Area News – Computer Science

What have we been up to?

In October, we took our students on an overnight visit to Bletchley Park—the historic home of the Second World War codebreakers—and to the neighbouring National Museum of Computing. The trip offered a rare opportunity for students to connect what they study in the classroom with the real-world origins of modern computing. Across the two days, students took part in a series of engaging, hands-on workshops delivered by knowledgeable staff and passionate volunteers. These sessions explored topics such as the evolution of encryption techniques, the growing influence of artificial intelligence in developing driverless car technology, and a collaborative Virtual Reality puzzle solving challenge that encouraged teamwork and creative thinking.

Guided tours at both sites provided valuable historical context, allowing students to trace the development of computing from the electromechanical codebreaking machines of WWII to some of the earliest programmable computers. Seeing functioning examples of these machines in person helped bring the subject to life and deepened students' appreciation for how far technology has progressed.

To round off the first day, we visited the nearby XSCAPE indoor entertainment centre, where students relaxed and enjoyed a range of activities including arcade games, mini golf, and tenpin bowling. This offered a fun and social end to an educational and inspiring trip.

Recently in lessons we have been

Year 2 students have been making excellent progress on their NEA (non-exam assessment) projects, producing an impressive range of creative and technically ambitious work. This year's submissions include applications capable of generating and solving Sudoku puzzles, interactive solar system orbital simulators, tower defence games with fully coded game mechanics, secure end-to-end encrypted messaging tools, and even a fully functioning Turing machine simulator. These projects reflect not only the breadth of student interests but also the depth of their developing programming skills.

To complete the NEA, students are required to follow every stage of the software development life cycle. This begins with researching a real-world problem and producing a clear, justified set of requirements. They then move on to creating a detailed design document, outlining data structures, algorithms, and the overall architecture of their proposed solution. After this, students implement their designs by writing and refining the technical solution itself. Once development is complete, they create and carry out a structured test plan to ensure the final product meets the original requirements. Finally, they evaluate its overall success and consider possible improvements.

This project enables students to demonstrate not only the technical skills gained throughout Year 1 and beyond, but also their ability to work independently and produce a professional, well-structured report documenting their entire development process.