Family and Friends 6

Information Technology

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Activities

Before reading

1 Is information technology important in your life? How often do you . . .

	Every day	Every week	Not very often
1 send emails?	☐	☐	☐
2 look for information on the Internet?	☐	☐	☐
3 take photos with a mobile phone?	☐	☐	☐
4 listen to music on an MP3 player?	☐	☐	☐
5 play computer games?	☐	☐	☐

2 Read these sentences. For each sentence, circle 1 (strongly disagree),
2 (disagree), 3 (not sure), 4 (agree) or 5 (strongly agree).

1 Information technology has made people's lives better in a lot of ways.

     1   2   3   4   5

2 In the future people won't have to work hard, because computers will do
most of the work.

     1   2   3   4   5

3 People are getting fat and lazy, because they spend too much time using
computers.

     1   2   3   4   5

4 Older people do not need to use information technology – it is for young
people.

     1   2   3   4   5

CHAPTER 1 **How computers began**

Today it is hard to imagine a world without computers. They are everywhere, in homes and offices, and they are in many of the machines we use every day: cars, televisions, radios, washing machines … But it was very different sixty years ago. When computers were first built in the 1940s and 1950s, they were very difficult to use, and only a few people understood them. They were enormous – each computer was as big as a room! In 1949 the magazine *Popular Mechanics* made this prediction: 'One day computers will be really small; in fact, they will weigh less than 1.5 tonnes.' Now computer chips can be smaller than the full stop at the end of this sentence. Over the past fifty or sixty years computers have changed much more than people thought possible.

prediction saying what you think will happen

weigh to measure how heavy something is

computer chip a small piece which is the thinking centre of a computer

Computers all around us

The word 'computer' used to mean a person, not a machine. In the nineteenth century builders and technicians needed to know the answers to very difficult calculations to help them do their work. They did not have the time to do these calculations themselves, so they bought books of answers. The people who did the calculations and wrote the books were called 'computers'.

In the 1820s a British mathematician called Charles Babbage invented a machine that did very difficult calculations automatically: the Difference Engine. He did not finish building it at the time. But in the late 1980s some technicians from the Science Museum in London built a Difference Engine, which is still in the museum today. It weighs about three tonnes, and it is nearly two metres tall and three metres wide. And it works: in the early 1990s it did a calculation and gave the right answer – thirty-one digits long!

Babbage then started work on another machine, called the Analytical Engine. The Analytical Engine could do more: it had a kind of memory. This meant that it was possible to write programs for it that did more and more difficult calculations. For this reason, the Analytical Engine is often seen as the first real computer. However, Babbage never finished building this machine either!

Babbage's ideas were ahead of their time. Slowly inventors began to build better calculating machines.

In 1957 a company called IBM made a computer called the 610 Auto-Point. They said that it was the first 'personal computer', but it was not like computers today. It was large and cost $55,000! It was called a personal computer, or PC, because it only needed one person to work it.

technician a person who works with machines

calculation using numbers to find out an amount

mathematician a person whose job is working with numbers

invent (n invention) to make something that did not exist before

automatically without needing a person

museum a place where you can look at old or interesting things

memory the part of a brain or of a machine that remembers things

real not false

company (plural companies) a group of people all working to make or do something for money

The first computers were too big, heavy and expensive to have in your home. But in the 1960s technicians found a way to make computer chips with thousands of very small transistors on them. An American inventor called Ed Roberts made one of the first PCs, called the Altair 8800. People who bought an Altair 8800 got a box of parts to put together at home to make the PC. It cost less than $400, and Ed Roberts sold 2000 in the first year.

In 1976 Steve Wozniak and Steve Jobs started the Apple Computer Company. In 1977 their second computer, the Apple 2, appeared. It was popular, and the company made $700,000 that year. The next year the company made $7 million! Personal computers had become a part of ordinary people's lives. IBM made their first home computer in 1981, and the *Time* magazine 'Person of the Year' in 1982 was not a person at all – it was the PC.

In the 1980s the market for home computers grew very quickly. There were lots of different computer companies, and many used their own operating systems. But some companies, like Dell and Compaq, made 'IBM-compatible' computers, which meant that they used the same operating system and the same software as an IBM PC. IBM-compatible computers were more successful than the other kinds of PC, and today nearly all PCs are IBM-compatible.

Apple is the only famous computer company which still uses its own operating system. In 1998 it started selling the iMac – a computer that looked very different from other PCs at that time. People chose the iMac because they thought it looked good in their homes. Apple is now also famous for its media players (iPods) and mobile phones (iPhones).

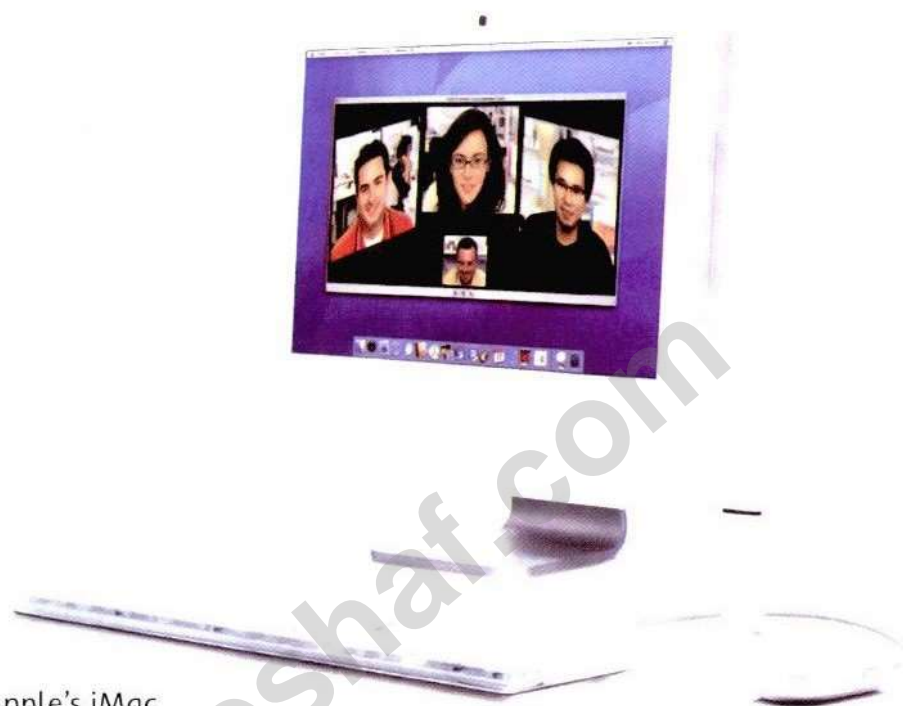**transistor** an electronic switch

appear to come and be seen

market the people who want to buy something

operating system the software that lets computers understand programs

system a group of things that work together

software computer programs

successful getting or doing what you want

Apple's iMac

As computer chips became smaller during the 1980s, companies began to make laptops. You could put them on your lap so you did not need to have a desk. These were very popular with business people, because they could take information with them when they travelled. With a laptop they could work at home, in hotel rooms and on aeroplanes.

Because today's computer chips work so fast, modern PCs can copy and keep music, films and a lot of information, and they can even understand spoken language. A modern laptop is much faster than the very large and expensive computers from the 1970s. For many people laptops are now part of ordinary life.

lap your knees, when you are sitting down

copy to make something that is the same as something else