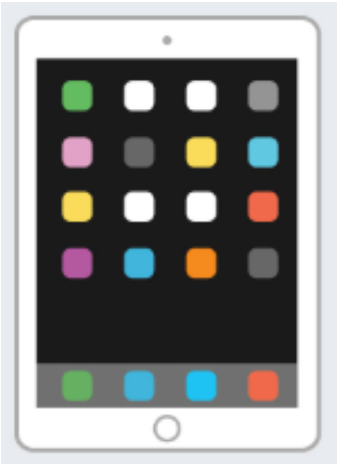
How Computing is taught at Swindon Village Primary School.



Intent, Implementation and Impact

Computing at Swindon Village Primary School

Curriculum Intent:

Swindon Village has a Computing curriculum that allows all children to gain knowledge and understanding of the technological world that surrounds them. This curriculum is embedded with the four outlined areas stated by the National Curriculum and enriched with key concepts that will help them integrate into a society growingly driven by technology.

Our curriculum inspires pupils to explore a range of computing concepts and use this to explore their own computational thinking and creativity. They will see themselves as a computer scientist and use technology as a tool to overcome a range of problems.

As a school, we will offer a range of opportunities for children to investigate a plethora of different technology-based problems and provide the tools for those problems to be solved. In a safe, stimulating environment, pupils will use an exciting range of technology types for exploratory-based learning, data handling, presenting and problem-solving tasks. Pupils will not only use technology but also discuss and highlight the advantages and disadvantages of an ever-growing virtual world.

Children's skills will develop in line with a clear skills progression. This document enables the children to develop new skills year on year and covers the four aims outlined in the National Curriculum.

The National Curriculum Aims are, pupils:

- *can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.*
- *can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.*
- *can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.*
- *are responsible, competent, confident and creative users of information and communication technology.*

With these aims in mind, our curriculum is based on Key Stage milestones as well as the National Curriculum expectations. These expectations are:

EYFS

Pupils will be able to identify technology that is used both inside and outside a school setting. They will be able to use a range of simple technology within the school provision to grow in confidence.

KS1

Pupils will understand what algorithms are, how they are implemented on digital devices and how technology creates an output when these algorithms are clear and concise. Children will understand how to debug algorithms that are not working and predicts the outcome of these with logical reasoning.

Pupils will use technology purposefully to create, organise, store and retrieve digital content as well as recognise how technology has uses both in and outside a school environment.

Finally, pupils will have a clear understanding of safety on technology. They will be able to identify why we keep personal information safe; identify where to go for support should they have concerns and what content is appropriate for them whilst using technology.

KS2

Pupils will understand what algorithms are and design their own to accomplish specific goals (including controlling or simulating physical systems). Using their understanding of debugging, pupils will be able to decompose problems into smaller steps and identify why some algorithms may not work. Using logical thinking, pupils will then solve issues and correct those algorithms.

Pupils will understand how computing networks work such as the internet, how we can harness this for ourselves and how they can offer communication and collaboration opportunities.

Pupils will select, combine and use a range of software to design, create and present work – with a specific goal in mind. This can include: collecting, analysing, evaluating and presenting information.

Pupils will use technology safely, respectfully and responsibly and recognise acceptable/unacceptable behavior as well as ways to seek support for concerns.

Curriculum Implementation

Throughout their time at SVPS, children will be exposed to a range of exciting and inspiring computing concepts supported by high-quality technology. They will have learned and developed computational skills in accordance with the SVPS Computing curriculum and skills progression. This will allow pupils to understand fully how to use a range of technology safely and appropriately and ensure high-quality learning for all as they progress through the school.

- Children will get an opportunity to share their learning at the SVPS Easter Technology Fair – 'The Techno Expo'.
- Computing is taught throughout the year, with all year groups looking at E-Safety in Autumn, Coding in Spring and Creation in Summer.

Teachers are expected to:

- Plan engaging lessons that build on prior learning. They need to include the teaching of specific skills and the implementation of them in a task.
- Provide opportunities for pupils to use a range of hardware and software.
- Create an environment where children are confident to use technology and express creativity.
- Seek advice/training/CPD from colleagues to ensure that subject knowledge is satisfactory for the teaching of computing concepts.
- Ensure that evidence of Computing is provided for KAT leaders.
- KAT team will carry out regular monitoring to include scrutiny of evidence and interviews of pupils.

How we will support staff:

- CPD opportunities shared with staff.
- Use of staff meeting time to upskill staff.
- Use of digital leaders to support lessons.
- Workshops/small group support sessions implemented when required.

SVPS ensures that all children can access learning in Computing by:

- Providing opportunities for pupils to explore the technology that they are using.
- AfL strategies used in the classroom to assess children's learning and adapt teaching/task where necessary.
- Providing additional activities for those that need challenging.

SEND or EAL children are supported at SVPS by:

- Seating children next to a peer confident with the technology used.
- Providing visual prompts. Use of widgit for key vocabulary.
- Adjusting teaching to meet the needs of the children.
- Consideration of the software/hardware being used and adjusting accordingly.

Curriculum Impact

All children at SVPS will be able to speak confidently about their Computing learning, skills and knowledge. They will have a strong depth of knowledge about the various technology they have used and will be able to apply this understanding to future learning in a range of subjects.

Children engaged in computational learning are:

- Engaged, enthusiastic learners.
- Able to ask and answer questions about their task.
- Have a good knowledge of e-safety.
- Have a good understanding of technology and how it can help us overcome a range of problems.
- Use technology safely.
- Actively showcase their learning and teach others how to achieve the same outcome.
- Resilience with technology.
- Positive attitude towards computing lessons.

At SVPS we know our children are doing well by:

- Staff are teaching lessons that are well planned and based up on our Computing curriculum.
- Verbal feedback.
- Photographic evidence.
- Celebration of pupils work on our own platforms e.g. Facebook page
- Pupil Voice.
- Discussions with other staff and our digital leaders.
- Children's skills are progressing each year as they continue through SVPS.

Children at SVPS will become inquisitive, reflective learners who are confident using technology to overcome problems. They will be able to share their computational knowledge and demonstrate their skills. In an ever-growing digital world, confident computer scientists that understand technology is becoming essential. We want to send our children into the world not afraid of technology but embracing the opportunities that it brings to make the world a more cohesive place.

Cultural Capital

Pupils at SVPS will have the opportunity to experience using a range of different technology during their time here. The coding robots (BeeBots, BlueBots and Sphero) are an engaging way to learn and provide the students with a memorable experience.

In year 4, students will take part in an interactive experience called 'In The Net'. This trip focuses on internet safety and is an invaluable opportunity to learn outside of the classroom.