aim for Computing at Southbroom St James Academy is for children to develop the key skills involved and be able to transfer these to a range of technologies. Each set of lessons builds towards a final product that solves a problem. We want them to be excited and curious about new technology but also have the ability to use and explore it confidently to enhance their learning.

We draw from the National Curriculum whilst still ensuring that we personalise, adapt and enhance the computing curriculum. We use standards from Teach Computing to create aspirational objectives for our children to reach by the time they leave Year 6. As well as this, our lessons are carefully differentiated for different abilities and taught with a clear skills focus. Using progression documents, we can ensure that children are making progress in these skills and technologies and ensure that their understanding deepens as they move through the school. Children often take ownership of their learning and are motivated to solve a problem or create something specific.

Curriculum Review (Impact):

The impact of this curriculum will be measured against its core aims. We want children to become successful digital learners through working on the progression of skills needed to achieve the aims.

Concepts in Computing

Computer Scientists use four key concepts to help them understand the many areas of their discipline: computing systems and networks, creating media, data and information and programs and algorithms. These key concepts have been carefully considered and identified as the core knowledge, skills, and confidence to engage with technology required to successfully achieve in a digital world. The Key Concepts are revisited and developed as the pupils move through the school to ensure that the knowledge, skills, and confidence to engage with technology are firmly embedded within the long-term memory.

Teaching Enquiries

Year 3/4 A	Connecting Computers	Animation	Sequence in Music	Branching Databases	Desktop Publishing	Events and Actions
Year 3/4 B	The Internet	Audio Editing	Repetition in Shapes	Data Logging	Photo Editing	Repetition in Games
Year 5/6 A	Sharing Information	Video Editing	Selection in Physical Computing	Flat-file Databases	Vector Drawing	Selection in Quizzes
Year 5/6 B	Internet Communication	Webpage Creation	Variables in Games	Introduction into Spreadsheets	3D Modelling	Sensing

Key Concepts

Key concepts identify the content or focus areas of study at different times and come under the headings below:

	Computing Systems and Networks	**Creating Media**	**Data and Information**	**Programming and Algorithms**
Lower KS2	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		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 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	

	Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	accomplish given goals, including collecting, analysing, evaluating, and presenting data and information
Upper KS2	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 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 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 Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	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 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 logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Second Order Concepts

Second order concepts can be used across all aspects of the subject to organise the substantive knowledge and skills taught:

Connect	**Communicate**	**Code**	**Collect**	**Safety**
How technology can be used to connect with the wider world safely.	Using digital literacy to express oneself in a variety of ways. Exploring reliability of information received electronically.	How programming is used widely in everyday life. Using instructions, logic, and sequences to achieve a desired effect.	How to collect understand, interpret, evaluate, represent, and utilise information collected in a variety of forms.	How I keep myself and others safe while using technology.

Progression in Substantive Knowledge in Computing

Second Tier Concepts	End of Lower KS2	End of KS2
Computing Systems and Networks		
Connect How technology can be used to connect with the wider world safely.	• I can explain how digital devices function • I can identify input and output devices • I can recognise how digital devices can change the way we work • I can explain how a computer network can be used to share information • I can explore how digital devices can be connected • I can recognise the physical components of a network • I can describe how networks physically connect to other networks • I can recognise how networked devices make up the internet • I can outline how websites can be shared via the World Wide Web • I can describe how content can be added and accessed on the World Wide Web	• I can explain that computers can be connected together to form systems • I can recognise the role of computer systems in our lives • I can recognise how information is transferred over the internet • I can explain how sharing information online lets people in different places work together • I can contribute to a shared project online • I can evaluate different ways of working together online • I can identify how to use a search engine • I can describe how search engines select results • I can explain how search results are ranked

	• I can recognise how the content of the WWW is created by people • I can evaluate the consequences of unreliable content • I can explain how digital devices function	• I can recognise why the order of results is important, and to whom • I can recognise how we communicate using technology • I can evaluate different methods of online communication
Creating Media		
Communicate Using digital literacy to express oneself in a variety of ways. Exploring reliability of information received electronically.	• I can explain that animation is a sequence of drawings or photographs • I can relate animated movement with a sequence of images • I can plan an animation • I can identify the need to work consistently and carefully • I can review and improve an animation • I can evaluate the impact of adding other media to an animation • I can recognise how text and images convey information • I can recognise that text and layout can be edited • I can choose appropriate page settings • I can add content to a desktop publishing publication • I can consider how different layouts can suit different purposes • I can consider the benefits of desktop publishing • I can identify that sound can be digitally recorded • I can use a digital device to record sound	• I can recognise video as moving pictures, which can include audio • I can identify digital devices that can record video • I can capture video using a digital device • I can recognise the features of an effective video • I can identify that video can be improved through reshooting and editing • I can consider the impact of the choices made when making and sharing a video • I can identify that drawing tools can be used to produce different outcomes • I can create a vector drawing by combining shapes • I can use tools to achieve a desired effect • I can recognise that vector drawings consist of layers • I can group objects to make them easier to work with • I can evaluate my vector drawing • I can review an existing website and consider its structure • I can plan the features of a web page

	• I can explain that a digital recording is stored as a file • I can explain that audio can be changed through editing • I can show that different types of audio can be combined and played together • I can evaluate editing choices made • I can explain that digital images can be changed • I can change the composition of an image • I can describe how images can be changed for different uses • I can make good choices when selecting different tools • I can recognise that not all images are real • I can evaluate how changes can improve an image	• I can consider the ownership and use of images (copyright) • I can recognise the need to preview pages • I can outline the need for a navigation path • I can recognise the implications of linking to content owned by other people • I can use a computer to create and manipulate three-dimensional (3D) digital objects • I can compare working digitally with 2D and 3D graphics • I can construct a digital 3D model of a physical object • I can identify that physical objects can be broken down into a collection of 3D shapes • I can design a digital model by combining 3D objects • I can develop and improve a digital 3D model
Data and Information		
Collect How to collect understand, interpret, evaluate, represent, and utilise information collected in a variety of forms.	• I can create questions with yes/no answers • I can identify the object attributes needed to collect relevant data • I can create a branching database • I can identify objects using a branching database	• I can use a form to record information • I can compare paper and computer-based databases • I can outline how grouping and then sorting data allows us to answer questions • I can explain that tools can be used to select specific data

	• I can explain why it is helpful for a database to be well structured • I can compare the information shown in a pictogram with a branching database • I can explain that data gathered over time can be used to answer questions • I can use a digital device to collect data automatically • I can explain that a data logger collects 'data points' from sensors over time • I can use data collected over a long duration to find information • I can identify the data needed to answer questions • I can use collected data to answer questions	• I can explain that computer programs can be used to compare data visually • I can apply my knowledge of a database to ask and answer real-world questions • I can identify questions which can be answered using data • I can explain that objects can be described using data • I can explain that formula can be used to produce calculated data • I can apply formulas to data, including duplicating • I can create a spreadsheet to plan an event • I can choose suitable ways to present data
Programming and Algorithms		
Code How programming is used widely in everyday life. Using instructions, logic, and sequences to achieve a desired effect.	• I can explore a new programming environment • I can identify that each sprite is controlled by the commands I choose • I can explain that a program has a start • I can recognise that a sequence of commands can have an order • I can change the appearance of my project • I can create a project from a task description • I can explain how a sprite moves in an existing project	• I can control a simple circuit connected to a computer • I can write a program that includes count-controlled loops • I can explain that a loop can stop when a condition is met, eg number of times • I can conclude that a loop can be used to repeatedly check whether a condition has been met • I can design a physical project that includes selection • I can create a controllable system that includes selection

	• I can create a program to move a sprite in four directions • I can adapt a program to a new context • I can develop my program by adding features • I can identify and fix bugs in a program • I can design and create a maze-based challenge • I can identify that accuracy in programming is important • I can create a program in a text-based language • I can explain what 'repeat' means • I can modify a count-controlled loop to produce a given outcome • I can decompose a program into parts • I can create a program that uses count-controlled loops to produce a given outcome • I can develop the use of count-controlled loops in a different programming environment • I can explain that in programming there are infinite loops and count controlled loops • I can develop a design which includes two or more loops which run at the same time • I can modify an infinite loop in a given program • I can design a project that includes repetition	• I can explain how selection is used in computer programs • I can relate that a conditional statement connects a condition to an outcome • I can explain how selection directs the flow of a program • I can design a program which uses selection • I can create a program which uses selection • I can evaluate my program • I can define a 'variable' as something that is changeable • I can explain why a variable is used in a program • I can choose how to improve a game by using variables • I can design a project that builds on a given example • I can use my design to create a project • I can evaluate my project • I can create a program to run on a controllable device • I can explain that selection can control the flow of a program • I can update a variable with a user input • I can use a conditional statement to compare a variable to a value • I can design a project that uses inputs and outputs on a controllable device • I can develop a program to use inputs and outputs on a controllable device

	• I can create a project that includes repetition	

Progression in Substantive Knowledge in Education for a Connected World

Second Tier Concepts	End of Lower KS2	End of KS2
Self-Image and Identity		
Safety How I keep myself and others safe while using technology. Shaping online identities and how media impacts on gender and stereotypes	• I can explain what is meant by the term 'identity'. • I can explain how people can represent themselves in different ways online • I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why. • I can explain how my online identity can be different to my offline identity. • I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. • I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.	• I can explain how identity online can be copied, modified or altered. • I can demonstrate how to make responsible choices about having an online identity, depending on context. • I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online. • I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. • I can explain the importance of asking until I get the help needed.
Online Relationships		
Safety How I keep myself and others safe while using technology.	• I can describe ways people who have similar likes and interests can get together online.	• I can give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs).

