CANN BRIDGE SCHOOL

Computing Curriculum Policy




Statement of Intent

Our computing curriculum is designed to empower learners to develop essential digital literacy, communication, and problem-solving skills. Through personalised and accessible experiences, we aim to enhance their independence, confidence, and participation in a rapidly evolving digital world.

Our computing curriculum is committed to inclusivity and accessibility by adapting all activities and resources to meet the diverse needs of our learners, utilising a range of assistive technologies and differentiated instructional strategies. We provide personalised learning paths that reflect each learner's unique abilities, interests, and developmental stages. To sustain interest and motivation, we employ engaging, interactive, and sensory-rich activities. Our focus is on developing functional digital literacy skills that support communication, social interaction, and everyday tasks. Additionally, we teach learners about online safety and responsible use of technology, fostering a safe digital environment.

By nurturing these skills and providing a supportive, inclusive learning environment, we aim to prepare our learners to thrive in an increasingly digital world, fostering greater independence, confidence, and participation in society.

Implementation

At Cann Bridge, our computing curriculum is structured to encompass three fundamental areas: Digital Literacy, Computer Science, and Information Technology. Each component is designed to provide our learners with a comprehensive understanding of the digital landscape and equip them with the necessary skills to thrive in an increasingly technology-driven world.

Digital Literacy forms the cornerstone of our curriculum, focusing on developing essential skills for navigating and utilising digital tools effectively. Learners are guided through activities and exercises aimed at developing proficiency in areas such as internet browsing, digital communication, and media literacy.

Computer Science education at Cann Bridge emphasises computational thinking and problem-solving skills. Through hands-on activities and projects, learners explore concepts such as algorithms, coding, and programming languages, fostering creativity and logical reasoning abilities.

Information Technology encompasses the practical application of computing principles to real-world scenarios. Our curriculum equips learners with the skills needed to utilise software applications, manage data, and create digital content. By engaging in projects that involve tasks such as digital design, multimedia production, and data analysis, learners develop practical skills that are directly applicable to various future pursuits.

Furthermore, online safety is an integral component woven throughout our computing curriculum. Learners are educated about the importance of digital security, privacy protection, and responsible online behaviour. Through interactive discussions, simulations,

and workshops, learners are empowered to navigate online environments safely and ethically, equipping them with the knowledge and tools to protect themselves and others in the digital realm.

Through the strategic integration of these components, our computing curriculum at Cann Bridge aims to provide learners with a well-rounded and holistic education in digital literacy, computer science, information technology, and online safety, preparing them to thrive in the digital age.

Impact

Through our comprehensive computing curriculum, learners embark on a transformative journey, acquiring not only heightened understanding but also a diverse range of skills essential for fostering their autonomy and safety within the digital domain.

With a carefully crafted blend of theoretical knowledge and hands-on practical experience, our curriculum equips learners with the tools they need to navigate the digital world with confidence and competence. From mastering the fundamentals of digital literacy to delving into the skills and knowledge of computer science and information technology, learners are empowered to develop critical thinking, problem-solving, and decision-making abilities crucial for independence in the digital age.

Moreover, our curriculum places a strong emphasis on online safety, ensuring that learners are equipped with the awareness and strategies needed to safeguard themselves and others in an ever-evolving digital landscape. By providing a comprehensive foundation and fostering a culture of responsible digital citizenship, our computing curriculum prepares learners to thrive in an increasingly interconnected world.

We assess learners' progress using data-driven systems, enabling tailored teaching, learning and support to meet individual needs. Assessment data also helps track the effectiveness of our maths program using B Squared. This informs next progressive steps.

Monitoring, Evaluation, and Review

We ensure equal and appropriate access to the Computing curriculum through ongoing monitoring, evaluation and review. The curriculum team leader for Understanding of the World conducts regular meetings with the Understanding of the World team, monitors learners learning and progress. The computing policy is reviewed yearly, and the action plan is updated accordingly.

Computing in EYFS

In the Early Years Foundation Stage (EYFS), computing education takes on an integrated approach, seamlessly woven into the fabric of understanding the world around them. Rather than being taught as a standalone subject, computing principles are embedded within various aspects of the curriculum, allowing learners to naturally develop fundamental skills that will serve as a strong foundation for accessing the formal computing curriculum in later stages of their school journey.

During this critical developmental stage, learners engage in continuous provision activities that provide rich opportunities for exploration and skill development. Through activities such as role play, small world play, and building/construction activities, learners are encouraged to interact with their environment in ways that naturally incorporate computing concepts.

