



Subject: Computing

Rationale

We want our children to love computing. We want them to have no limits to what their ambitions are and grow up wanting to be software engineers, video game designers, web developers or IT consultants. The computing curriculum has been carefully crafted so that our children develop their digital capital. We want our children to remember their computing lessons in our school, to cherish these memories and embrace the opportunities they are presented with! At our school we firmly believe that to make the most of the internet, children need to make smart decisions when online. The 'E-Cadets' programme has helped to empower our children to use the internet safely and wisely and to be confident explorers of the online world. Enrolling in this programme is just another example of how we embed important safeguarding messages into our curriculum. Keeping our children safe is our number one priority and bringing computing alive is important at St Vincent de Paul Catholic Primary School.

Characteristics of a Well-rounded Computer Scientist (Curriculum Aims)

Computing subject specific characteristics, which we expect the children to be able to demonstrate:

- The ability to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- The ability to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Competence in applying computing skills for a variety of practical and inventive purposes, including the application of ideas within other subjects
- The ability to communicate ideas creatively using ICT applications and devices throughout the curriculum
- The ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity
- An understanding of the connected nature of devices

Curriculum Intent

At our school we want our children to be MASTERS of technology and not slaves to it. Technology is everywhere and will play a pivotal part in their lives. Therefore, we want to model and educate our children on how to use technology positively, responsibly and safely. We want our children to be creators not consumers and our broad curriculum, encompassing computer science, information technology and digital literacy, reflects this. We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our children. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our children become skilful computer scientists. Through thorough planning, we embed computing across the whole curriculum to make learning creative and accessible.

We endeavour to enrich our pupil's time in our school with memorable, unforgettable experiences and provide opportunities, which are normally out of reach – this piques their interests and passions. We firmly believe that it is not just about what happens in the classroom, it is about the added value we offer to really inspire our children.

Curriculum Implementation

Our computing curriculum has been built to ensure progression and repetition in terms of embedding key learning, knowledge and skills. We focus our teaching on three main themes of computing: computer science, information technology, and digital literacy including online safety. These are revisited year on year where pupils progressively build their skills and knowledge, deepening learning and providing further challenge to them. We use 'Mr Andrews Online' computing curriculum as a basis for planning and delivering high quality computing sessions. Our children create a variety of exciting projects that bring together their skills developed in each of the three main computing themes. Teachers use the 'Mr Andrews Online' projects and learning objectives as a starting point for ensuring the delivery of our computing curriculum. However, they are encouraged to make links across the wider curriculum and tailor the themes of their projects to enhance learning and engagement in other subjects.

In addition to this, we provide specialist computing teaching to pupils in each class once a week for a full half term every year. Our partnership with computing experts, MGL, enables our children access to technologies that would usually be beyond the reach of the standard school curriculum. As a result, children are able to learn and develop their computing skills through the exploration of specialised robotics equipment, virtual and augmented reality kits and a whole host of other exciting technologies. These additional computer science sessions are delivered by our specialist computing teacher alongside our class teachers to ensure high quality outcomes for both our children and for staff CPD. We encourage staff to teach a weekly computing lesson. This was a notable change after the computing audit. This helps to ensure sufficient time is allocated to computing and that subject matter can be revisited frequently. We believe that by crafting our curriculum this way, we improve the potential for our children to retain what they have been taught, to alter their long-term memory and thus improve the rates of progress they make.

Curriculum Impact

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?' We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. 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. 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 also look for evidence through reviewing pupils' knowledge and skills digitally through tools like Google Drive and Seesaw in addition to class learning walks and pupil voice surveys/interviews. Progress of our computing curriculum is demonstrated through our whole school 'Balance' assessment system outcomes and the record of coverage in the process of achieving these outcomes.