The Ripley Academy

Year 7

Department and Subject area	Computer Science

Areas of study / topics covered in Year 7 (what will our new year 7s be doing, learning, experiencing) / what equipment will the student need?

Autumn term	**Digital Literacy** Students learn the basic skills needed for operating the school network and basic word processing applications.	**Under the Hood** Students learn about the basic hardware that allows the computer to operate, learning how this hardware interacts and its importance in the computer architecture.
Spring term	**Algorithms** A journey begins in the world of algorithms, linking their logical thinking skills back to the basic hardware of the machine in order to learn about efficiency.	**Visual Programming** With their new-found knowledge of algorithm design, students are now set on a course of programming. We begin with visual based programming before taking a step into text-based development.
Summer term	**P5.JS** Our text-based programming journey starts with JavaScript based p5.js. This provides the perfect bridge between visual programming and full text-based programming. Although the code is completely text based the output remains visual. This sets the foundations for Year 8's text-based curriculum.	**E-Safety** As well as text-based programming, students will carry out an e-safety unit of work during the summer term. This unit provides awareness of the dangers of modern technology, giving guidance on how to deal with issues should they arise.

Course available at Sixth Form	A-Level Computer Science

Further Information

Opportunities to represent the school

- The department run an after school coding club for any student who wishes to enhance their programming skills.

- These clubs are entered into national competitions where students compete against other schools in programming challenges

- We have a close bond with John Flamsteed Community School and continue to enhance our partnership, allowing students to collaborate across the schools.

Oxford University Challenge

- All students in year 7 will be entered into the Oxford Bebras challenge, a computational logical thinking challenge which takes place every October. Last year 4 of our Year 7 students made it into the semi-final rounds, with 1 student narrowly missing out on an invite to the finals which are held each year at the University.

Lessons and Equipment

All students are offered their own PC during lessons. Each room is equipped with interactive teaching equipment, printers, and headphones.

Our lessons involve a range of tutorials to allow students to work at their own pace, ensuring no child is left behind or left unchallenged.

Our department has a plethora of ex-hardware which is used by students to learn about the internal workings of the computer.

Online learning

The IT service team has worked hard to integrated all internal network drives with our online student hub. This ensures that any work carried out on the school computers can be accessed externally via the World Wide Web.