For example, during role play activities, learners may use pretend technology devices such as toy phones or tablets, fostering early familiarity with digital tools and interfaces. Small world play scenarios may involve storytelling and imaginative play that introduce learners to concepts such as sequencing and cause-and-effect relationships, laying the groundwork for understanding basic programming principles.

Similarly, building and construction activities encourage spatial awareness, problem-solving, and creative thinking, all of which are essential skills for future success in computing. Whether it's building structures with blocks or assembling puzzles, learners are provided with opportunities to develop fine motor skills and logical reasoning abilities that are integral to computing.

By integrating computing concepts into everyday experiences and activities, learners in the EYFS not only develop foundational skills but also cultivate a natural curiosity and enthusiasm for exploring the digital world. This holistic approach ensures that learners are well-prepared to transition into formal computing education later in their school journey, equipped with the skills and mindset necessary for success in an increasingly technology-driven society.

Computing in Key Stage One

In Key Stage One, learners build upon the fundamental computing skills they developed during the Early Years Foundation Stage (EYFS) through a continuation of continuous provision activities. Role play, small world exploration, and building/construction activities remain integral components of their learning journey, providing rich opportunities for skill development and engagement.

Through role play, learners continue to immerse themselves in imaginative scenarios that foster the exploration of computing concepts. Whether pretending to be characters interacting with digital devices or engaging in storytelling activities that introduce basic sequencing and problem-solving, learners further develop their understanding of how technology interacts with the world around them.

In small world and building/construction activities, learners continue to refine their fine motor skills, spatial awareness, and logical thinking. These hands-on experiences not only support their physical development but also lay the groundwork for more complex computing concepts such as algorithms and programming.

Furthermore, Key Stage One introduces learners to a wider range of technology and early computing skills. They have the opportunity to explore different types of equipment, such as tablets, laptops, and simple robotics kits, allowing them to familiarise themselves with various digital tools and interfaces. Additionally, learners begin to engage in activities that involve using technology to make choices, such as selecting options in educational software or interactive games, further honing their digital literacy skills.

Importantly, Key Stage One also marks the beginning of explicit instruction in online safety. Learners are introduced to basic concepts of digital citizenship and responsible online behaviour, learning how to navigate the digital world safely and ethically. Through age-appropriate discussions and activities, learners develop an awareness of potential online risks and strategies for staying safe online.

By combining hands-on exploration, imaginative play, and early exposure to technology, Key Stage One provides learners with a solid foundation in computing that prepares them for continued growth and exploration in the digital realm.

Computing in Key Stage Two

In Key Stage 2, there's a divergence in the educational approach between learners following the engagement curriculum and those on the subject-specific curriculum.

For learners on the engagement curriculum, the focus remains on the continuous development of foundational cognitive skills and the gradual progression of prerequisite computing skills.

During Key Stage Two, our learners embark on an exciting journey into the realm of computing, where they delve into the workings of computing systems and data. They actively engage in tasks such as creating media, programming projects, conducting data collection exercises, and critically, learning about online safety.

At this stage, learners are provided with a rich array of opportunities to participate in hands-on sessions that utilise a diverse range of equipment. Whether it's experimenting with coding kits, exploring multimedia creation tools, or engaging with data collection devices, learners have access to various resources that cater to their individual learning needs and preferences.

Computing in Key Stage Three

In Key Stage 3, learners may still follow either a subject-specific curriculum or the engagement curriculum, depending on their individual learning needs and capabilities.

For learners following the subject-specific curriculum, computing continues to be taught as a standalone subject. It typically involves dedicated computing lesson once a week. These lessons are structured to cover a wide range of computing concepts and skills in line with the National Curriculum.

In Key Stage 3, we continue to build upon the strong foundation established in Key Stage 2, providing learners with a curriculum that further develops their skills and knowledge in various aspects of computing. Building upon their previous learning, learners deepen their understanding of computing systems and networks, exploring advanced concepts and applications.

Programming skills are honed through increasingly complex projects and challenges, allowing learners to expand their proficiency in coding languages and problem-solving strategies. Moreover, learners continue to develop their abilities in creating media, utilising advanced tools and techniques to produce multimedia content that is both engaging and impactful.

Data collection and analysis remain a focal point of the curriculum, with learners delving into more sophisticated methods and practices for gathering and interpreting data. Through hands-on activities and projects, learners gain practical experience in handling data sets and drawing meaningful insights from them.

Throughout Key Stage 3, our commitment to online safety remains steadfast. Learners continue to consolidate their understanding of digital safety practices, learning to navigate the evolving landscape of online risks and responsibilities with confidence and resilience.

