Computers

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Computers are very interesting. They used to be very large but now they are smaller.

A computer is a machine that handles information and works very quickly. A computer helps people in weather forecasting, typesetting, medical diagnosis, education, engineering, science, space programs, and other things. A computer works by electricity.

The earliest computer-like machine was an abacus. In 1830, Charles Babbage invented a computer he called the Analytical Engine. He never did finish his great invention. In 1888, Herman Hollerith used an early computer to take the American census. He used punched cards and did the job in a third the time that was required for the previous census. In 1946, the ENIAC computer was invented. It was a digital computer with vacuum tubes. It was very large, produced a great deal of heat, and was a first-generation computer. In 1951, UNIVAC I was invented and was the first to be mass-produced. It too was very large, produced much heat, and was a first-generation computer. In 1960, a computer was made with transistors which was smaller, faster, more dependable, and was a second-generation computer. In 1965, a computer was invented with tiny, integrated circuits and was a third-generation computer. Also in 1965 a computer was invented with tiny integrated circuits on a chip. This was the beginning of fourth-generation computers.

Analog computers measure things. An example of this kind of computer is a thermometer. When you have a fever, the heat causes the mercury to climb up the tube. Digital computers solve problems by counting. They do this by using their memories.

There are three main parts to a computer: the input, the CPU (Central Processing Unit), and the output. In the input stage, the programmer puts in the instructions and data. They can be put into the computer by using disks, tapes, cards, and so on. The CPU is made up of memory, control, and arithmetic units. This is where all the instructions and data are handled. The output involves getting the processed information out to the user. It comes out to the user in such forms as the video display, printer, cards, and voice.

A program is a set of coded instructions. There are many different programming languages including COBOL, APL, PL/1, FORTRAN, ASSEMBLER, and BASIC. They are used to write sets of instructions for the computer to use. This is how the programmer codes his program: First he assigns symbols to stand for his data. Then he gives the instructions. Then he tells the computer to print the answers. Finally, he tells the computer to stop!

An example of a simple program is the following:

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READ A,B
C=A+B
PRINT C
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READ A,B tells the computer to place data on locations A and B in its memory. C=A+B instructs the computer to add the numbers at locations A and B and to put that sum into location C. Print C tells the computer to print the sum that is in location C. After all the instructions are in the computer, the programmer must give two numbers (such as 5 and 7) for A and B so that the computer can solve the problem.

Some fields in which computers are used are medical diagnosis, manufacturing, transportation, control room operator, business, and education. Some careers involving computers are being a programmer, a designer, an operator, and a manufacturer.

Now you see how interesting computers are. Computers can do a lot of work for us. Computers used to be very expensive but now they are cheaper. A lot of people have computers in their homes. Some electronic toys are actually small computers.

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