

Chapter I: The Digital Era

I/ Warm-up

We are living in a digital age. Computers have revolutionized the way we perform daily tasks, such as working online, holding meetings and shopping. Make a list of the different uses of a computer.

II/ Reading

Computers: friend ...

People who have grown up with PCs and microchips are often called the digital generation. This is how some people answered when questioned about the use of computers in their lives.

*'I have a **GPS, Global Positioning System**, fitted in my car. With this navigation system I never get lost. And the **DVD recorder** is perfect for my children's entertainment.'*

*'I use an **interactive whiteboard**, like a large touchscreen monitor, at school. I find computers very useful in education.'*

***Assistive technology**, for people with disabilities, has helped me a lot. I can hardly see, so I use a **screen reader**, a program that reads aloud onscreen text, menus and icons.'*

*'This new **HMD, head-mounted display**, allows me to watch films, and enjoy **virtual reality**, the artificial environment of the latest video games.'*

*'The upgraded **wireless network** at my university is great: we can connect our laptops, PDAs and Wi-Fi cell phones to the network anywhere in the campus. Communication is becoming easier and easier.'*

... or foe?

- Our society has developed **technological dependence**. When computers are down, our way of life breaks down: planes stop flying, telephones don't work, banks have to close.
- Computers produce **electronic waste**, plastic cases and microchips that are not biodegradable and have to be recycled or just thrown away.
- They are responsible for health problems, e.g. **computer addiction**, an inappropriate and excessive use of computers.
- **Cybercrime**, crime committed with the help of computers, is creating serious problems.
- Citizens may feel a loss of privacy because of unauthorized use of personal data or receiving unwanted electronic messages.

A/ Complete the following sentences with words from the text above

1. The is a piece of software that interfaces with your PC and allows you, via keyboard commands, to get any text information read to you in synthetic speech.
2. A....., as popularized by virtual reality, lets the user immerse him/herself in a synthetically generated environment.
3. An is a touch-sensitive device where a special pen or your finger can act as a mouse.

4. Tony Adams is now the proud owner of a dark silver Vogue, complete with leather interior,navigation and a, with LCD TV screens.

B/ Read the text again and decide what problems are mentioned in these sentences.

1/ We are sorry to announce that most flights are delayed or canceled.

2/ He should go to a psychologist. He spends hours surfing the Web.

3/ Technology changes so quickly that we have to scrap computers when they become obsolete.

4/ I've been getting emails about offers for lots of different products.

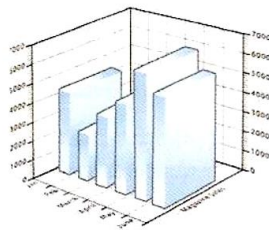
5/ My computer system has been broken into and some useful information has been destroyed.

C/ Complete the computer uses with words from the following text

Things we can do on the computer



A publication



A business graph



Web pages and email



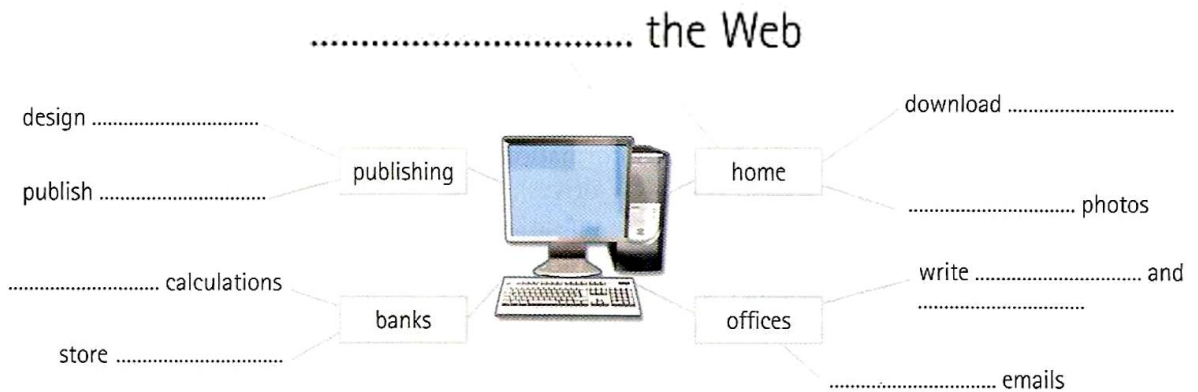
Photo editing

A secretary: 'I use computers to do the usual office things like write letters and faxes, but what I find really useful is email. We are an international company and I send emails to our offices all over the world.'