Digital Skills in Key Stage Four and Five

In Key Stage 4 and Key Stage 5, learners embark on a journey dedicated to honing their Digital Skills, leveraging the solid foundation of computing knowledge acquired in earlier stages to prepare for independence beyond school. Throughout these stages, learners focus on refining and consolidating their abilities across a spectrum of crucial digital competencies.

Central to the curriculum is the cultivation of responsible online behaviour and digital citizenship. Learners delve deeper into online safety, equipping themselves with the knowledge and strategies necessary to navigate the digital landscape with confidence and resilience.

Communication skills are emphasised, with learners refining their ability to effectively express themselves and collaborate in various digital contexts. Whether it's through written communication, multimedia presentations, or online collaboration tools, learners develop the skills needed to communicate clearly and persuasively in a digital environment.

The creation and editing of digital content are also key components of the curriculum, with learners mastering tools and techniques for producing high-quality multimedia materials. Learners explore a range of creative outlets, developing their capacity to express ideas and concepts through digital media.

Transacting in the digital realm is another focus area, with learners gaining proficiency in conducting secure and responsible online transactions. Whether it's managing finances or purchasing goods and services, learners develop the skills needed to navigate digital transactions safely and effectively.

Additionally, learners focus on utilising devices and handling information efficiently and ethically. From understanding hardware and software components to managing digital files and data, learners develop the technical skills and knowledge necessary to leverage technology effectively in their personal and professional lives.

By immersing themselves in these essential Digital Skills, learners in Key Stage 4 and Key Stage 5 emerge equipped with the skills and knowledge needed to navigate the complexities of the digital world with confidence, independence, and responsibility.

Online Safety

Ensuring the safety of our learners in the digital world is a cornerstone of our educational approach at Cann Bridge School. Online safety is not just a standalone lesson—it's a pervasive thread woven throughout every aspect of a learner's journey.

As part of our commitment to fostering responsible digital citizenship, online safety is integrated into the taught curriculum across all key stages. Through age-appropriate lessons, discussions, and activities, learners develop the knowledge, skills, and attitudes necessary to navigate online environments safely and responsibly.

In addition to ongoing education, we recognise the importance of dedicated focus on online safety. That's why we organise an annual Online Safety Day, providing a focused opportunity for learners to engage in interactive workshops, discussions, and activities centred around online safety. This dedicated day reinforces key concepts, allows learners to ask questions, and provides them with practical strategies for staying safe online.

For comprehensive guidance on online safety practices and procedures, we encourage all stakeholders to refer to our Online Safety Policy. This policy outlines our school's approach to online safety, including measures for protecting learners, promoting responsible digital behaviour, and addressing concerns or incidents related to online safety.

Teach Computing

At Cann Bridge, we are dedicated to providing a comprehensive and progressive computing education for our Key Stage 2 and Key Stage 3 learners. To achieve this, we follow the Teach Computing scheme of work from the National Centre for Computing Education (NCCE). This structured scheme ensures our learners experience small, incremental progression steps, allowing them to build on their prior knowledge effectively.

A core component of our curriculum is online safety. Recognising its paramount importance, we integrate online safety education throughout every aspect of the computing curriculum. This approach ensures that our learners are consistently aware of the critical importance of staying safe online as they develop their computing skills.

Accreditation and Assessment

At Cann Bridge School, we use B Squared Assessment Frameworks to track pupil progress across the school in all subjects. Our assessment policy provides detailed information on our approach to tracking and evaluating learners' progress.

Using B Squared allows us to effectively monitor and assess learners' computing and digital skills development, identifying any gaps in their learning and fundamental skills. This tracking system informs our planning process, enabling teachers to deliver appropriate lessons and provide learners with opportunities for development and progression.

By regularly assessing learners' progress in computing and digital skills, we ensure that our teaching aligns with their individual needs and enables them to make continuous improvements. This approach supports a comprehensive and tailored computing programme that promotes the development of understanding, use and application of their knowledge.

Some learners in Key Stage 5 will be using their digital skills knowledge and understanding to work towards two units for the NOCN Employability Skills Award. These units are: Using ICT equipment in the workplace, and Using ICT skills in the workplace.

Staff Training and Continued Professional Development

Continual Professional Development (CPD) in computing for teachers is a crucial aspect of maintaining and enhancing the quality of computer education.

Keeping Current with Educational Trends: The field of education, including computer instruction, is constantly evolving. CPD ensures that teachers stay up-to-date with the latest teaching methods, technologies, and best practices.

Enhancing Teaching Skills: CPD programs can help teachers improve their instructional strategies, classroom management techniques, and communication skills, all of which are essential for effective computing teaching.

Adapting to Changing Curriculum: Curriculum standards and educational requirements may change over time. Regular CPD allows teachers to adapt their teaching methods to align with the latest curriculum and assessment standards.

