Year 8 Autumn Half Term 1

LEARNING JOURNEY COMPUTING

COMPUTING SYSTEMS (1)

GOLDEN THREAD QUESTION

WE ARE HERE

Software

What is the difference between hardware and software?

What is a program?

What is a computer system?

What is the difference between a general purpose system and a purpose-built device?

How do general purpose systems use programs?

Why is hardware and software separate?

Hardware

What is hardware?

What is meant by computer architecture?

What are the different components in computer systems?

How do these components relate to each other?

What is an operating system?

What is the relationship between the OS and the different components?

Logic (next slide)

This unit takes you on a tour through the different layers of computing systems: from programs and the operating system, to the physical components that store and execute these programs, to the fundamental binary building blocks that these components consist of. The last lessons cover two interesting contemporary topics: artificial intelligence and open source software!

TUDOR HABITS

You will develop systematic thinking skills as you work through this unit.

VOCABULARY

System, data, hardware, CPU/processor, (applications / utility) software, operating system, input, process, output, ROM, RAM, memory, secondary storage, input device, output device, binary, logic gate, artificial intelligence

Year 8 Autumn Half Term 1

LEARNING JOURNEY COMPUTING

COMPUTING SYSTEMS (2)

WE ARE HERE

Logic

What is a logical operator?

Why are logical operators needed?

What is a logical expression?

What is a logic gate?

What is a logic circuit?

What is the relationship between logic expressions and circuits?

What is the relationship between logic circuits and hardware?

Artificial intelligence

What is meant by artificial intelligence?

What is meant by machine learning?

How does machine learning differ from traditional programming?

What are the moral issues associated with AI?

Impact of technology on society

What is the impact of technology on society?

GOLDEN THREAD QUESTION

Leading to:
A deeper understanding of the wa
computing systems work, their imp
on society and their future potent