Northolt High School
Scheme of Learning

Year group: 8	Term: 1	Unit duration: 6 weeks	Number of lessons: 6	Unit title: **Binary**

Assessment outcome: Students will understand how computers count with Binary and how we can make calculations using Binary.	Fertile question? How do computers count and perform calculations using only on/off electrical signals?	
Key skills/concepts/knowledge that students should cover	**Start RAG**	**End RAG**
What is Binary? - Electrical signals, Boolean True or False Binary - base 2 - vs Denary - base 10 How to count in Binary - converting between Binary and Denary Adding in Binary - the rules of binary addition Bits and Bytes - groups of binary digits Overflow errors - what happens when we run out of bits?		
Stretch. Key skills/concepts/knowledge that students should cover What computer-related numbers can you think of that are limited by the Binary counting system? For example: in Minecraft, you can only build 255 blocks high.		

Literacy. Key vocabulary/subject terminology that students should cover

Bit
Byte
Nibble
Binary
Denary
Decimal
Base-2
Base-10
Overflow error

Suggested materials teachers could/should use

TeachICT
Computer Science Powerpoints/Worksheets

Key home learning tasks students should complete
To be set in lessons