

Subject: Computing

Curriculum content covered in Year 7

We cover a variety of skills to introduce Computing to students and ensure they are confident using a range of software. Students are introduced to concepts such as their digital footprint and computational thinking by studying a mix of digital literacy, Computing and ICT topics.

Autumn term

Students will study how to use the internet in a safe and responsible way. This will involve looking at what information is appropriate to share online as well as how to avoid computer viruses. Students will create leaflets and logos using professional standard image-editing software and will create basic web pages using professional web-authoring software.

Spring term

Students will learn how to use Kodu, the first programming language that is taught to Key Stage 3 students, to make a video game. This gives students an insight into the product development cycle and gives them an introduction to computational thinking. Students will also learn about the components on the inside of the computer.

Summer term

Students will develop their graphics skills and begin creating and editing images for a given purpose. This term will start to focus on ensuring that work is appropriate for a given target audience and intended purpose. Students will create animated banners using professional standard software, as well as creating, creating posters using professional image-editing software.

Curriculum content covered in Year 8

In Year 8 students will complete a production company project to experience what it is like to produce a show from designing a company logo to creating a spread sheet with formulas for a seating plan. During the development tasks, they will gain experience with software used by professionals in the field of advertising and production. Students will also gain a deeper understanding of the theory of programming which will help them prepare for the more in depth subject matter and programming covered in Year 9.

Autumn term

Students begin exploring how a business creates a brand identity and how to create a logo using graphics software. Towards the end of term, they go on to create a ticket booking system for a theatre in Scratch building their knowledge of programming and introducing another language in more detail. The internet will be used for research purposes during this time and students will be taught how to perform an effective Boolean internet search.

Spring term

Students will build on the digital literacy, Computing and ICT knowledge they were taught during Year 7 to understand how to operate computers in more depth. Students will also look more at how we use social media and the internet and what information should not be shared online and why. Students are given the opportunity to look into how ICT and Computing might look in the future and explore what they think will be different when they are older. Year 8 sees students covering a variety of ICT skills such as spread sheets, and DTP within a range of projects.

Summer term

Students will look into the principles of programming. Students will be able to write algorithms for given situations to ensure they can order instructions and follow these. Students will plan their programs using flowcharts and will also start studying binary, converting binary numbers to denary and converting denary to binary. An introduction to the ASCII and Unicode tables will be introduced as well as looking into why we have these. Students will be introduced to coding of the BBC micro:bit computer and will develop from coding from a task sheet to creating their own programs from scratch using their new found coding skill.

Curriculum content covered in Year 9

In Year 9, students will complete a Music Festival themed project to experience a taste of each of the GCSE subjects offered by the faculty: GCSE Business Studies, GCSE Computer Science, and CIDA. This will allow students to make an informed decision when they make their options, and the year is structured so that they will have experienced each subject before the decision is made.

Autumn term

Students will focus on developing the skills and knowledge needed to study GCSE Business Studies and CIDA as they begin to plan their music festival and make key decisions that will impact and inform decisions they make later in the year such as which audience they will be targeting from a freely chosen demographic. Students will then use these decisions to create a logo for their festival, using Adobe Illustrator, before learning how to write formal business letters and creating a spreadsheet to track the costs and revenue associated with their festival to calculate potential profit. Alongside this, students will also be taught all the key business terminology required to confidently discuss their spreadsheet and the key factors affecting their revenue forecasts.

Spring term

Students will focus on developing the skills and knowledge needed to study GCSE Computer Science by focusing on developing their computational thinking and programming knowledge. To achieve this students will study program development using Python. Students will complete a series of lessons that focus on the key programming skills required to complete a simplified GCSE style programming task of creating a basic ticket booking program for their music festival. Students will learn how to use computational thinking and professional techniques to analyse, design, develop and test their program to ensure that it meets the required criteria.

Summer term

Students will focus on the skills needed to study CIDA as they create and evaluate a series of digital products to promote their music festival. Students will make use of professional software to create a promotional video, using Adobe Premiere Pro; a promotional poster, using Adobe Illustrator; and a website, using Adobe Dreamweaver and Adobe Fireworks. Students will also develop the crucial ability to be able to analyse and evaluate work, a requirement on each of the GCSE courses offered in the department.