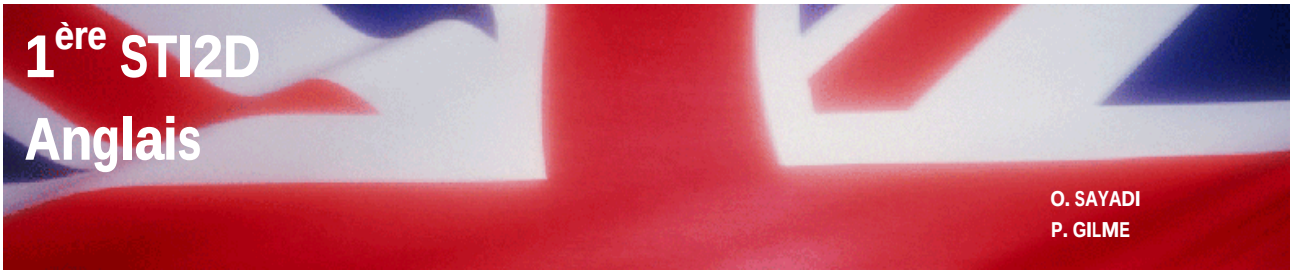
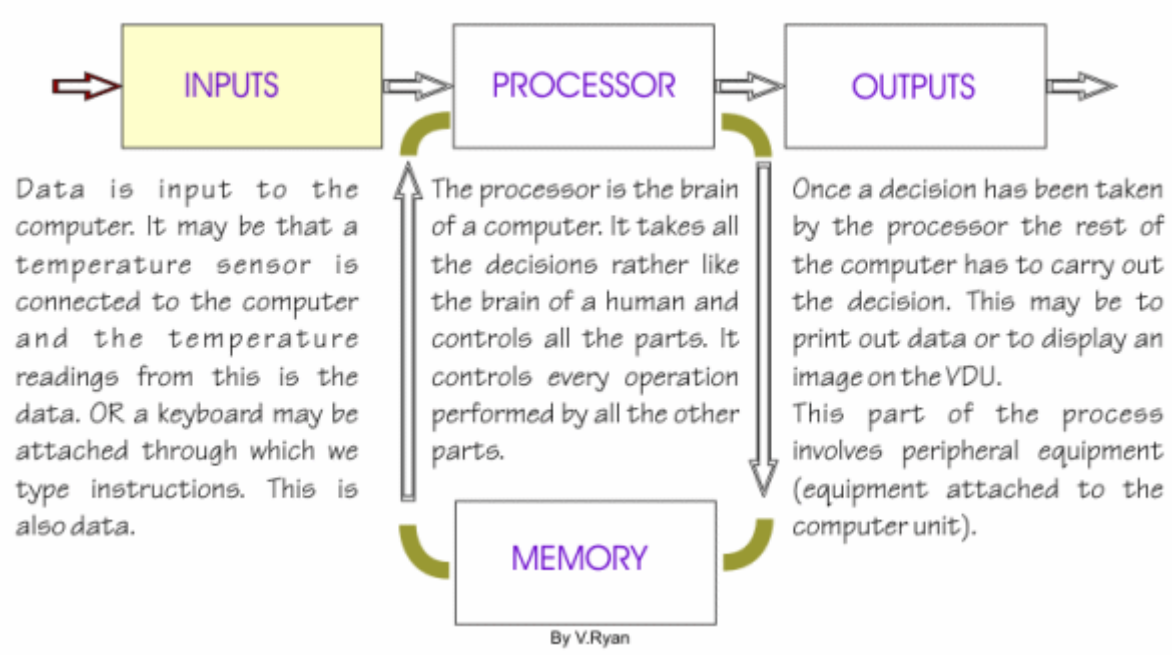
Industrial Technological Sciences
And Sustainable Development



BASIC CONCEPTS OF THE MICROPROCESSOR

A computer works in a very simple way and this is shown

in the diagram below.



BIT

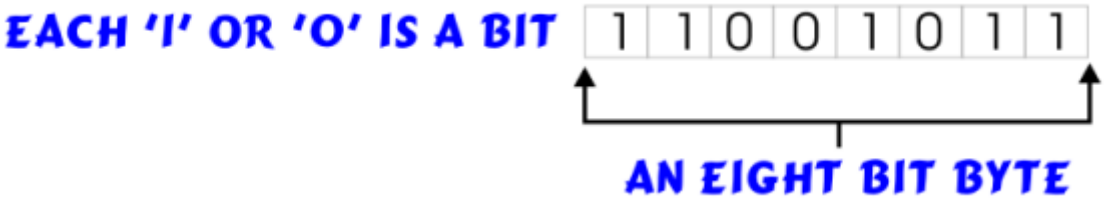
It is important that a computer remembers what it is doing and the data from inputs such as sensors or the keyboard. Memory is used for this function.

Each piece of data (*Byte*) is placed in an '*ADDRESS*' in the memory and when the processor needs to use the data it 'fetches' it from its address. Another name for the

BYTE

ADDRESS is *LOCATION*.

It is important to understand the way data is transmitted from one part of the computer to another. Data is usually stored in the memory. Numbers, words or characters (data) is stored as 'BITs'. These are "1's" and "0's". These bits are arranged into 'BYTES' - a line of 1's and 0's.



This eight BIT BYTE could represent a letter from the alphabet or be a simple instruction the computer has to carry out. Computers do not understand words or sentences; in order to understand them the computer converts words into BITs and BYTEs and then it can use them. The example is an eight bit BYTE, what do you think a sixteen bit byte actually looks like? Each byte is placed in an address or location in memory.

1. Explain with the aid of a diagram the main functions of a computer - INPUT, PROCESS, MEMORY and OUTPUT.

2. Explain the way data is transmitted between parts of a computer - BITS and BYTES.