

KESTEVEN AND SLEAFORD HIGH SCHOOL



Computing Scheme of Learning

Year 9 – Topic 3 – Tech Savviness

Intent – Rationale

Topic Intent: Develop students' understanding of the range of devices available, the main components inside a desktop PC and how to compare technical specifications. The unit also briefly introduces the role of system software and some of the threats to computer systems.

Curriculum Intent: Developing an understanding of some of the underlying principles of Computer Science

KS3 PoS: Understand the hardware and software components that make up computer systems

Sequencing – what prior learning does this topic build upon?	Sequencing – what subsequent learning does this topic feed into?
<ul style="list-style-type: none"> Year 9 Unit 1: Binary 	<ul style="list-style-type: none"> GCSE Computer Science (J277 1.2.1 and 1.2.2) A-Level Computer Science (H446 1.1.3) Future study and life as a consumer/user of technology
What are the links with other subjects in the curriculum?	What are the links to SMSC, British Values and Careers?
<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A
What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?	What are the opportunities for developing mathematical skills?
Directly linked to topic <ul style="list-style-type: none"> https://fossbytes.com/whats-inside-my-computer-different-components-of-a-computer/ Wider Reading/Interest: <ul style="list-style-type: none"> Girls Who Code: Learn to Code and Change the World by Reshma Saujani 	<ul style="list-style-type: none"> Unit conversion Numeric comparison

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Year 9 – Topic 3 – Tech Savviness

Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?

Know

- Understand some of the key performance indicators for tablets/smart phones
- Understand the role of the main components inside a modern desktop PC and how to judge their performance/capabilities
- Understand the main tasks performed by system software
- Understand some of the main threats to computer systems

Apply

- Be able to compare a range of digital devices with some regard for technical specification and performance indicators
- Be able to identify and describe the role of the main components and system software in a desktop PC
- Be able to describe some of the threats to computer systems and identify steps to minimise them

Extend

- Understand the role of virtual memory and its impact on performance

What subject specific language will be used and developed in this topic?

- **Hardware:** the physical components of a computer system/device
- **Software:** system utilities and programs that run on hardware
- **Component:** a single piece of equipment within a larger device
- **Peripheral:** an external device that is 'plugged into' a computer system, such as a printer, keyboard, etc.
- **Technical Specification:** a detailed description of a component/device's capabilities
- **Hertz:** the SI unit of frequency, equal to one cycle per second

What opportunities are available for assessing the progress of students?

- Workbook, in-lesson observation and starter/plenary quizzes
- Onscreen assessment

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Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
			See T Drive