

All Saints CE Primary School

Computing and ICT Policy

Vision for Computing at All Saints:

At All Saints School, we aim to provide an inclusive, values-based computing curriculum, enabling our children to achieve their highest potential in digital literacy, information technology and computer science. It is essential that all pupils gain the confidence and ability that they need in this subject, to prepare them for the challenge of a rapidly developing and changing technological world.

Statement of Intent

At All Saints CE (Aided) Primary School, we want pupils to be MASTERS of technology and not slaves to it. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education.

Building knowledge in this subject will allow pupils to effectively demonstrate their learning through creative use of technology. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

Our aims are:

Computer Science

- To enable children to become confident coders on a range of devices.
- To create opportunities for collaborative and independent learning.
- To develop children's understanding of technology and how it is constantly evolving.

Digital Literacy

- To enable a safe computing environment through appropriate computing behaviours.
- To provide opportunities for children to explore a range of digital devices.
- To promote pupils' spiritual, moral, social and cultural development.

Information Technology

- To develop ICT (Information Communication Technology) as a cross-curricular tool for learning and progression.
- To promote learning through the development of thinking skills.
- To enable children to understand and appreciate their place in the modern world.

Implementation

At All Saints CE (Aided) Primary School, knowledge, understanding and skills in computing and ICT are built upon and developed in each year group, from Nursery to Year 6. Computing is taught as a single subject, whilst seeking cross-curricular opportunities in other subject areas. Within each year group, computing skills are learnt through different strands, such as programming, coding and controlling devices; digital exploration; communicating and collaborating; multimedia; digital imagery; music and sound, and data handling. To embed and progress these skills, the learning focuses on a small proportion of these strands over a half term. Where possible, we use the Wokingham Schemes of Work and the Purple Mash Computing Scheme to provide relevant learning opportunities, in line with the National Curriculum.

To maintain safe and appropriate use of electronically connected devices, a formal e-safety lesson is taught at the start of each half term, with the SMART rules shared to empower children in the positive use of these technologies.

Roles and responsibilities

The head teacher, in consultation with the computing subject leader and staff will:

- Determine the ways in which computing and ICT supports, enriches and extends the curriculum.
- Decide on the provision and allocation of resources.
- Ensure that computing and ICT is used in a way that achieves the aims and objectives of the school.

The computing subject leader is responsible for overseeing the planning and delivery of computing through:

- Facilitating the use of computing across the curriculum in collaboration with all subject leaders.
- Providing or organising training to keep staff skills and knowledge up to date.
- Keeping up to date with the latest developments in computing teaching and learning, disseminating relevant information to colleagues.
- Advising colleagues about effective teaching strategies, managing equipment and purchasing resources.
- Monitoring and supporting the planning, learning and assessment of computing for all children, reporting to the head teacher and governors.
- Collaboration with individual teachers to ensure all National Curriculum statutory requirements are being met with regard to the use of ICT within curriculum subjects.

Whole school coordination and support is essential to the development of computing capability. However, it is the responsibility of each individual teacher to plan and teach appropriate computing activities and assist the leader in the monitoring and recording of pupil progress.

The Curriculum

At All Saints CE (Aided) Primary School, knowledge, understanding and skills in computing and ICT are built upon and developed in each year group, from Nursery to Year 6. We use the Purple Mash Computing Scheme to provide relevant learning opportunities, in line with the National Curriculum.

The Foundation Stage (Reception)

In the Reception year, children will:

- Know how to operate simple equipment, e.g. turn on a CD player and use a remote control.
- Show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- Know that information can be retrieved from computers.
- Complete a simple program on a computer.
- Use ICT hardware to interact with age-appropriate computer software.
- Recognise that a range of technology is used in places such as homes and schools.
- Select and use technology for particular purposes.

Key Stage 1

Throughout years 1 and 2, children will:

- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs,
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content,
- Recognise common, real-life uses of ICT beyond school,
- Recognise some of the impacts of good choices made online versus the risks and consequences of poor choices,
- Use technology safely and respectfully, keeping personal information private and identifying where to go to for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2

Throughout years 3, 4, 5 and 6, children will:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems and solving problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand computer networks, including the internet, how they can provide multiple services, such as the worldwide web, and the opportunities they offer for communication and collaboration.

- Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Planning

In order to develop the Computing and ICT capability and understanding of each child, we will provide through our planning:

- Computing through all three strands taught within the classroom.
- Continuity throughout the school to ensure that experience and skills are developed in a cohesive and consistent way.
- Access to computers, laptops, ipads and cameras within class or in designated communal areas.
- Experience of a variety of well-planned, structured and progressive activities.
- Experience cross-curricular links to widen children's knowledge of the capability of computing, including safe use of the Internet and other digital equipment.
- Opportunities for children to recognize the value of computing and ICT in their everyday lives and their future working life as active participants in a digital world. By doing this we will fulfil the requirements of the National Curriculum.

Progression and Continuity

At All Saints CE Primary School we consider children's prior learning when planning activities for learning in computing. To meet the needs of every child, we scaffold tasks to engage and challenge children of all abilities and their needs, developing and applying their skills, knowledge and understanding. Individual learners are able to progress with the effective acquisition of concepts, knowledge and skills at the rate most appropriate to their ability and stage of development.

Early Years Foundation Stage

Technology in the Early Years is not a stand-alone subject. It is embedded across the curriculum as part of the new reforms with in-school and at home learning opportunities. We provided a range of day-to-day technology in our continuous provision including: sound buttons, interactive whiteboard, tablets and digital cameras.

A number of statements from the EYFS 2020 Development Matters are prerequisite skills for computing within the national curriculum. Below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for computing:

- Personal, Social and Emotional Development
- Physical Development
- Understanding the World
- Expressive Arts and Design

Key Stage 1 & 2

Computing is planned by each class teacher in accordance with the National Curriculum. Medium term plans are drawn up by class teachers at the beginning of each half term. They ensure an

appropriate balance and distribution of work across each half term with ample opportunity to revisit and extend children's learning. For each computing lesson, these plans identify learning objectives, resources required, the nature of learning tasks and how to differentiate these tasks to meet the needs of all children. The subject leader monitors and reviews these plans regularly.

Curriculum Links

Computing has deep links with mathematics, science and design technology and provides insights into both natural and artificial systems. Effective teaching of computing involves making connections across other curriculum areas and through continuous provision in the EYFS, Key Stage 1 and Key Stage 2. E-safety is also an important part of PSHE.

Impact

Assessment, Recording and Reporting

Learners are formatively assessed in the computing curriculum by teachers during lessons, through observation, questioning and analysis of work. It is the responsibility of the class teacher to assess the progress of individual learners; children are assessed termly against Target Tracker statements for each lesson and/or unit of work. As part of this process, teachers may feel the need to record each child's progress, determining what each child has learned and adapting what should be learnt next, ensuring planning is effective and responding to the needs of all children.

Wider Community Links

Within the wider community, All Saints CE Primary School supports the use of technology through information on our school website, including our newsletters and policies. In addition, children have access to a wide variety of online resources through 2Simple's Purple Mash and Times Table Rockstars.

Conclusion

During a child's learning journey at All Saints CE (Aided) Primary School, they learn to be confident users of technology and are able to use it to accomplish a wide variety of goals, both at home and in school. Children will have a secure and comprehensive knowledge of the implications of technology and digital systems. This is important in a society where technologies and trends are rapidly evolving. Finally, children will be able to apply the British values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.