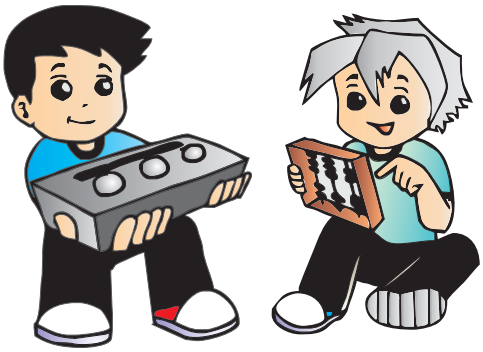
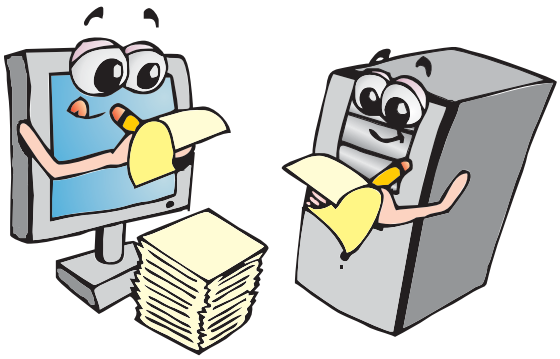


UNIT 1

Word Power

Early Devices
Abacus
Napier's Bones
Jacquard's Loom
Difference Engine
Leibniz's Calculator
Slide Rule
Pascaline
System
Computer System
Speaker
Monitor
CPU
Mouse
Keyboard
Printer



KNOW YOUR COMPUTER

LEARNING OBJECTIVES

At the end of the Unit, you should be able to :

- identify the different devices created in the early days;
- tell the importance of early devices in the evolution of computer;
- name the inventors of the early devices;
- express the significance of the early devices;
- describe each of the early devices;
- explain the characteristics of computer;
- explore the capabilities of computer;
- enumerate the ways on how the computer helps man.
- define what is computer;
- recognize what a computer can do and cannot do;
- break down the components of the computer system; and
- determine how each component contributes to the whole computer system.

Lesson 1 WHO WERE THEY BEFORE ME?

