Springfield Computing Policy

Intention

At Springfield, we recognise the importance of providing a high-quality computing education which equips children to use computational thinking and creativity to understand and become active and responsible participants in the ever-changing digital world. We aim to inspire all children to consider themselves as the computational thinkers and computer scientists of the future. Furthermore, we aim to develop children's perception of technology as a tool for learning, innovation and discovery, as well as helping them to understand the advantages and disadvantages associated with online experiences. We aspire for all children to become digitally literate and able to use technology positively, responsibly and carefully, being mindful of how their behaviour, words and actions can affect others. Computational thinking is a key component of our computing curriculum as it is not only useful for helping develop algorithms and programming but is also develops problem solving skills that can be used in all aspects of life. Ultimately, all children should leave Springfield as confident, able and responsible Digital Citizens who are prepared for the technological challenges they will face in the future.

Implementation

Teach Computing Scheme

In KS1 and KS2, teachers follow the Teach Computing curriculum which is a progressive, spiral curriculum designed to meet all the National Curriculum Objectives for Computing. The scheme of work focuses on the National Centre for Computing Educations ten strands for comprehensive coverage of the subject aiming to give children a deep and broad knowledge through opportunities to apply skills in various digital contexts. Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences. Within the Teach Computing Curriculum, every year group learns through units within the same four themes, Computing Systems and Networks, Programming, Data and information and Creating Media, which combine with the tens stands of the National Centre for Computing Education's taxonomy.

The 'Teach Computing' Scheme is a spiral curriculum, which means that each of the themes is revisited regularly, children revisit each theme through a new unit that consolidates and builds on prior learning and skills within that theme. This reduces the amount of knowledge lost through forgetting and supports children to remember more. The scheme of work also acknowledges the importance of physical computing as a tool to engage pupils and as a strategy to develop understanding in more creative ways. Our physical computing element engages a diverse range of pupils in tangible and challenging tasks. Our curriculum also covers elements of digital citizenship covered in the Education for a Connected World Framework relating to aspects of Online Safety.

Assessment

Every lesson includes formative assessment opportunities to ensure that misconceptions are recognised and addressed if they occur. This can vary from teacher observation or questioning to even marked activities. These assessments allow teachers to adapt their teaching to meet the needs of all their pupils. The Learning outcomes and steps for success are introduced in every lesson. Pupils are invited to assess how they feel they have met these at the end using a thumbs up, middle, and down approach. This reminds children of the content that has been covered as well as a chance to reflect. Teachers use this as an opportunity to assess how their class feel to make changes to subsequent lessons. At the end of each unit, pupils will complete a new End of Unit assessment form to provide a snapshot of a pupils understanding of the content from that unit.

Cross-curricular opportunities

Cross curricular opportunities in computing are specifically planned for, with strong links between PSHE and English lessons.

Vocabulary

The importance of a clear understanding of the key vocabulary in Computing is recognised. Staff work hard to explain key vocabulary clearly using vocabulary slides that consistent across all subjects, then encourage children to use that vocabulary in their discussions. Teachers understand the need for retrieval practise and also embed this into the start of each lesson, drawing on the prior knowledge children will need.

Impact

Our Computing curriculum is of a high quality, well thought out and planned to demonstrate progression. We measure the impact of our curriculum using the following methods:

- Tracking progress against the NC objectives through the teach Computing Curriculum using end of unit assessments.
- Pupil discussions about their learning
- Evidence folders for each year group
- Retrieval practise used within lessons to identify pre and post learning.
- The subject leader would devise a smart action plan determined by the SIP.
- The Computing Lead closely monitors teaching and learning through monitoring of planning, 'Online evidence looks, Learning Walks and pupil voice.
- The Computing lead identifies gaps in knowledge and understanding and offers CPD opportunities to ensure staff feel they can deliver confidently.