

Key Stage 4 Curriculum Guide for GCSE Computer Science –

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Outline Programme of Study

EdExcel GCSE Computing should encourage students to be inspired, moved and challenged by following a coherent, satisfying and worthwhile course of study. GCSE in Computing must enable students to:

- *develop their understanding of current and emerging technologies, understanding of how they work and apply this knowledge and understanding in a range of contexts*
- *acquire and apply a knowledge, some technical skills and an understanding of the use of algorithms in computer programs to solve problems using programming*
- *use their knowledge and understanding of computer technology to become independent and discerning users of IT, able to make informed decisions about the use and be aware of the implications of different technologies*
- *acquire and apply creative and technical skills, knowledge and understanding of IT in a range of contexts*
- *develop computer programs to solve problems*
- *develop the skills to work collaboratively*
- *evaluate the effectiveness of computer programs/solutions and the impact of, and issues related to, the use of computer technology in society*

Assessment

- *Principles of Computer Science – This unit of work is assessed through a 1 hour 30 minute written exam, which is worth 50% of the overall grade.*
- *Application of Computational Thinking – This unit of work is assessed through a 2 hour onscreen examination which is worth 50% of the overall grade.*

	YEAR 10			YEAR 11		
Subject	Term1&2	Term3&4	Term5&6	Term1&2	Term3&4	Term5&6
GCSE Computer Science	Algorithms and programming fundamentals During the first two terms students will learn how to code using python. They will also learn the programming	Producing robust programs & Boolean Logic Students will continue to code during term 3 & 4 looking at algorithms particularly pseudocode	Translators & Facilities of language and IDEs Students will cover a number of topics throughout term 5&6 and will receive a test at the end of each topic.	Systems Architecture, Memory & Storage, Coding & Algorithms Students will start the theory for paper 1. They will complete the first two	Computer networks, connections and protocols, Network Security, Coding & Algorithms Students will start the theory for	Systems Software & Ethical, legal, cultural & Environmental issues, Exam prep and technique Students will spend time completing extended

	theory needed in paper 2 and look at algorithms (2.1 & 2.2)	Students cover a number of topics throughout term 4 and will receive a test at the end of each topic.	Students will also spend two hours a fortnight programming and will be tested on this regularly.	topics. Students will also spend two hours a fortnight programming and will be tested on this regularly.	paper 1. They will complete the second two topics. Students will also spend two hours a fortnight programming and will be tested on this regularly	writing questions and building on their algorithm knowledge. Students will also spend two hours a fortnight programming and will be tested on this regularly
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Useful resources

Students would benefit from purchasing the revision guides:

Pearson REVISE EdExcel GCSE (9-1) Computer Science Revision Guide: For 2024 and 2025 assessments and exams

Homework

Students will receive periodic programming task that they need to complete. They will also receive revision, research and investigation tasks at least twice a term. All homework will be posted on Show my homework which parents can access.

Essential equipment/books required/recommended

Revision Guides

Pearson REVISE EdExcel GCSE (9-1) Computer Science Revision Guide: For 2024 and 2025 assessments and exams

Pearson REVISE EdExcel GCSE Computer Science Revision Workbook - for 2025 and 2026

A programming IDE – most are free downloads from the internet

CGP – New Python Programming Guide for GCSE Computer Science with online edition

How can parents help?

Parents can help by encouraging students to attend catch up sessions if they are absent or are falling. All lesson work is set on Show My Homework each day in order for absent students to catch up. Parents can encourage students to revise for end of chapter tests, request feedback from the teacher and regularly check show my homework for details on homework set. Parents can also purchase the revision guide and workbook and encourage students to complete a page a night to ensure they are keeping on top of revision. Most importantly, parents need to encourage students to program every day. Students will not become competent programmers without practice and they will not receive enough time in class to complete all the practice needed.

If you have any further questions please use the contact details at the top of the guide