TOOL – A BRIEF HISTORY OF COMPUTERS

OPERATION OF DEVICES > 0.1 OPERATING COMPUTERS

TARGET GROUP	AGE GROUP	PROFICIENCY LEVEL	FORMAT	COPYRIGHT	LANGUAGE
Facilitators	N/A	Level 0, Level 1	Preparatory guide	Creative Commons (BY-SA)	English, French

This document contains background information for facilitators before they run the workshop with participants. It gives a general overview of the development of computers over the years.

General Objective	Knowledge acquisition
Preparation time for facilitator	less than 1 hour
Competence area	0 - Operation of devices
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Resource originally created in	French

WORKSHOP DIRECTIONS

1 What's a computer?

A computer is a device that processes information. Using programmed instructions, computers execute many tasks. A computer is therefore an electronic and digital device, programmable, and can, using memory, execute several tasks simultaneously. It is composed of:

- a screen
- a keyboard
- a mouse
- speakers
- console: box containing the electronic material permitting the computer to function: the screen, mouse, keyboard and speakers are linked to this. A laptop doesn't feature an external console – instead all the components are contained in the smaller device's body, along with a battery allowing for more portability.

External devices can be connected to the computer, such as webcams, printers, USB keys, memory cards, gaming controllers, etc. Today, computers are used by software developers and scientists as well as by the general public. This was not the case for a long time following its creation in the 20th century!

2 Calculators and computers

Charles Babbage invented what we today consider to be the first computer: a way of mechanising the production of mathematical tables. It was in 1823 that the British government authorised him to create two giant calculators and it was between 1830 and 1840 that he completed his design for the Analytical Engine, described as the first general purpose computer. This was the dawn of programming! It was after the second world war that the first digital computers were produced which could store and read programs (invented by John von Neumann). Later developments saw the mouse, hard drive, etc.

3 Personal computers

The personal computer arrived much later. These were – and are sometimes still – referred to as microcomputers. It was in 1977 that Radio Shack unveiled its first model followed by IBM in 1981 which ran on a Microsoft operating system developed by Bill Gates and Paul Allen in 1975. In 1976, Steve Jobs, Steve Wozniak and Ronald Wayne founded Apple which sold its first computer in 1984 (this was the first commercially mass-produced computer featuring a mouse and an integrated user interface). The form of computer we use today would arrive over the following decades.

4 Some key dates

Historians and scientists are today unable to identify the very first machine we could classify as a computer as its creation came at the end of a very long process of development. Essentially, countless vital steps led to the creation of the device we know today.

- 1725 – Basile Bouchon's Loom: a machine whose operating method was similar to and preceded the piano roll invented at the end of the 19th century. It is considered to be the first industrial application of a semi-automated machine.
- 1837 – Charles Babbage's Analytical Engine.
- 1941 – Mark I. This was the most reliable calculator ever created up to this point. It was followed by various versions: Mark II, III and IV. These are often referred to casually as the first computers.
- 1950s – the first programming languages and the first integrated circuit.
- 1970s – the first microprocessors such as Intel 4004.
- Finally, towards the end of the 1970s, Apple produced the first personal computer in the form we know them today.

5 Going further

You can complement this with the 'Internet:an overview'.