YEAR 10 ROADMAP

WETHERBY HIGH SCHOOL

Systems Architecture

Why might a device perform one designated function? How do the components of the CPU interact to allow operations to execute?

Memory

How do computers start up?

What are the limitations of RAM? What happens when RAM is full?

Storage

What's the need for different storage technology? What are the characteristics that enable them to be chosen for specific tasks?

Computational Thinking

How does Abstraction, decomposition and algorithmic thinking allow us to solve problems?

Computational Logic

How can we represent the rules of logic gates? How could you represent a logic circuit in visual format?

Data Representation

How do we convert an 8 bit binary number to denary/hex? Vice versa?

How do we add, multiply and divide using binary?

Data Representation cont.....

Why are different character sets used when representing characters in binary?

Programming Techniques

How can we combine programming constructs to design a programming solution? How could we make our code more efficient? What could be the purpose of manipulating strings with our code?

Wired/Wireless Networks

How could a server benefit or be malevolent to a network? How does a website appear on your screen when you click on a link? Can you explain 'the cloud'?

Networks

What are the strengths and weaknesses of different network topology? How can different devices from different countries communicate and transfer data?

Into YEAR 11....