Year 8 summer 2 Computing: Representations

A) Key knowledge		B) Key knowledge		C) Key knowledge		D) Literacy
Computers need:	To **store**, **process,** and **communicate** information	**Bit**	A binary digit, representing 0 or 1	**Decimal**	Its multipliers are powers of 10; it uses 10 digits; known as base ten; each multiplier is ten times as big as the one before it	**'Explain why computers use binary' [3]** **'Explain why 3 MB is approximately 3 million bytes' [3]**
Computers use:	Sequences of symbols to represent information	**ASCII #2**	ASCII uses 7 bits to represent characters – this is sufficient to encode all keyboard letters, symbols and numbers	**Binary**	Its multipliers are powers of 2; uses 2 digits; known as base two; each multiplier is twice as big as the one before it	
Information in computers	Must be represented in a form convenient for processing	**Electronic devices**	Are built using circuits of interconnected **switches** that control the flow of electricity	**Binary digits act like switches:**	Flip one to **on**, and the corresponding multiplier is included in the sum	
Coding scheme	Associates each letter with a sequence of symbols	**Keyboard characters**	All keyboard characters are represented using sequences of bits	**Byte**	8 binary digits	
ASCII #1	A coding scheme used to represent text as sequences of 1s and 0s	**Why binary?**	Computers use two symbols because they are built out of switches	**To convert bits to bytes:**	Divide the number of bits by 8	
Homework: Look/cover/write and self-mark the information from Section A		**Homework:** Look/cover/write and self-mark the information from Section B		**Homework:** Look/cover/write and self-mark the information from Section C		**Homework:** Literacy task