



## The Computer Science Faculty

Computer Science is a popular and well established subject at Sandringham School. The faculty consistently achieves outstanding results, with student progress at both GCSE and A Level being amongst the highest in the school. The popularity of the subject continues to grow with large cohorts of students choosing to study Computer Science in Key Stage 4 and 5.

In September 2015 we opened a new £3m Science, Mathematics and Computer Science block which has state of the art facilities for teaching Computer Science in large classrooms. These facilities are in recognition of the importance of Computer Science in the curriculum and are a direct result of our success and increasing numbers of students.

All of our Computer Science facilities are well equipped with the most modern technologies running the latest industry standard software. Our teaching spaces provide room for practical activities as well as theory based work.

### Staff

The faculty currently consists of three specialist full time teachers. Colleagues work collaboratively across all key stages, sharing schemes of learning and resources in order to maximise opportunities for creativity and team-teaching, as well as to ensure the highest standards of learning in the classroom. This close support extends to the supervision of Schools Direct trainees and PGCE students across the year.

### Curriculum

#### Key Stage 3

Our Computer Science curriculum is both fun and stretching, covering aspects of computer science, digital literacy and creativity. The areas of study offer students broad experiences within the subject area. Over the course of Key Stage 3, students will have experienced and studied many different areas of Computer Science to give them a taste of what the subject entails.

Students study Computer Science for 1 hour a week in Years 7, 8 and 9.

#### Key Stage 4

At Key Stage 4 the faculty offers students the chance to study OCR GCSE Computer Science. The popularity of this course has grown significantly over the past few years. Each student receives access to an online textbook, through their device, to use in the classroom and at home and teacher's planning is supported through a range of interactive and e-learning resources.

In September 2016 a vocational pathway was included within the faculty's offerings. Students choosing this route currently study Cambridge Nationals in IT Award (Level 2).

Students studying either of these courses receive 5 hours of teaching a fortnight.

#### Key Stage 5

We have delivered OCR A Level Computing and Computer Science for a number of years now, this course is offered as a 2 year linear course. As part of the BeauSandVer Consortium, we attract students from all three schools so this is a popular course and attains excellent results. A large number of students who study Computer Science at A Level move forward to follow interests in this area at university level.

### Beyond the classroom

Extra-curricular opportunities are available for students to participate in throughout their time at Sandringham. At present we offer a Year 7 Computer Science Club, a Games Design Club and a more hands on and advanced Computer Science Club where students get to experiment with hardware less frequently used within curriculum time. In addition to these weekly clubs, we also offer students opportunities to enter both local and

national competitions, this includes, Bafta Young Games Designer Competition, CISCO's Little Big Award and many others.

The Computer Science faculty aims to enrich students learning beyond the classroom. We have developed close links with the University of Hertfordshire Computer Science faculty, as well as other companies and organisations, to assist us in providing exciting opportunities such as talks and lectures, hack days and other events for our students to participate in. In recent times we have secured activities, talks and visits from University of Hertfordshire, University College London, CISCO, Google, Intel, Silicon Valley, just to name a few.

Optional trips such as the Silicon Valley and San Francisco trip, National Computing Museum, and Farnborough Air Show Careers Days provide students with a chance to further their interests and allow them to see first-hand where Computer Science can lead them towards.

### **STEM Specialism**

Recently we have become a STEM hub to promote teaching and learning of Science, Technology, Engineering and Maths. In September 2015, our £3m Science, Maths and Computer Science building was formally opened by Kevin Fong, an expert on Space Medicine and presenter of the Royal Society Christmas Lectures 2015. In January 2016 our STEM team organised a video and audio link up with British Astronaut, Tim Peake, so our students could speak to him on the International Space Station and ask him questions about his time on the station. This event, with significant national profile, sat within our '**Space Festival**' which was a week-long event with a variety of school and community events.

The Computer Science faculty plays a key role in supporting STEM activities throughout the school. In March 2017 the faculty led a school wide STEM project which saw students launching a high altitude balloon to near space. We strongly believe that this, alongside other opportunities, helps to enrich the experiences of our students beyond the classroom and brings our subject alive.