Computing Curriculum

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.
National Curriculum 2014

Intent

Following the National curriculum, we aim for children to be able to:
- Understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Be responsible, competent, confident and creative users of information and communication technology.

Implementation

Staff are supported in computing through the Kapow scheme of learning and are encouraged to plan around this. This scheme ensures that all staff are following a coherently planned sequence, which is tailored to show a progression of skills in each area of computing across the whole school. Staff are asked to alter the Kapow scheme of learning to match the needs of the children, meaning that we can ensure the correct skills are taught and the lesson is accessible to all children. Class teachers are responsible for teaching computing, although there will be times when professionals may be involved in the teaching of a specific topic e.g. we often invite someone in during internet safety week. We take every opportunity to develop links with outside agencies and experts, including other schools, in order to enrich our computing provisions.

Impact

Our approach to the curriculum results in a fun, engaging, and high-quality computing education. The quality of children's learning will be evident on Seesaw, a digital platform where pupils can share and evaluate their own work, as well as

that of their peers. Evidence such as this will be used to feed into teachers' future planning, and as a topic-based approach continues to be developed, teachers are able to revisit misconceptions and knowledge gaps in computing when teaching other curriculum areas. This supports varied paces of learning and ensures all pupils make good progress.

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 St John Vianney gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives.

Plans for the future

- CPD
- New and up to date technology
- Accessible technology and apps for all children
- Internet for all children at home
- Homework to continue online
- Courses and workshops for parents to join