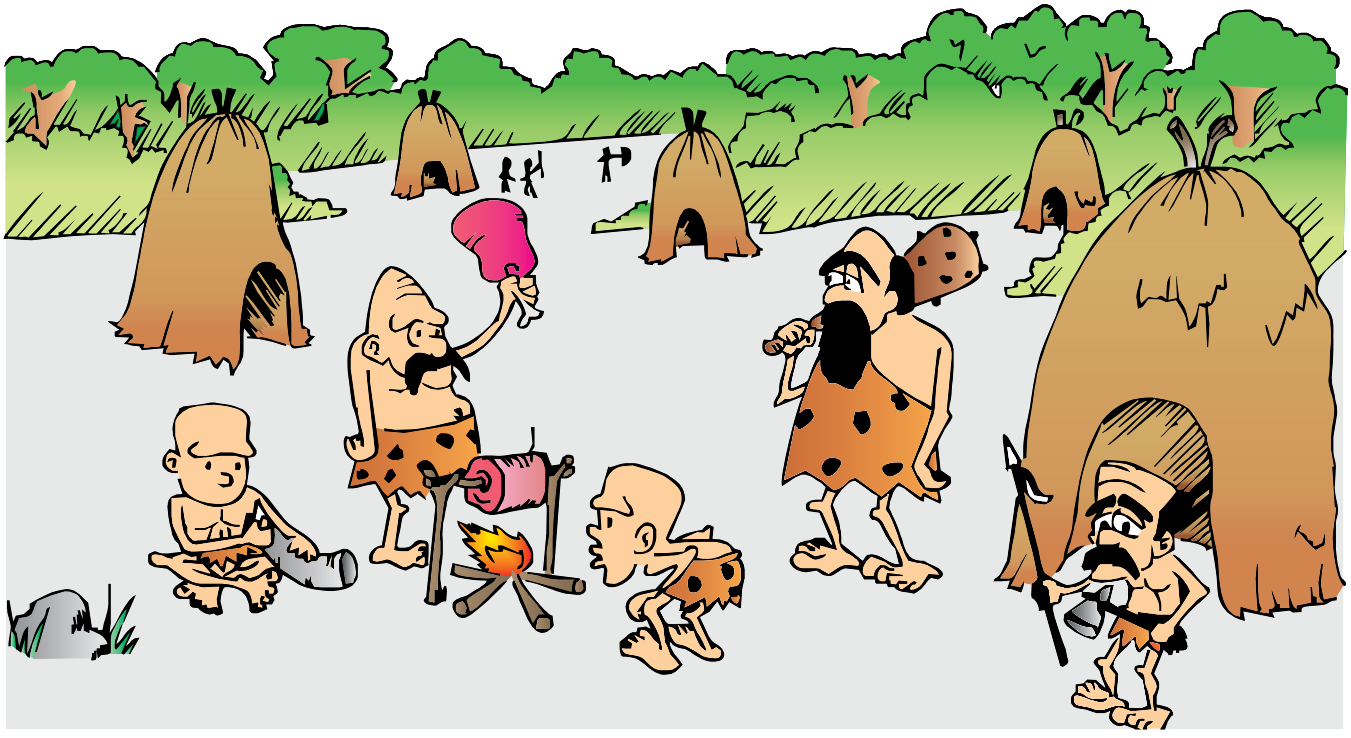
Early Devices

Life during the early times was so simple. Men had only few worries. The most important thing before was to survive and continue living.

Mother earth was very different before compared to what it is today. What about you? Do you observe changes in the surrounding each day? Whatever difference you may observe, the same thing remains consistent: Life is the most precious treasure one could ever have.

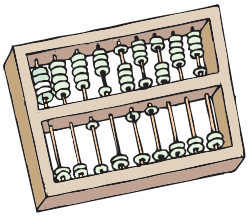
Try to compare life during the early times with the kind of life in the present time. Look at the picture below. What can you tell about the people? Answer the following questions:

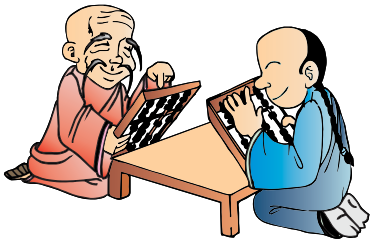
- *Where did they live?*
- *What did they eat?*
- *What did they use for clothing?*



The following are the early devices that most of our ancestors used.

ABACUS



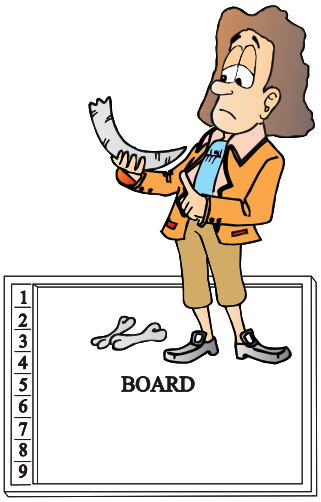


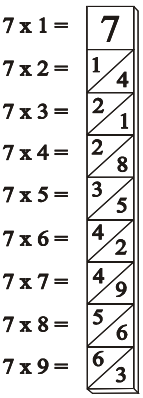
Abacus was considered as the oldest device and the first known machine developed to compute or perform mathematical computations. It originated between 600 and 500 B.C. either in China or Egypt. It consisted of round beads that were slide back and forth on rods or sticks to perform addition and subtraction.

