**wHAT iS cOMPUTER?**

A computer is a machine that accepts data as input, processes that data using programs, and outputs the processed data as information. Many computers can store and retrieve information using hard drives. Computers can be connected together to form networks, allowing connected computers to communicate with each other. The two principal characteristics of a computer are: it responds to a specific instruction set in a well-defined manner and it can execute a prerecorded list of instructions call a program. There are four main processing steps in a computer: inputting, storage, outputting and processing. Modern computers can do billions of calculations in a second.

**Being able to calculate many** times per second allows modern computers to multitask, which means they can do many different tasks at the same time. Computers do many different jobs where automation is useful. Some examples are controlling traffic lights, vehicle computers, security systems, washing machines and digital televisions. Computers can be designed to do almost anything with information. Computers are used to control large and small machines which in the past were controlled by humans. Most people have used a personal computer in their home or at work. They are used for things such as calculation, listening to music, reading the news, writing etc.

Modern computers are electronic computer hardware. They do mathematical arithmetic very quickly but computers do not really "think". They only follow the instructions in their software programs. The software uses the hardware when the user gives it instructions, and gives useful output. Humans control computers with user interfaces. Input devices include keyboards, computer mice, buttons, and touch screens. Some computers can also be controlled with voice commands, hand gestures or even brain signals through electrodes implanted in the brain or along nerves. Computer programs are designed or written by computer programmers.

A few programmers write programs in the computer's own language called machine code. Most programs are written using a programming language like C++, Java, and Fortran. These programming languages are more like the language with which one talks and writes every day. The compiler translates the user's instructions into binary code (machine code) that the computer will understand and do what is needed.

**CO2+2H2O**

**a2+b2+2ab**

Tutor Joe’s