A publisher: 'We use PCs to produce all sorts of texts in digital format. We publish e-books (electronic books) and interactive e-learning programs on CD, and we help a local company to design an online newspaper, displayed on the Web.'

A bank manager: 'We use financial software to make calculations and then generate graphs or charts. We also use a database to store information so that it can be easily searched.'

A home user: 'I like to retouch photos on my computer; I improve them by making a few touches and then save them on a CD. I also enjoy looking at music portals on the Web. I surf the Web every day and I often download files, I copy music files from the Net to my PC.'



D/ Tick the computer users cited in the article below

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> home | <input type="checkbox"/> art |
| <input type="checkbox"/> hospitals | <input type="checkbox"/> banking |
| <input type="checkbox"/> engineering | <input type="checkbox"/> libraries |
| <input type="checkbox"/> shopping | <input type="checkbox"/> film-making |
| <input type="checkbox"/> television advertising | <input type="checkbox"/> schools |

Computers are part of our everyday lives. They have an effect on almost everything you do. When you buy groceries at a supermarket, a computer is used with laser and barcode technology to scan the price of each item and present a total. Barcoding items (clothes, food, and books) requires a computer to generate the barcode labels and maintain the inventory. Most television advertisements and many films use graphics produced by a computer. In hospitals, bedside terminals connected to the hospital's main computer allow doctors to type in orders for blood tests and to schedule operations. Banks use computers to look after their customers' money. In libraries and bookshops, computers can help you to find the book you want as quickly as possible.

E/ Read the text and find out how computers are used in different situations

The digital age

We are now living in what some people call *the digital age*, meaning that computers have become an essential part of our lives. Young people who have grown up with PCs and mobile phones are often called *the digital generation*. Computers help students to **perform** mathematical **operations** and improve their maths skills. They are used to **access the Internet**, to **do** basic **research** and to

communicate with other students around the world. Teachers use projectors and interactive whiteboards to **give presentations** and teach sciences, history or language courses. PCs are also used for administrative purposes – schools use word processors to **write letters**, and databases to **keep records** of students and teachers. A school website allows teachers to publish **exercises** for students to **complete** online.

Students can also enrol for courses via the website and parents can download official reports.

20 Mobiles let you **make voice calls, send texts,** email people and download logos, ringtones or games. With a built-in camera you can send pictures and make video calls in *face-to-face* mode. New smartphones combine a telephone with web access, 25 digital assistant (PDA) and a GPS navigation system, all in one.

In banks, computers **store information** about the money held by each customer and enable staff to **access** large **databases** and to **carry out** financial 30 **transactions** at high speed. They also control the cashpoints, or ATMs (automatic teller machines), which **dispense money** to customers by the use of a PIN-protected card. People use a Chip and PIN

35 card to pay for goods and services. Instead of using a signature to verify payments, customers are asked to **enter a four-digit personal identification number (PIN)**, the same number used at cashpoints; this system makes transactions more secure. With online banking, clients can easily **pay bills** and **transfer** 40 **money** from the comfort of their homes.

Airline pilots use computers to help them control the plane. For example, monitors **display data** about fuel consumption and weather conditions. In airport control towers, computers are used to 45 manage radar systems and regulate air traffic. On the ground, airlines are connected to travel agencies by computer. Travel agents use computers to find out about the availability of flights, prices, times, stopovers and many other details.


1/ Find the words (1-10) in the text above. Can you guess the meaning from the context? Are they nouns, verbs, adjectives, or adverbs? Write n, v, adj, or adv next to each word.

- | | |
|----------------------------------|----------------------------|
| 1/ perform (line 6)..... | 6/ digital (line 25)..... |
| 2/ word processor (line 13)..... | 7/ store (line 27)..... |
| 3/ online (line 16)..... | 8/ financial(line 29)..... |
| 4/ download (line 18)..... | 9/ monitor (line 42)..... |
| 5/ built-in (line 28)..... | 10/ data (line 42)..... |

2/ Match the words in E 1 (1-10) with the correct meanings (a-j).

- | | |
|-----------------------------------|--|
| a keep, save..... | g collection of facts or figures..... |
| b execute, do..... | h describes the information that is recorded or broadcast using computers..... |
| c/ monetary..... | i program used for text manipulation..... |
| d/ screen..... | j- copy files from a server to your PC or mobile..... |
| e/ integrated..... | |
| f/ connected to the internet..... | |

III/ Listening

A  Listen to four people talking about how they use computers at work. Write each speaker's job in the table.

electrical engineer secretary librarian composer		
Speaker	Job	What they use computers for
1		
2		
3		
4		

IV/ Language Work: The present simple passive

Read the Help box and then fill in the blanks with the correct form of the verbs in brackets.

Example: Houses (design).....with the help of computers Houses **are designed**-with the help of computers.

HELP box

The present simple passive

- You form the present simple passive with *am/is/are* + past participle, e.g.:
 - This program **is written** in a special computer language.
 - Programs and data **are usually stored** on disks.
- Remember that the word *data* takes a singular verb (3rd person singular) when it refers to the information operated on in a computer program.
 - The data **is** ready for processing.

1/ Various terminals (connect).....to this workstation.

2/ Microcomputers (know).....as PCs.

3/ Magazines (typeset).....by computers.

4/ When a particular program is run, the data (process).....by the computer very rapidly.

5/ The Web (use).....to search for information and buy products online.

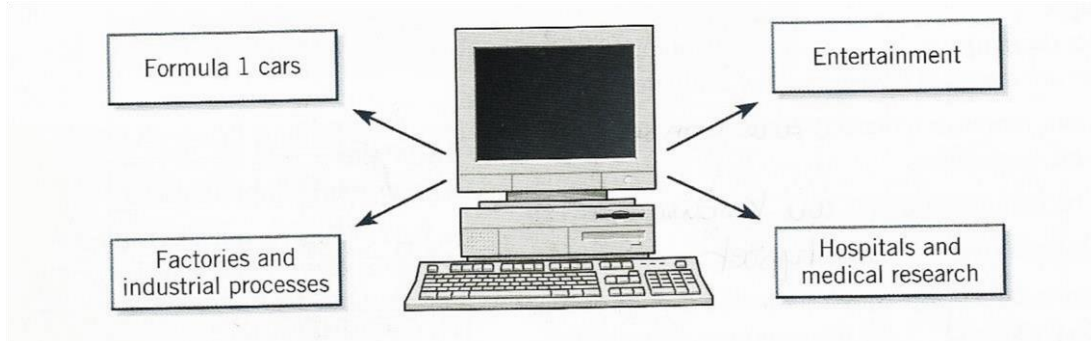
6/ The drug-detecting test in the Tour de France (support).....by computers.

7/ All the activities of a computer system (coordinate).....by the central processing unit.

8/ In some modern systems information (hold).....in optical disks.

V/ Speaking

In small groups, choose one of the areas in the diagram below and discuss what computers can do in this arena



Use the following words and constructions to discuss computer applications

Useful words

Formula 1: *racing car, car body, design, mechanical parts, electronic components, engine speed*

Entertainment: *game, music, animated image, multimedia, encyclopedia*

Factories: *machinery, robot, production line, computer-aided manufacturing software*

Hospitals: *patients, medical personnel, database program, records, scanner, diagnose, disease, robot, surgery*

Useful constructions

Computers are used to ...

A PC can also be used for ...

Computers can help ... make ... control ... store ... keep ... provide ... manage ... give ... perform ... measure ... test ... provide access to ...

VI/ Writing

Write a paragraph on the ways you use computers in your work and in your free time.