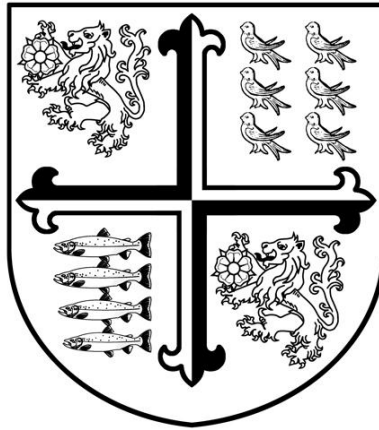




GCSE Computer Science Exam Preparation

Exam Board: Cambridge OCR

Specification: J277

ocr.org.uk/Images/558027-specification-gcse-computer-science-j277.pdf

Contact details:

Mr S Perry – sperry@bournemouth-school.org

	Week 1-5	Week 6-8	Week 9-11	Week 12 – 19	Week 20-21
Topic	1.1 Systems Architecture	1.2.1 -1.2.2 Primary Storage & Secondary Storage	2.4 Boolean Logic	1.2.3 -1.2.5 Units, Data Storage & Compression	2.2 Programming Revision
Learning Objectives	An understanding of computer architecture.	An understanding of the purpose and need for primary & secondary storage.	Knowledge of simple logic diagrams and truth tables	Familiarity with units of data storage. Knowledge of how data is represented in binary. Understanding of data compression.	To review key coding principles and practise key skills.
Knowledge/skills to be gained	Key principles of computer architecture. • Computer systems • CPU architecture • CPU performance • Von Neumann Architecture • Embedded systems	Key principles of primary & secondary storage. • RAM & ROM • Magnetic, optical and solid-state storage	Ability to produce: • Logic diagrams • Truth tables • Boolean algebra	Knowledge of units of data storage. Ability to convert between denary, binary & hexadecimal. Ability to describe how different media is represented in binary. To understand the need for and the key types of compression.	Understanding of the key concepts of programming and the ability to program solutions to problems.
Assessment	Summative assessment using exam questions EAD 21/09	Summative assessment using exam questions EAD 19/10	Summative assessment using exam questions EAD 16/11	Summative assessment using exam questions EAD 11/01	Teachers check on learning in every lesson.
Revision	Systems architecture	Primary Storage & Secondary Storage	Boolean Logic	Units, Data Storage & Compression	Programming theory Practical Python programming
Link with prior/subsequent learning	Builds upon KS3 computing theory.	Builds upon KS3 computing theory.	Builds upon KS3 computing theory.	Builds upon KS3 computing theory.	Consolidates previous Python programming skills from Year 10.

	Week 22-25	Week 26-32	Week 34-37	Week 38-40
Topic	1.5 Systems Software	1.3.1 Networks & Topologies	1.4 Network Security	2.2 Programming Revision
Learning Objectives	Familiarity with systems software.	To introduce concepts of networking.	To familiarise pupils with how to protect data from threats.	To review key coding principles and practise key skills.
Knowledge/skills to be gained	The ability to describe the key aspects of systems software. The ability to describe key utility programs.	Understanding of the importance of computer networks. Describe the key components of networking.	An understanding of key threats to networks and data. An understanding of the key ways data and networks can be protected from threats.	Understanding of the key concepts of programming and the ability to program solutions to problems.
Assessment	Summative assessment using exam questions EAD 15/3	Summative assessment using exam questions EAD 10/05	Summative assessment using exam questions EAD 21/05	Teachers check on learning in every lesson.
Revision	Systems Software	Networks & Topologies	Network Security	Programming theory Practical Python programming
Link with prior/subsequent learning	Builds upon KS3 computing theory.	Builds upon KS3 computing theory. Links to 1.3.2 Wired & Wireless Networks (Year 11) & 1.4 Network Security.	Builds upon KS3 computing theory. Builds material from 1.3.1 Networks & Topologies. Links to 1.3.2 Wired and Wireless Networks (Year 11).	Consolidates previous Python programming skills from Year 10.

Online Revision Resources (all units):

- Ada Computer Science - <https://adacomputerscience.org/>
- BBC Bitesize - <https://www.bbc.co.uk/bitesize/examspecs/zmtchbk>
- Seneca - <https://senecalearning.com/en-GB/>

Online Python Programming Revision

- W3 Schools Python https://www.w3schools.com/python/python_intro.asp
- Time2Code Python <https://time2code.today/python-course>

