Computing

Intent

At Sacred Heart Primary School, we believe that every child should have the right to a curriculum that is exciting, broad, relevant and challenging, supporting pupils in achieving to the very best of their abilities and equipping them with the skills and knowledge that they need to use technology competently throughout their lives.

We recognise the pivotal role that technology plays in our everyday lives and therefore aim to teach our pupils how to use it responsibly and safely, to become Internet Sharp, Alert, Secure, Kind and Brave.

We want our pupils to understand the choices they have with technology and we utilise our own online platforms to model positive use, as well as to develop links between home and school.

We believe that technology can provide enhanced collaborative learning opportunities and better engagement of pupils, provide easier access to rich content, support understanding of new concepts and help to support the needs of all our pupils. We have therefore developed a broad curriculum, which encompasses Computer Science, Information Technology and Digital Literacy, to inspire all pupils to use technology imaginatively and creatively and to foster a 'Yes I Can' attitude in all of our children.

We aim to give children access to a variety of high-quality hardware, software and unplugged resources, demonstrating that skills such as logical reasoning, reflective learning and computational thinking can be applied beyond the Computing curriculum.

Safeguarding: Online Safety

- Online safety has a high profile at Sacred Heart Primary School. We ensure this profile is maintained and that pupil needs are met by the following:
- A relevant up-to-date online safety curriculum which is progressive from Early Years to the end of Year 6.
- A curriculum that is threaded throughout other curriculums and embedded in the day-to-day lives of our pupils.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the pupils.
- Pupil talk sessions steer changes and inform training needs.
- Through our home/school links and communication channels, parents are kept up to date with relevant online safety matters, policies and agreements. They know who to contact at school if they have concerns.

- Pupils, staff and parents have Acceptable Use Policies and copies are freely available.
- Our online safety policy (part of our safeguarding policy) clearly states how monitoring of online safety is undertaken and how any incidents/infringements are dealt with.
- Filtering and monitoring systems for all of our online access.
- Data policies which stipulate how we keep confidential information secure.

Implementation

As a school, we aim to deliver Computing in a way that emphasises strong cross-curricular links and ensures a clear skills progression from EYFS to Year 6. We have implemented the NCCE Teach Computing curriculum across school, with each year group covering 6 units of work each year. We have created a comprehensive progression document for staff, which allows children to revisit and then build upon skills and knowledge taught in previous years. This ensures full coverage of the Computing curriculum and corresponds with our assessment statements so that staff and pupils can identify next steps in the learning journey.

Digital Literacy is taught discretely on a half-termly basis, following the Project Evolve and Google Internet Legends programmes, however online safety is also threaded through everything that we do. The curriculum is updated regularly and staff respond to online safety issues quickly to ensure that teaching is relevant and meets the needs of our pupils.

Computer Science and Information Technology are taught in weekly timetabled Computing lessons. Children have their own Computing books, which they use for 'unplugged' activities where they practise and develop skills such as creating algorithms, logical reasoning and debugging. They also use their Computing books to reflect upon their learning, explaining key vocabulary and evaluating their programs/digital content to identify next steps. Computing objectives are also covered through other areas of the curriculum. For example, children in Key Stage 1 may use instruction writing tasks as an introduction to algorithms, or pupils may apply what they know about using search engines effectively to find information for other subjects.

Early Years

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts, including scenarios based on experiences in the real world. Children are given opportunities to develop perseverance, motivation, creativity and critical thinking skills through a range of resources, including software, programmable toys and unplugged activities.

High-quality interactions between pupils and a supportive adult encourage sustained shared thinking, where children co-construct meanings and interpretations. Adults are listening and extending children's thoughts and knowledge. Children are given opportunities to work independently and with their peers to develop the core approaches of computational thinking; tinkering, creating, debugging, persevering and collaborating.

Pupils gain confidence, control and language skills through opportunities to 'paint' or 'write' on the interactive board, create mazes using construction materials and use programmable toys, such as the Code-a-Pillar or Bee-bots. Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language. Outdoor learning is an important aspect of our curriculum, supported by open-ended resources which allow children to practise and apply those core approaches of computational thinking.

Key Stage 1 Outcomes

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.
- Write and test simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Key Stage 2 Outcomes

- Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works 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 world wide web; and the opportunities they offer for communication and collaboration.
- Describe how Internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Inclusion

At Sacred Heart Primary School, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and those with a Special Educational Need. We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind, we ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Impact

We aim to deliver a curriculum that children both enjoy and value and therefore make the 'why' behind their learning explicit. Children are regularly asked to reflect on their prior learning to ensure the skills and knowledge they need to move forward are fully embedded. Regular 'pupil talk' conversations give children the opportunity to articulate their learning and their opinions about the Computing curriculum in school, sharing the aspects they are most enthusiastic about and informing areas for development.

Pupil attainment is assessed against agreed statements, which ensure a progression of skills and knowledge through the three main strands of Computing; Computer Science, Information Technology and Digital Literacy. Staff use assessment to inform planning for supporting and challenging all children. Pupils are encouraged to be involved in formative assessment, which is undertaken in every Computing lesson.

'Children have the right to enjoy childhood online, to access safe online spaces, and to benefit from all the opportunities that a connected world can bring to them, appropriate to their age and stage' – Education for a Connected World (2020).

At Sacred Heart we believe that our Computing curriculum equips pupils with the skills, strategies and knowledge they need to use technology imaginatively and creatively, reaping the benefits of the online world, while being able to minimize risk to themselves or others.

Policy updated: September 2021
Subject Leader: Miss J. Burns