

ICT/Computing Education Curriculum Statement

Intent

We at Leopold aim to prepare our children for a world that is changing rapidly through the use of technology. In line with the 2014 National Curriculum for Computing, our aim is to provide a high-quality computing education which equips children to use computational thinking and creativity to understand and change the world. The curriculum will teach children key knowledge about how computers and computer systems work, and how they are designed and programmed. Learners will have the opportunity to gain an understanding of computational systems of all kinds, whether or not they include computers.

Our computing curriculum is designed to enable our students to understand 'What is computing?' We aim to develop their thinking further to understand our world and the increasing part that technology has in shaping it. Firstly, we ensure our pupils are able to use technology safely, respectfully and responsibly and understand how computer networks enable devices to communicate. They will be able to use and combine a variety of software to design and create content for a given audience. This will include collecting, analysing and presenting data, as well as designing, writing and debugging programs that control or simulate virtual events.

The curriculum design has links with English, Mathematics, Science, Topic, R.E, PSHE and Art and Design & Technology. By the time they leave Leopold, children will have gained key knowledge and skills in the three main areas of the computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond.

Implementation

Our Computing curriculum is comprised of three aspects: Digital Literacy, Computational Thinking and IT in the World. Computing skills are taught both discretely and cross-curricularly, supporting other areas of learning across the school. In Reception and Key Stage 1, children are taught to use equipment and software confidently and purposefully, to communicate and handle information and to support their problem solving, recording and expressive skills. In Key Stage 2, our children extend their use of computing that they use for communication, investigation and programming and work to understand how to communicate safely. Our planned curriculum for digital literacy that includes online safety is broad in covering a range of issues including understanding current issues such as 'fake news' and 'body image'.

At Leopold, computing is taught using a blocked curriculum approach. This ensures children are able to develop depth in their knowledge and skills over the duration of each of their computing topics. Teachers use the 'Purple Mash' computing scheme. An online resource for the planning of their computing lessons, which are often richly linked to engaging contexts in other subjects and topics. On each site, we have a computing suite and iPads to ensure that all year groups have the opportunity to use a range of devices and programs for many purposes across the wider curriculum, as well as in discrete computing lessons. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught.

The implementation of the curriculum also ensures a balanced coverage of computer science, information technology and digital literacy. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in depth, with more complex skills being taught, thus ensuring that learning is built upon. For example, children in Key Stage 1 learn what algorithms are, which leads them to the design stage of programming in Key Stage 2, where they design, write and debug programs, explaining the thinking behind their algorithms.

(This part is something I need to review using the current school computing impact)

Impact

Computing has a high profile at our school. Our children are confident using a wide range of hardware and software, and are diligent learners who value online safety and respect when communicating with one another.

(Future plan/intention)

Our team of young 'Digital Leaders' are prominent and proficient. These children are responsible for supporting staff and children in delivering excellent Computing sessions. They will be further developed by completing the Childnet Digital Leaders Programme <https://www.childnet.com/our-projects/childnet-digital-leaders-programme> over the next 12 months.

There were no reported online safety incidents in the past 18 months as a result of strong and consistent online safety procedures. If you were to walk into Computing lessons at Leopold you would see:

- Proficient users of technology who are able to work both independently and collaboratively.
- Computing hardware and software being utilised to enhance the learning outcomes of our children, across the curriculum.
- Clear progression in technical skills.
- A learning buzz as children engage in programming, instruct floor robots, prepare online safety presentations etc.
- Confident and supportive Digital Leaders who are able to assist children and staff in delivering high quality Computing sessions.

Our approach to the curriculum results in a fun, engaging, and high-quality computing education. The quality of children's learning is 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 is 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 Leopold gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives.

Pupil Voice...

https://web.seesaw.me/remote-learning?utm_medium=banner&utm_source=homepage&utm_campaign=remoteteaching

<https://swgfl.org.uk/products/360-degree-safe/>

<https://www.childnet.com/our-projects/childnet-digital-leaders-programme>