ELA Computing

In KS3 Computing at ELA the students focus on a different piece of software each half term. An example of this would be:

1. Coding using blocks to introduce the concepts of sequence, selection and iteration
2. Using the same programming structures but in a text based language (eg. Python)
3. Data Representation – understanding the concept of binary numbers, how characters and images are represented using binary
4. Editing digital images using a package such as Photoshop
5. Improving their general ICT skills in Powerpoint and Word
6. E-Safety – learning how to use the internet safely

At KS4 we follow the OCR GCSE Computer Science (J277) specification. At the end of the course the students sit two 90 minute exams:

Component 01: Computer systems

Introduces students to the central processing unit (CPU), computer memory and storage, data representation, wired and wireless networks, network topologies, system security and system software. It also looks at ethical, legal, cultural and environmental concerns associated with computer science.

Component 02: Computational thinking, algorithms and programming

Students apply knowledge and understanding gained in component 01. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic and translators.

Practical programming

Students are to be given the opportunity to undertake a programming task(s) during their course of study which allows them to develop their skills to design, write, test and refine programs using a high-level programming language (Python). Students will be assessed on these skills during the written examinations, in particular component 02 (section B).

During KS4 students will be encouraged to take responsibility of their own learning through:

- having a Personal Learning Checklist where they evaluate how confident they are in different topics

- completing knowledge retrieval questions at the start of each lesson, which again highlights topics the students need to revisit

- regular end of unit tests

- regular homework which they self-mark. This again highlights areas they need to focus on

- lots of pair work/peer learning in the classroom

If you have any questions, please do get in touch with Miss Harewood

eharewood@eastleake-ac.org.uk