

# 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 "Binary digIT", 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

Activate Windows  
Go to Settings to activate Windows

## 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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