Computing – Intent Statement

Computing at Townhill Junior School intends to develop pupil knowledge and understanding through a modern, ambitious and relevant curriculum in computing. We want pupils to use computational thinking and creativity to enable them to become active participants in the digital world. It is important to us that the children understand how to use evolving technology to express themselves, as tools for learning and as a means to innovate into the future.

Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to be respectful, responsible and confident users of technology: aware of measures that can be taken to keep themselves and others safe online. The Online Safety committee (comprising of the Computing and PSHE leads, Deputy Headteacher and a school Governor) have created a document to show how this strand is threaded through Computing and PSHE across the school.

Our aim is to provide a computing curriculum that is inclusive and designed to balance acquiring a broad and deep knowledge alongside opportunities to apply skills in various digital contexts. Beyond teaching computing discreetly, we will give pupils the opportunity to apply and develop what they have learnt across wider learning in the curriculum. We introduced BoomReader | Digital Reading Record to log reading from home and also use TT Rockstars to engage and track times tables knowledge and progress for Maths.

Implementation

Our scheme of work for Computing is adapted from the 'Teach Computing' Curriculum and covers all aspects of the National Curriculum. This scheme was chosen as it has been created by subject experts and based on the latest pedagogical research. It ensures progression of skill and knowledge across the year groups, with units that build upon learning from the previous year.

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.

Each class has a 1 hour computing lesson a week, work is set and recorded on Seesaw.

We have implemented elements of physical computing, using data loggers, Crumble kits and Micro:bits to ensure purposeful contexts for data collection and coding. We used our partnership with Southampton University to obtain a set of data loggers, which our Year 4 classes used in Computing and in geography fieldwork.

A computing club, attended by up to 30 children, has been running for many years to enable pupils to explore elements of Computing that particularly peaks their interests.

A representative from each class meets each half term for the pupil online safety group, as part of their work they have delivered assemblies and created a video that was shared with parents.

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

- A laptop trolley in upper school and lower school
- 60 iPads
- Micro:bit computers for Year 6

- Loaned sets of Data Loggers
- Crumble kits

Each classroom is provided with:

- A visualiser
- A tablet
- Interactive Whiteboard

All children are provided with Outlook accounts and work can be accessed in school and remotely using Teams and Seesaw.

The national curriculum for computing aims to ensure all pupils:

Key stage 2 Pupils should be taught to:

- Design, write and debug 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
- 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 world wide 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