

LEARNING JOURNEY GCSE Computer Science

YEAR 11 – Computer Science: TERM 1



J277/01 – COMPUTER SYSTEMS

PRIOR LEARNING (from Key Stage 3):

	TERM 1	TERM 2	TERM 3
YEAR 7	MY DIGITAL WORLD Be SMART online and using ICT Software Mastery: Microsoft Suite	AUDIENCE AND PURPOSE Create products that have impact Software Mastery: PowerPoint	UNDERSTANDING COMPUTERS How computers work Software Mastery: Scratch
YEAR 8	DIGITAL MEDIA Being creative in a digital world Software Mastery: Photoshop	CYBER SECURITY Living in the modern world Software Mastery: PowerPoint	PYTHON BASICS Begin to programme Software Mastery: Python
YEAR 9	CREATIVE DESIGN Creative iMedia taster Software Mastery: Photoshop	ADVANCED PYTHON Computer Science taster Software Mastery: Python	CREATE A VIDEO Research developing technology Software Mastery: Premier Elements

Aim of the Unit

In this unit students will learn how to develop an understanding of the threats posed to networks and systems. Students will learn about different types of threats and measure that can be taken to reduced risk to IT systems. Students will also learn about IT systems software that helps systems function.

Topics to be covered:

- Threats
- Prevention
- System software

Assessment Procedure

The topics covered in this unit, will help prepare students for some of the theory needed for Paper 1. This will be examined at the end of Year 11 and is worth 50% of the final mark for the course. During the lessons, students will undertake informal MCQ (multiple choice questions) to diagnose misconceptions. They will then undertake an end of unit assessment. The assessment will be out of 50 marks.

Homework

Homework will be set at least once a week. Seneca assignments will be assigned to help with knowledge retrieval in the run up to assessments. Details of individual homework can be found on Synergy.

How can you help?

Encourage your child to attend sessions with their teacher after school to improve their understanding. They should also review their theory regularly at home, as well as complete homework's thoroughly as they are all from past exam papers. Support is also available through explainer videos contained on the class team's page.



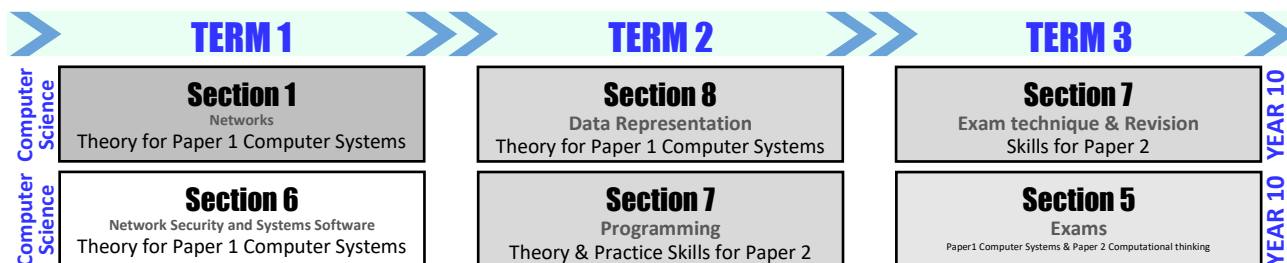
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STARS
★ SINCERE ★ THOUGHTFUL ★ ASPIRATIONAL ★ RESILIENT ★ SOLIDARITY ★

Unit 4 – NETWORK SECURITY AND SYSTEMS SOFTWARE (Knowledge)				
4.1 Network threats	Date:	😊	😐	😞
Malware Viruses Worms Trojans Social engineering Phishing Human error blagging Security training Hacking Brute force attack Denial of Service (DoS) attack Shouldering Man in the middle attack SQL injection access levels				
4.2 Identifying & preventing vulnerabilities	Date:	😊	😐	😞
Penetration Testing External Penetration Testing Internal Penetration Testing Anti malware Firewall Password protection Access levels Encryption Physical Security				
4.3 Operating systems	Date:	😊	😐	😞
User interface Memory management Peripheral management User management File management WIMP Command Line GUI Multi-tasking Buffering Buffer				
4.4 Utility Software	Date:	😊	😐	😞
Defragmentation Encryption disk defragmenter Compression Lossy Lossless Plaintext ciphertext				

Revision, Test and Closing the Gap for topics covered so far	
TEST RESULT:	Target Grade:
Mark:	Percentage:
Grade:	On target?

FUTURE LEARNING:



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