UNIT 2: COMPUTER OPERATIONS & FUNDAMENTALS
BITS & BYTES

Yr Level:	Subject: ICT	Unit:	
Name :		Date:	

2.5 Bits and Bytes

The word bit is a shortening of the words "**B**inary dig**IT**", that is "0" and"1" (The "bi" in binary means two) For example: 1011. Everything you say to a computer has to be put in terms of these two numbers.

A **BYTE** is a group of 8 bits. It is used to represent a character.

COUNTING THE NUMBER OF BITS AND BYTE

A character in computing terms can be a letter, a number or any other characters and even a blank space is a character.

For example:
Each character is represented by one byte and each byte is made up of 8 bits. So count the number of byte and the number of bits

Did you know

Human beings have 10 fingers and we have been used to count numbers in group of tens. Computers, however, operate using the base-2 number system, also known as the **binary number system**.

So computers use binary numbers, and therefore use **binary digits** in place of decimal digits. Everything you say to a computer has to be put in terms of these two numbers.

First byte	Second byte	Third byte	Fourth byte	Fifth byte
P	**O**	**W**	**E**	**R**

8 bits for a character

Letter "P" = 8 bits
Letter "O" = 8 bits
Letter "W" = 8 bits
Letter "E" = 8 bits
Letter "R" = 8 bits

→ Therefore adding the 5 letters (5bytes) from the word power gives you 40 bits

Quick Test 2.5

How many bytes and bits can you count in the word COMPUTER?

Number of bytes = ... bytes

Number of bits = ... bits

How many bytes and bits can you count in the sentences below?

i) Using computer is fun.

Number of bytes = ... bytes

ii) 12th March 1968 – Mauritius Independence day.

Number of bytes = ... bytes

iii) 50, St. Georges street, Port-Louis.

Number of bytes = ... bytes

Using your own words, differentiate bits from bytes.

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