

Computing & ICT Department

Exodus 35:31-32, 35:

And he has filled him with the Spirit of God, with skill, with intelligence, with knowledge, and with all craftsmanship, to devise artistic designs, to work in gold and silver and bronze... He has filled them with skill to do every sort of work done by an engraver or by a designer or by an embroiderer in blue and purple and scarlet yarns and fine twined linen, or by a weaver—by any sort of workman or skilled designer.

The Computing & ICT Department plays an important role in educating all learners the basics of computing technology, knowledge and software skills in a safe and appropriate way.

ICT technology is widely used by everyone of us in a variety of ways. It is our responsibility to ensure all learners leave their time at English Martyrs with the basics to aid them in their future careers and with those who seek to pursue a career in Computing and/or ICT, the advanced knowledge and skills in suitable software used in industry.

Our curriculum follows the main pillars of the National Computing Curriculum (Published September 2013) which include Algorithms, Programming & Development, Data & Data Representation, Hardware & Processing, Communication & Networks, and Information Technology. Digital Literacy skills are also taught alongside including eSafety and Cyber Security.

Sequential Approach

The curriculum is taught in a logical, sequential way to aid all our students have the foundations of computing and software skills from Year 7. These skills are then developed further in Years 8 and 9.

All students have a good understanding of the Microsoft Office Suite (Word, Excel, PowerPoint, Access) by the end of Key Stage 3 and this helps them when using ICT software in other curriculum areas and future careers.

The skills are transferable and further developed in Key Stages 4 and 5 where students are able to take the following courses: GCSE Computing, BTEC Tech Award in Digital Information Technology (Level 2) and BTEC Extended Certificate in Information Technology (Level 3). These courses help provide learners the flexibility to showcase their creativity while building on their knowledge of ICT/Computing systems.

Teaching and Learning

A variety of teaching methods are used within the department. They vary between units and key stage. With practical software, demonstrations and user guides aid all students to understand the basics of the programmes while spaced or distributed practice, including the use of interleaving, is used for more theoretical based units. Retrieving knowledge for the examination units/components is key and using retrieval practice through quizzes aids our students to be equipped for these. This is used more so at Key Stages 4 and 5 as students are required to sit formal examinations and this provides a useful method to challenge students. All methods are in line with the current Curriculum, Teaching and Learning Policy.

Student Development

Being able to communicate effectively online (Digital Literacy) is also part of the curriculum. Therefore, literacy and numeracy are embedded throughout the curriculum. Students are required to create a variety of digital products using appropriate language for the document i.e. formal reports, presentations, and spreadsheets with analysis.

In order to try to maintain students interests in the topics studied, we use a variety of case studies and scenarios enabling different software to be used that students will be using in everyday life outside of education i.e. word processing, spreadsheets, presentations, databases. Students are also able to showcase their creative flair in areas such as web design and motion creation by creating a variety of digital products.

Focus for Change

A review of the curriculum content taking into account feedback from subject staff and students at the end of each academic year, allows us to keep things up to date with current trends and hopefully, engaging for students. Often, other department staff members ask about recapping “the basics”, as they can often be forgotten by students who do not continue with ICT e.g. layout of reports, adding headers and footers and using appropriate file names for tasks.

Additional Curriculum Information

All students have access to variety of devices in ICT during their lessons. These include a desktop PC during ICT lessons, iPads, Notebooks, Digital Cameras.

Primarily, specialist staff teach all students in all year groups. On occasions, non-specialist staff deliver the curriculum at key stage 3 (years 7 and/or 8). Where this is the case, staff receive appropriate training with regular support.

Students are not “set” in lessons. The school policy on seating arrangements is followed and learning barriers considered where required.

Homework is set as a 3-week project in Years 7 and 8. These are based on topical issues and reviewed/revised annually. The projects for the next academic year involve students creating an Information Point using appropriate software to provide information about “Being Responsible Online” and “Cyber Security”. Projects are created from resources available to schools from relevant agencies. In Key Stages 4 & 5, research tasks are set alongside revision quizzes to ensure students have the required knowledge and understanding for their summer examinations.

We believe that the computing curriculum delivered to all students is one that meets the key foundations from the National Curriculum and enables each student to have the basic skills within “commonly used” software and for those who take the subject further, have the skills and techniques to progress on to the next stage in their learning.