Relationships and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.	• I can explain what it means to 'know someone' online and why this might be different from knowing someone offline. • I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with. • I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. • I can explain how someone's feelings can be hurt by what is said or written online. • I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. • I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms) • I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. • I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	• I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my / our fault. • I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). • I can explain how someone can get help if they are having problems and identify when to tell a trusted adult. • I can demonstrate how to support others (including those who are having difficulties) online. • I can explain how sharing something online may have an impact either positively or negatively • I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. • I can describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs. • I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the

		sharer and others; and who can help if someone is worried about this.
Online Reputation		
Safety How I keep myself and others safe while using technology. Strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles	• I can explain how to search for information about others online • I can give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal. • I can explain who someone can ask if they are unsure about putting something online. • I can describe how to find out information about others by searching online. • I can explain ways that some of the information about anyone online could have been created, copied or shared by others.	• I can search for information about an individual online and summarise the information found. • I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect • I can explain the ways in which anyone can develop a positive online reputation. • I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.
Online Bullying		
Safety How I keep myself and others safe while using technology. Strategies for effective reporting and intervention and how bullying and other aggressive behaviour relates to legislation	• I can describe appropriate ways to behave towards other people online and why this is important. • I can give examples of how bullying behaviour could appear online and how someone can get support. • I can recognise when someone is upset, hurt or angry online.	• I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences. • I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying.

	• I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). • I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).	• I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. • I can identify a range of ways to report concerns and access support both in school and at home about online bullying. • I can explain how to block abusive users. • I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix). • I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me. • I can explain how someone would report online bullying in different contexts.
Managing Online Information		
Safety How I keep myself and others safe while using technology. Strategies for effective searching, critical evaluation and ethical publishing	• I can demonstrate how to use key phrases in search engines to gather accurate information online. • I can explain what autocomplete is and how to choose the best suggestion. • I can explain how the internet can be used to sell and buy things • I can explain the difference between a 'belief', an 'opinion' and a 'fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.	• I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with. • I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'. • I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.

	• I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed). • I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened. • I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others. • I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites). • I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online. • I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. • I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be. • I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them	• I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. • I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads • I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers). • I can explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others. • I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. • I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share. • I can explain how search engines work and how results are selected and ranked. • I can explain how to use search technologies effectively. • I can describe how some online information can be opinion and can offer examples. • I can explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the

	online to pretend something is true when it isn't.	personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. • I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). • I understand the concept of persuasive design and how it can be used to influences peoples' choices. • I can demonstrate how to analyse and evaluate the validity of 'facts' and information and I can explain why using these strategies are important. • I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. • I can describe the difference between online misinformation and dis-information • I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation or disinformation). • I can identify, flag and report inappropriate content.
Health, Well-being, and Lifestyle		

Safety How I keep myself and others safe while using technology. The impact that technology has on health, well-being and lifestyle including understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.	• I can explain why spending too much time using technology can sometimes have a negative impact on anyone; I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged • I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). • I can explain how using technology can be a distraction from other things, in both a positive and negative way. • I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.	• I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively. • I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology. • I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals. • I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing. • I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. • I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this. • I can recognise features of persuasive design and how they are used to keep users engaged (current and future use). • I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).

Privacy and Security		
Safety How I keep myself and others safe while using technology. Behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.	• I can describe simple strategies for creating and keeping passwords private. • I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult. • I can describe how connected devices can collect and share anyone's information with others. • I can describe strategies for keeping personal information private, depending on context. • I can explain that internet use is never fully private and is monitored, e.g. adult supervision. • I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. • I know what the digital age of consent is and the impact this has on online services asking for consent.	• I can explain what a strong password is and demonstrate how to create one. • I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. • I can explain what app permissions are and can give some examples. • I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). • I can explain what to do if a password is shared, lost or stolen. • I can describe how and why people should keep their software and apps up to date, e.g. auto updates. • I can describe simple ways to increase privacy on apps and services that provide privacy settings. • I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). • I know that online services have terms and conditions that govern their use.
Copyright and Ownership		
Safety	• I can explain why copying someone else's work from the internet without	• I can assess and justify when it is acceptable to use the work of others

How I keep myself and others safe while using technology. Protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.	permission isn't fair and can explain what problems this might cause. • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. • I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.	• I can give examples of content that is permitted to be reused and know how this content can be found online. • I can demonstrate the use of search tools to find and access online content which can be reused by others. • I can demonstrate how to make references to and acknowledge sources I have used from the internet.

