Curriculum Intent: Computing

Intent

Computing at Busbridge Junior School intends to develop 'thinkers of the future' through a modern, ambitious and relevant education in computing. 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.

Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online.

Our aim is to provide a computing curriculum that is 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 offer a structured sequence of lessons, helping teachers to ensure that they have covered the skills required to meet the aims of the national curriculum. Computing lessons will be inclusive for all, regardless of barriers to learning, and opportunities will be provided for experienced learners to stretch and challenge themselves. The content allows for a broad, deep understanding of computing and how it links to pupils' lives. It offers a range of opportunities for consolidation through regular retrieval opportunities, challenge and variety. This allows pupils to apply the fundamental principles and concepts of computer science. They develop analytical problem-solving skills and learn to evaluate and apply information technology. It also enables them to become responsible, competent, confident and creative users of information technology, whilst also promoting the development of the 6Rs.

Implementation

Our scheme of work for Computing largely follows the 'NCCE' 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 provides an innovative progression framework where computing content (concepts, knowledge, skills and objectives) has been organised into interconnected networks called learning graphs.

The curriculum aims to equip pupils with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. It promotes 'learning without limits', and embodies achievement, enjoyment and enrichment. 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)

Impact

Learning in computing is enjoyed across the school across a wide range of learning abilities. Teachers have high expectations and work is starting to be evidenced in a variety of ways. Pupils use digital and technological vocabulary accurately, alongside a progression in their technical skills. They are confident using a range of hardware and software and produce high-quality purposeful products. Pupils see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They are confident and respectful digital citizens who will go on to lead happy and healthy digital lives.

E-Safety and Digital Citizenship

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 pupils the necessary skills to keep themselves safe online. Pupils 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.

Pupils build online resilience during computing lessons and Double Days, using the 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.