Addressing Learner Needs: Teachers encounter a diverse range of learners, each with unique learning needs. CPD can provide tools and strategies to address the needs of different learners, including those who require additional support or enrichment.

Audit and Accountability: Annual audits of teachers' knowledge and understanding of computing, followed by structured CPD, ensure accountability and quality assurance in computing education. This helps in maintaining high standards and can identify areas where improvement is needed.

Improved Learner Outcomes: Teachers who engage in ongoing CPD tend to be more effective in the classroom, which can lead to improved learner performance and outcomes in computing.

Incorporating regular audits and structured CPD plans for teachers in computing is a proactive approach to ensure that educators are equipped with the knowledge and skills necessary to provide high-quality computing education. It's an investment in both the teachers' professional development and the success of their students.

CANN BRIDGE SCHOOL

Computing Rolling Programme

Year group	Termly Topic		
	Autumn	**Spring**	**Summer**
EYFS	**Exploring technology**	**Exploring technology**	**Exploring technology**
KS1 Year 1	**Cause and Effect** Pushing buttons to make things move/sound/light up	**Staying safe** - Keeping information private Who can help me	**Using a computer** - Turning on and off - Exploring games etc
KS1 Year 2	**Making things work** turning things on and off	**Making choices** Choosing songs/apps/colours on different devices	**Communicating** - Taking photos and video
KS2 Year 1	**Computing Systems and networks** Technology around us	**Creating Media** Digital Painting	**Programming** Moving a robot
KS2 Year 2	**Data and Information** Grouping data	**Creating Media** Digital writing	**Programming** Programming animations
KS2 Year 3	**Computing Systems and Networks** IT around us	**Creating Media** Digital Photography	**Programming** Robot algorithms

KS2 Year 4	**Data and Information** Pictograms		**Creating Media** Digital Music		**Programming** Programming Quizzes	
KS3 Year 1	**Computing Systems and Networks** Connecting computers	**Creating Media** Stop-frame animation	**Programming** Sequencing sounds	**Data and Information** Branching databases	**Creative Media** Desktop publishing	**Programming** Events and actions in programmes
KS3 Year 2	**Computing Systems and Networks** The Internet	**Creating Media** Audio production	**Programming** Repetition in shapes	**Data and Information** Data logging	**Creative Media** Photo editing	**Programming** Repetition in games
KS4 Year 1	**Using devices and handling information** - Know the main features and different uses of different devices	**Using devices and handling information** - Know what an application is and the main types	**Creating and editing** - Using application to enter, edit and format text	**Being safe and responsible online** - Staying safe and respecting others online	- **Communicating** - Compose and reply to online communications (text/email etc) -	**Transacting** - Understanding your personal details
KS4 Year 2	**Using devices and handling information** - Changing basic settings on a device and know when there is a problem	**Using devices and handling information** - Navigate online content to find information	**Creating and editing** - Using application to enter, edit and format graphics -	**Communicating** - Initiate and participate in video calls	**Being safe and responsible online** - Protecting personal information online - Using security features	**Transacting** - Completing and submitting forms online

KS4 Year 3	**Using devices and handling information** - Searching the internet for information, photos and videos)	**Using devices and handling information** - Using folders to read and store information, organise and retrieve	**Creating and editing** - Capturing digital media	**Communicating** - Understanding of digital footprint	**Being safe and responsible online** - Benefits of security software - Minimising physical stresses from using devices	**Transacting** - Completing online transactions
KS5 Year 1	**Using devices and handling information** - Know the main features and different uses of different devices	**Using devices and handling information** - Know what an application is and the main types	**Creating and editing** - Using application to enter, edit and format text	**Communicating** - Compose and reply to online communications (text/email etc)	**Being safe and responsible online** - Staying safe and respecting others online	**Transacting** - Understanding your personal details
KS5 Year 2	**Using devices and handling information** - Changing basic settings on a device and know when there is a problem	**Using devices and handling information** - Navigate online content to find information	**Creating and editing** - Using application to enter, edit and format graphics -	**Communicating** - Initiate and participate in video calls -	**Being safe and responsible online** - Protecting personal information online - Using security features	**Transacting** - Completing and submitting forms online
KS5 Year 3	**Using devices and handling information** Searching the internet for	**Using devices and handling information** Using folders to read and store	**Creating and editing** - Capturing digital media	**Communicating** Understanding of digital footprint	**Being safe and responsible online** - Benefits of security software	**Transacting** Completing online transactions

	information, photos and videos)	information, organise and retrieve			Minimising physical stresses from using devices	