Vocabulary

Vocabulary is an essential building block to enable children to access the curriculum; within computing teaching sequences we use explicitly planned vocabulary to teach tier 2 and 3 vocabulary to all children. Teachers ensure that all children understand the key vocabulary needed to access the learning, with careful scaffolding for children with SEND. To support their vocabulary acquisition, the etymology and morphology of key vocabulary is also taught explicitly in our spelling lessons throughout KS2.

Key Conceptual Vocabulary

Key conceptual vocabulary identified within the content or focus areas of study at different times under the headings below:

	Computing Systems and Networks	**Creating Media**	**Data and Information**	**Programming and Algorithms**
Year 3/4 A	Digital device, input, output, process, program, connection, network, network switch, server, wireless access point (WAP)	Animation, flip book, stop frame, animation, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, delete, frame, media, import, transition	Attribute, value, questions, table, objects, branching databases, objects, equal, even, separate, order, organise, j2data, selecting, pictogram, information, decision tree, questions	Motion, event, sprite, algorithm, logic, move, resize, algorithm, extension block, pen up, set up, design, action, debugging, errors, setup, test
Year 3/4	Internet, network, router, network security, network	Audio, record, playback, microphone, speaker,	Data, table (layout), input device, sensor, data logger,	Scratch, programming, sprite, blocks, code, loop, repeat,

B	switch, wireless access point (WAP), router, website, web page, web address, router, routing, route tracing, browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, accurate, honest, adverts	headphones, input, output, start, stop, podcast, save, file, selection, edit, mixing, time shift, export, MP3, evaluate, feedback	logging, data point, interval, analyse, import, export, logged, collection, analyse, review, conclusion	value, forever, infinite loop, countcontrolled loop, animate, costume, event block, duplicate, modify, debug, refine, evaluate, algorithm
Year 5/6 A	System, connection, digital, input, process, output, protocol, address, packet, chat, explore, slide deck, reuse, remix, collaboration	Video, audio, recording, storyboard, script, soundtrack, dialogue, capture, zoom, storage, digital, tape, AV (audiovisual), videographer, video techniques, zoom, pan, tilt, angle, YouTuber, content, camera, colour, export, trim/clip, titles, end credits, timeline, transitions, soundtrack, retake/reshoot, special effects, constructive feedback	Database, data, information, record, field, sort, order, group, search, criteria, value, graph, chart, axis, compare, filter, presentation	Selection, condition, true, false, count-controlled loop, outcomes, conditional statement – the linking together of a condition and outcomes, algorithm, program, debug, implement, question, answer, task, input, outcomes, test, run, setup, share, evaluate, constructive Microcontroller, controller, components, LED, crocodile clips
Year 5/6 B	Search, search engine, Google, Bing, Yahoo, Swisscows, DuckDuckGo, refine. index, crawler, bot, optimisation, links, web crawlers, content creator, ranking, communication, internet, public, private, one-way, two-	Website, web page, browser, media, Hypertext Markup Language (HTML), layout, header, media, purpose, copyright, fair use, evaluate, preview, device, breadcrumb, trail, navigation, hyperlink, subpage, implication, external	Spreadsheet, data, data heading, data set, cells, columns and rows, data item, format, common attribute, formula, calculation, call reference, sigma, graph, evaluate, results,	Variable, change, name, value, set, design, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share Micro-bit, MakeCode, input, process, output, flashing, USB, selection, condition, if… then…

	way, one-to-one, one-to-many, SMS, email, WhatsApp, blog, YouTube, Twitter, BBC Newsround	link, embed 2D, 3D, 3D object, 3D space, view, resize, colour, lift, rotate, position, select, duplicate, dimensions, placeholder, hole, group, ungroup, modify, evaluate, improve	comparisons, questions, software, tools, data, propose	else, variable, random, navigation, design, task, step counter, plan, create, code, test, debug

Adaption for children with SEND

Following the expectations laid out by the SEN Code of Practise, adaptations are made for individuals who need something that is addition to or different from others in the class.

'Everybody should learn to program a computer, because it teaches you to think. '

-Steve Jobs-