UNIT OVERVIEW & LEARNING JOURNEY



YEAR 10 - Computer Science:

J277/01 - COMPUTER SYSTEMS

PRIOR LEARNING (from Key Stage 3): TERM 2 TERM 1 TERM 3 **MY DIGITAL WORLD AUDIENCE AND PURPOSE** UNDERSTANDING COMPUTERS Я Be SMART online and using ICT Create products that have impact How computers work Software Mastery: Scratch Software Mastery: Microsoft Suite Software Mastery: PowerPoint **PYTHON BASICS DIGITAL MEDIA CYBER SECURITY** ЯА Being creative in a digital world Living in the modern world Begin to programme λE Software Mastery: Photoshop Software Mastery: PowerPoint Software Mastery: Python 6 **CREATIVE DESIGN** ADVANCED PYTHON **CREATE A VIDEO** Я Research developing technology Creative iMedia taster Computer Science taster Software Mastery: Photoshop Software Mastery: Python Software Mastery: Premier Elements

Aim of the Unit

In this unit students will learn how to develop an understanding of computer systems function. Students will learn the role of the CPU, Memory, and the need for secondary storage.

Topics to be covered:

- **Systems Architecture**
- Memory
- Storage

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 homeworks thoroughly as they are all from past exam papers. Support is also available through explainer videos contained on the class team's page.















Unit 1 - SYTEMS ARCHITECTURE, MEMORY, AND STORAGE (Knowledge)								
1.1 Architecture of the CPU	Date:		K	L				
CPU Fetch- Decode -Execute Arithmetic Logic Unit Cache Registers Control Unit Von Ne	umann Cores Memor	y Addr	ess Reg	ister				
Memory Data Register Program Counter Accumulator Von Neumann								
1.2 CPU performance	Date:		K	L				
Cores Clock speed GHZ Overclocking Embedded system								
1.3 Memory	Date:		K	L				
Primary Secondary Virtual Memory ROM RAM								
1.4 Secondary Storage	Date:		K	L				
Internal External Optical Magnetic Solid state Flash Durability reliability Cos	t Portability Capacit	ty Sp	eed					

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

FUTURE LEARNING:

	TERM 1	TERM 2	>>	TERM 3	>
Comput er Science	Section 1 Systems architecture, memory, and storage Theory for Paper 1 Computer Systems	Section 8 Logic & Languages Theory for Paper 2 Computational thinking		Section 7 Programming Skills for Paper 2	YE AR 10
Lomput er Science	Section 6 Algorithms Theory & Skills for Paper 2 Computational thinking	Section 7 Programming Theory & Practice Skills for Paper 2		Section 5 Ethical, Legal cultural & environmental Theory for paper1 Computer Systems	YE AR 10















