Computing – Subject Leader Charlotte Kirkham

"Computers themselves, and software yet to be developed, will revolutionise the way we learn." - Steve Jobs

Intent

Computing at St Wilfrid's Catholic Primary School intends to develop 'thinkers of the future' through a modern, ambitious and relevant education in Computing. Technology is everywhere and will play a pivotal part in our pupils' 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 to equip pupils to use computational thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a means to drive their generation forward into the future. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We want our pupils to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online. 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 and 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.

Implementation

The curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 3 strands: computer science, information technology and digital literacy, with the aims of the curriculum reflecting this distinction.

The national curriculum for computing aims to ensure all pupils:

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

Our scheme of work for Computing is adapted from the NCCE Teach Computing curriculum which covers all areas of the National Curriculum ensuring progression from Year 1 to Year 6. Teachers follow a clear progression of skills which ensure all pupils are challenged in line with their year group expectations and are given the

opportunity to build on their prior knowledge. To support teaching, staff access support from subject leaders, Teach Computing courses and Hyett Education workshops.

From Years 1-5 children begin the year with 'Basic Skills' lessons where they learn basic computer skills such as switching on/off, logging on/off, opening, saving and typing skills. We hope that children become efficient computer users by the end of KS2.

Children complete Computing units half-termly. Computing lessons are taught either weekly or in block sessions, depending on what suits the particular class and their needs, this allows children to focus on developing their knowledge and skills and teachers to assess children's 'sticky knowledge'.

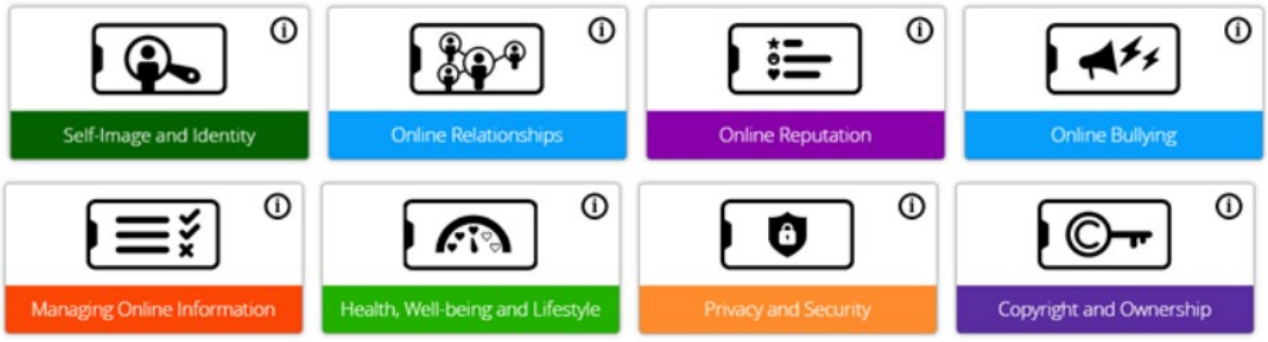
In our reception class our children access technology daily through ipads, beebots and the interactive whiteboard, beginning their journey in becoming digital users of the world.

Online Safety and Digital Literacy

A key part of implementing our computing curriculum was to ensure that safety of our pupils is paramount. We take online safety very seriously and we aim to give children the necessary skills to keep themselves safe online. Children have a right to enjoy childhood online, to access safe online spaces and to benefit from all the opportunities that a connected world can bring them, appropriate to their age and stage.

Children build online resilience through the use of the 'Project Evolve – Education for a Connected World' framework. The framework aims to support and broaden the provision of online safety education, so that it is empowering, builds resilience and effects positive culture change. The objectives promote the development of safe and appropriate long-term behaviours, and support educators in shaping the culture within their setting and beyond.

At St Wilfrid's we teach Online Safety and Digital Literacy when necessary and appropriate, adapting to the needs of the children in our care. We recognise the importance of tackling issues as they arise and are therefore flexible with our Online Safety curriculum. Children also begin each half term with a lesson focused on an area. Digital literacy is embedded in all subjects and referred to on a daily basis and when necessary to enhance and support the learning of other curriculum areas. We also have a good relationship with our PCSO who regularly comes into school for talks with parents and children. She will also come into school if we have a specific online safety incident to talk to UKS2 children.



Within each year group topics include:

Self Image and Identity - This strand explores the differences between online and offline identity beginning with self-awareness, shaping online identities and media influence in propagating stereotypes. It identifies effective routes for reporting and support and explores the impact of online technologies on self-image and behaviour.

Online Relationships - This strand explores how technology shapes communication styles and identifies strategies for positive relationships in online communities. It offers opportunities to discuss relationships, respecting, giving and denying consent and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.

Online Reputation - This strand explores the concept of reputation and how others may use online information to make judgements. It offers opportunities to develop strategies to manage personal digital content effectively and capitalise on technology's capacity to create effective positive profiles.

Online Bullying - This strand explores bullying and other online aggression and how technology impacts those issues. It offers strategies for effective reporting and intervention and considers how bullying and other aggressive behaviour relates to legislation.

Managing Online information - This strand explores how online information is found, viewed and interpreted. It offers strategies for effective searching, critical evaluation of data, the recognition of risks and the management of online threats and challenges. It explores how online threats can pose risks to our physical safety as well as online safety. It also covers learning relevant to ethical publishing.

Health Well-being and Lifestyle - This strand explores the impact that technology has on health, well-being and lifestyle e.g. mood, sleep, body health and relationships. It also includes understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.

Privacy and Security - This strand explores how personal online information can be used, stored, processed and shared. It offers both behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.

Copyright and Ownership - This strand explores the concept of ownership of online content. It explores strategies for protecting personal content and crediting the rights of others as well as addressing potential consequences of illegal access, download and distribution.

To help with our implementation of the computing curriculum we have a variety of hardware available to all teachers, including:

- A class set of laptops
- A class set of iPad's

Each classroom is provided with:

- Interactive Whiteboard
- A class iPad
- A camera

Impact

At St Wilfrid's Catholic Primary School staff ensure that skills build on those that have been attained in previous years to consolidate and build on them as they move through school. We encourage our children to enjoy and value the curriculum we deliver.

We will constantly ask the WHY behind their learning and not just the HOW encouraging our pupils to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. We truly believe that finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond and we encourage regular discussions between staff and pupils to best embed and understand this.

The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum. We currently showcase children's work through a learning book, which each year group carry with them through the school from EYFS – Y6. We also look for evidence through reviewing pupil's knowledge and skills digitally through observing learning regularly. Progress of our computing curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes.