Bevendean Primary School and Nursery

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A place for everyone to succeed and thrive

At Bevendean Primary School and Nursery, we are committed to providing our children with a curriculum that has a clear intention and impacts positively on developing them as a learner.

Curriculum statement for the teaching and learning of Computing

Intent	At Bevendean Primary School & Nursery, we believe a high-quality computing education equips all children, including disadvantaged children and children with SEND, with the skills, knowledge and creativity to help them understand the world that they live in and be able to be ambitious, successful young people. It is important to us that the children understand how to use ever-changing technology to express themselves, as tools for learning and as a means to achieve their personal goals. We recognise Computing and its' associated skills play an increasingly significant part in everyone's lives and we believe that children should develop as respectful, responsible and confident users of technology. Computing has strong links to a variety of other subjects such as mathematics and science, and therefore we believe that, as well as being taught discreetly, it is also integrated into all areas of learning, using a range of hardware, software and opportunities to apply computational thinking skills outside of computing lessons. At Bevendean, we recognise that pupils are entitled to quality software and hardware and a structured and progressive approach to the learning of the skills needed, to enable them to use them effectively. We also recognise the importance of responding to new developments in technology and aim to equip pupils with the confidence and capability to use a range of different devices to enhance their experiences. We strive to provide a relevant, progressive and enjoyable curriculum for all pupils. In EYFS, Computing is taught through the children learning about how technology is important to our World through play and investigation. We want our Computing curriculum to encourage our pupils to ask questions about how things work, how they are linked and why they are important.

	Knowledge and skills	E-Safety and Digital Citizenship	Being competent, confident and creative users
Underpinnned by..	Our computing curriculum uses the National Centre for Computing Education's computing taxonomy to ensure comprehensive coverage of the subject. ■ Algorithms — Be able to comprehend, design, create, and evaluate algorithms ■ Computer networks — Understand how networks can be used to retrieve and share information, and how they come with associated risks ■ Computer systems — Understand what a computer is, and how its constituent parts function together as a whole ■ Creating media — Select and create a range of media including text, images, sounds, and video ■ Data and information — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios ■ Design and development — Understand the activities involved in planning, creating, and evaluating computing artefacts ■ Effective use of tools — Use software tools to support computing work ■ Impact of technology — Understand how individuals, systems, and society as a whole interact with computer systems ■ Programming — Create software to allow computers to solve problems ■ Safety and security — Understand risks when using technology, and how to protect individuals and systems	A key part of our computing curriculum is ensuring that safety of our pupils is paramount. We take online safety very seriously and we aim to give children the necessary skills to keep themselves safe online. Children have a right to enjoy childhood online, to access safe online spaces and to benefit from all the opportunities that a connected world can bring them, appropriate to their age and stage. Children are encouraged to think critically, participate responsibly and take ownership of their digital lives.	Children are taught to understand that computing and technology now form an intrinsic part of our daily lives. We use our computing curriculum to enable children to learn about the world around us. It supports us to give our children a chance to apply knowledge from other areas e.g. Maths. We allow children to be creative and develop their own ideas autonomously through a range of projects. We work hard to develop an understanding that technology has changed our lives and that it is vital to the World's future.

Implementation	**How do we implement this?** Our scheme of work for Computing is adapted from the 'Teach Computing' Curriculum and covers all aspects of the National Curriculum. This scheme was chosen as it has been created by subject experts and based on the latest pedagogical research. It provides an innovative progression framework where computing content (concepts, knowledge, skills and objectives) has been organised into interconnected networks called learning graphs. The curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 3 strands: computer science, information technology and digital literacy, with the aims of the curriculum reflecting this distinction. The National Curriculum for computing aims to ensure all pupils: - Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer science) - Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Computer science) - Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information technology) are responsible, competent, confident and creative users of information and communication technology. (Digital literacy)

Supported by…	**Broad and Balanced Curriculum** Within the curriculum, we ensure that our children are exposed to a range of experiences, both in and out of the classroom. Our lessons build on skills, year on year and from Key Stage to Key Stage. We embed recapping of learning within our lessons so that our children can see the links in their learning. The units for Key Stages 1 and 2 are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme.	**Physical Computing** The Teach Computing Curriculum acknowledges that physical computing plays an important role in modern pedagogical approaches in computing, both as a tool to engage pupils and as a strategy to develop pupils' understanding in more creative ways. Additionally, physical computing supports and engages a diverse range of pupils in tangible and challenging tasks.	**Developing Vocabulary** Vocabulary and oracy is given high priority across the school and we support learners with the acquisition of key vocabulary. Key vocabulary is highlighted in the planning for each lesson and discussed and used repeatedly throughout a module to consolidate children's understanding.
	Challenging misconceptions Pupils can easily develop misconceptions about a concept, what it means, and how it can be applied. These misconceptions can undermine the students' understanding and their ability to grasp concepts in the future. Common misconceptions that students are likely to encounter are addressed in planning and prepared for ahead of time. Peer instruction can	**Effective modelling** Computing skills and knowledge are developed for learners through effective modelling. Techniques, such as worked examples, are used extensively. In programming specifically, teachers model the process of programming and debugging through live coding, where teachers write programs live with students. The teacher explains their thought processes, modelling how	**Hardware & Software** As part of a high-quality computing curriculum, children are exposed to a wide range of hardware including but not limited to: iPads, microphones, laptops, data-loggers, bee-bot programmable floor robots, video cameras, crumble controllers and Microbits. As well as hardware children develop their skills and confidence applying key computing concepts when using different software.

be used to challenge students and engage them in dialogue, which can uncover and address misconceptions. Misconceptions are highlighted and addressed throughout the Teach Computing Curriculum materials and misconceptions are identified in teacher assessment are challenged using interventions or scaffolding in future lessons.	to construct the program, making mistakes, and demonstrating what to do when things go wrong. Taking this approach can help demonstrate the thought processes and approaches of an "expert", which pupils can apply in their own programming practice.	

Impact	**How do we measure this?** Our approach to the curriculum results in a fun, engaging, and high-quality computing education. Teachers are able to revisit misconceptions and knowledge gaps in computing when teaching other curriculum areas and in computing lessons via the spiral curriculum. This supports varied paces of learning and ensures all pupils make good progress. Children record their work in their computing book and digital files are stored on the school's server. At the end of each lesson teachers make a judgement on the attainment of each child and this is recorded on the school's foundation assessment pro-forma. Much of the subject-specific knowledge developed in our computing lessons equip pupils with experiences, which will benefit them in secondary school, further education and future workplaces. From research methods, use of presentation and creative tools and critical thinking, computing at Our school gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives. In addition to effective pupil progress, the use of the Teach Computing curriculum will result in an increase in teacher's subject knowledge and confidence when delivering a high-quality computing education.	
Measured by….	Pupil Voice	Evidence in Knowledge and Skills
	We use pupil voice regularly to identify a range of information: levels of enjoyment, retention of information, monitoring of teaching & learning and experiences that they have had. Our children will talk confidently about their learning, their lessons and show an interest in this.	Our children will be able to share their knowledge and skills in each lesson, through recapping of learning in lessons and applying their knowledge to new varied challenges; through their work in their books, which will show support and challenge if applicable; be able to verbally explain their understanding, which will include the vocabulary that has been developed; and build on learning from previous years to create confident learners. All of our learners will be able to show their understanding of the computing curriculum throughout the lessons, which will be assessed by their class teacher against each lesson's learning objective. These assessments will be part of the child's school journey to enable all learning to be built on and developed.