THE EARLS HIGH SCHOOL

EXCELLENCE | CARE | PARTNERSHIP

KS3 Curriculum overview: Computing

Why do we study Computing at The Earls High School?

Our mission is to empower students with the knowledge and skills to understand how computer systems work, plan solutions to real-world problems, and succeed in a digital world. We nurture creativity, resilience, and collaboration by using cutting-edge software tools, fostering innovation, and ensuring ethical awareness in a digital context. Through practical learning experiences, students develop the critical digital skills needed for future success, preparing them to not only excel academically but also make meaningful contributions to their communities. We strive to shape confident, responsible, and forward-thinking individuals ready to navigate and lead in an ever-evolving digital world.

What skills and knowledge do we anticipate students will have in this subject before they begin at The Earls High School?

- Basic keyboard skills
- Basic Internet skills – searching, savings images, using websites
- Basic file management skills – creating folders, using sensible filenames
- Basic skills in MS Word and MS PowerPoint
- An understanding of simple programming concepts
- Security – and understanding of the need for knowing user details and passwords

What skills and knowledge would we like students to have in this subject at the end of their time at The Earls High School?

- Understanding Computer Systems: Students will gain a deep understanding of how computer systems work, including the hardware, software, and networks that underpin modern technology.
- Digital Literacy for Success: Students will develop essential skills and knowledge required to navigate and succeed in a rapidly evolving digital world, focusing on effective communication, collaboration, and project management.
- Problem-Solving with Technology: Students will be able to plan and implement effective solutions to real-world problems through the use of computers and technology, utilising logical thinking and structured approaches.
- Creativity and Skill Development: Students will enhance their creativity and technical skills by using a variety of software tools, exploring multimedia, artistic, and design-based content alongside technical solutions.
- Ethical and Legal Awareness: Students will understand the legal and ethical implications of using technology, recognising its potential impact on their lives and the wider community.
- Innovation through Digital Exploration: Students will foster innovation by exploring and using a wide range of digital tools, empowering them to create unique multimedia projects and develop creative digital content.

Year 7 Curriculum Map: Computing

Autumn term	Spring term	Summer Term
Unit 1: – Clear messaging in digital media Learners will work between different applications to create a poster and slides on a given theme. The central theme focuses on embedding online safety and secure ways of working Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key assessment: Practical assessment of skills demonstration Assessment conditions: Final assessment during KS3 assessment window 1. In class work will also provide evidence for 25% of the overall grade.	Unit 3: Networks This unit begins by defining a network and addressing the benefits of networking, before covering how data is transmitted across networks using protocols. The types of hardware required are explained, as is wired and wireless data transmission. Learners will develop an understanding of the terms 'internet' and 'World Wide Web', and of the key services and protocols used. Practical exercises are included throughout to help strengthen understanding. Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate key networking concepts. Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.	Unit 5: Gaining support for a cause During this unit, learners develop their understanding of information technology and digital literacy skills. They will use the skills learnt across the unit to create a blog post about a real-world cause that they would like to gain support for. Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key assessment: Knowledge test to demonstrate key software choices and document formatting knowledge Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.

Unit 2: Programming in scratch The aim of this unit and the following unit ('programming 2') is to build learners' confidence and knowledge of the key programming constructs Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate key programming concepts. Assessment conditions: Final assessment during KS3 assessment window 1. In class work will also provide evidence for 25% of the overall grade.	Unit 4: Modeling data with spreadsheets The spreadsheet unit for Year 7 takes learners from having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key assessment: Practical assessment demonstrating knowledge of key spreadsheet skills. Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.	The 5 schemes of learning will not quite match the linear term by term model and will take place over the whole school year. Whilst the learning that takes place will be static the order may change dependent on the needs of each cohort.

Year 8 Curriculum Map: Computing

Autumn term	Spring term	Summer Term
Unit 1: Computer systems This unit takes learners on a tour through the different layers of computing systems: from programs and the operating system, to the physical components that store and execute these programs, to the fundamental binary building blocks that these components consist of Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key assessment: Knowledge test to demonstrate understanding of computer systems Assessment conditions: Final assessment during KS3 assessment window 1. In class work will also provide evidence for 25% of the overall grade.	Unit 3: Developing for the web In this unit, learners will explore the technologies that make up the internet and World Wide Web. Starting with an exploration of the building blocks of the World Wide Web, HTML, and CSS Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate understanding of web development Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.	Unit 5: Python 1 This unit introduces learners to text-based programming with Python. The lessons form a journey that starts with simple programs involving input and output, and gradually moves on through arithmetic operations, randomness, selection, and iteration. Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate understanding python and programming concepts. Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.

Unit 2: Vector graphics This unit offers learners the opportunity to design graphics using vector graphic editing software. By the end of the unit learners will have produced an illustration, a logo, or some icons using vector graphics Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate understanding of vector graphics Assessment conditions: Final assessment during KS3 assessment window 1. In class work will also provide evidence for 25% of the overall grade.	Unit 4: App development In this unit, students will learn about mobile app development, including how safety considerations can be implemented to aid the user's engagement. Main home learning tasks: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate understanding of application development Assessment conditions: Final assessment during KS3 assessment window 2. In class work will also provide evidence for 25% of the overall grade.	The 5 schemes of learning will not quite match the linear term by term model and will take place over the whole school year. Whilst the learning that takes place will be static the order may change dependent on the needs of each cohort.

Year 9 Curriculum Map: Computing

Students in Year 9 study four units of work throughout the year. The rationale for this is that students should be able to make informed decisions about option choices for KS4. Students will have seen the style, complexity and quality of work needed to complete KS4 courses.

Autumn term	Spring term
Unit 1: Cambridge Nationals Creative iMedia To learn about: what is required to pass Cambridge Nationals Creative iMedia course should it be chosen as an option in KS4. This will include course outline, introduction to theory and exam questions Main home learning task: Key vocabulary Resource collection Key assessment: Create and interactive multimedia product based on design scenario from Creative iMedia Assessment conditions: Assessment to be completed in class and uploaded to Teams during assessment window 1	Unit 3: AQA GCSE BUSINESS Introduction Business To learn about: what is required to pass AQA GCSE business Studies course should it be chosen as an option in KS4. This will include course outline, introduction to theory and exam questions Main home learning task: Key vocabulary Online quizzes Key Assessment: Documents will be assessed throughout the unit. Assessment conditions: Assessment to be completed in class and uploaded to Teams during assessment window 2
Unit 2: OCR GCSE Computer Science Programming To learn about: what is required to pass OCR GCSE Computer Science course should it be chosen as an option in KS4. This will include course outline, introduction to theory and exam questions Main home learning task: Key vocabulary Online quizzes Programming Activities Key assessment: Aspects of programming and binary code will be assessed throughout the unit. Assessment conditions: Assessment to be completed in class and uploaded to Teams during assessment window 1	Unit 4: Python 2 This unit introduces learners to how data can be represented and processed in sequences, such as lists and strings. The lessons cover a spectrum of operations on sequences of data, that range from accessing an individual element to manipulating the entire sequence Main home learning task: Home learning menus will be given with a variety of tasks for students to practice skills leaned in lessons and to further pursue the topics delivered. Key Assessment: Knowledge test to demonstrate understanding of more advance python skills and programming concepts. Assessment conditions: Assessment to be completed in class and uploaded to Teams during assessment window 1