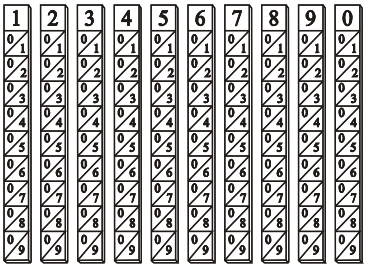
NAPIER'S BONES

John Napier, a **Scottish theologian,** became famous for his discovery of logarithms. He invented in 1617 the Napier's bones.

Napier's bones, also called Napier's rods, were numbered rods made of ivory that engraved the multiplication table. These calculating rods were manipulated by placing the sticks side by side such that it was possible to multiply and divide large numbers.

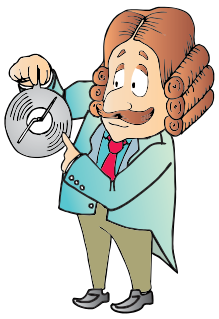


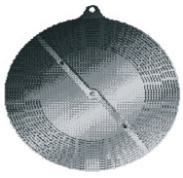




SLIDE RULE

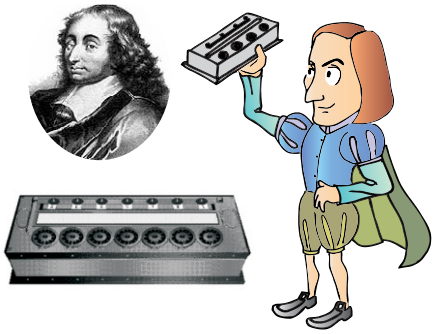
Slide Rule was a set of rotating discs invented in 1621 by William Oughtred, an English mathematician. This first analog-computing device was used primarily for multiplication and division, and also for scientific functions.





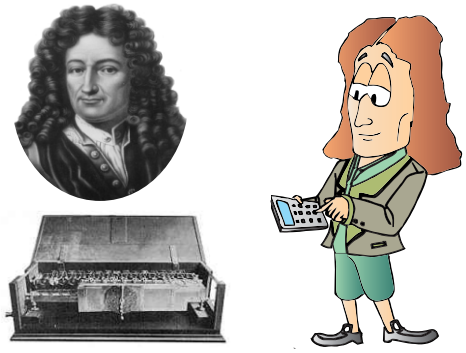
PASCALINE

It was the first automatic mechanical calculator invented in 1642 by the French mathematician and philosopher, Blaise Pascal. This device used a series of toothed wheels which were turned by the hand. Pascaline could only do addition and subtraction, with numbers being entered by manipulating dials.



LEIBNIZ'S CALCULATOR

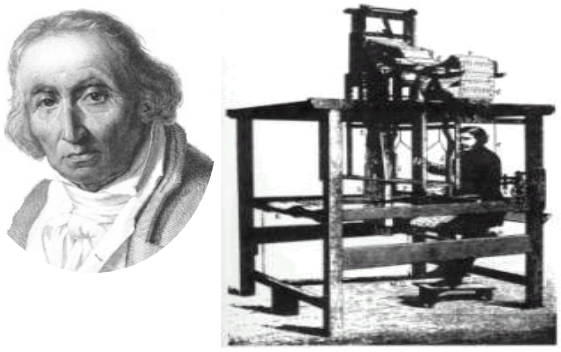
In 1647, a German philosopher and mathematician made improvements on Pascaline. Gottfried Wilhelm Von Leibniz made possible for the calculator to divide and multiply as easily as it could add numbers.



JACQUARD'S LOOM

Joseph-Marie Jacquard, a Frenchman, invented the Jacquard's Loom in 1801. It was not a computing machine but a weaving machine.

Although Jacquard's Loom is not a computer, it was the first machine that used punch cards to control a sequence of operation which was an important step in the history of computing hardware.



DIFFERENCE ENGINE

The **Difference Engine**, an automatic, mechanical calculator was invented in 1822 by Charles Babbage, also known as the "Father of Modern Computer". It was a machine used to perform calculations of polynomial functions. The Difference Engine was a complex assembly of wheels and gears engineered to exact specifications.