



Facultad Regional Venado Tuerto

TECNICATURA UNIVERSITARIA EN PROGRAMACIÓN

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INGLÉS I

UNIT 4

- ❖ Information Technology
- ❖ Devices
- ❖ Grammar: prefixes, suffixes, compound nouns, phrasal verbs, collocations
- ❖ Articles
- ❖ Adjectives: describing and comparing devices

5 Information technology 1

ADJECTIVE

NOUNS

A

Information systems collect, organize, store, process, retrieve and display information in different formats (text, video, and voice). Information technology allows very fast, automated manipulation of digital data and their transformation from and to analogue.

Two basic technologies have been responsible for the development of the necessary hardware: integrated circuits and digital communications. Parallel advances have been made in software, particularly easy-to-use software products to create, maintain, manipulate, and query files and records. Many of these software programs are designed for use both by computer professionals and enthusiastic amateurs. Another important factor is the development of computer networks (► 6).

B

As technology develops, new models and types of computer appear. At the heart of all computers is the hardware. However, without software, computers are just dumb boxes, unable to perform any calculations or operations.

Models and types of computer

desktop • laptop • mainframe • notebook • server • terminal • workstation

Computer hardware

CPU (central processing unit) • dot matrix printer • expansion card • inkjet printer
keyboard • laser printer • monitor • mouse • RAM (random access memory)
scanner • screen • storage devices

Software

applet • application software • browser • database software • email software
graphics software • operating system • search engine • spreadsheet
word processing

C

Many words in the field of IT come from American English. So you may see the following spellings:

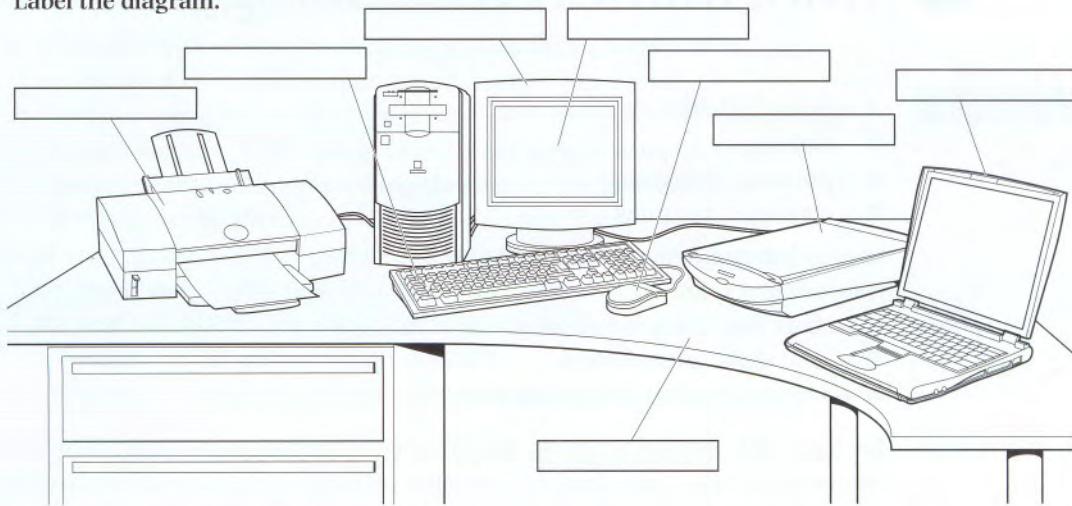
British English	American English
programme	program
analogue	analog

The area of IT is developing very quickly; and the language to describe hardware, software and applications is also evolving at a high speed. As a result new noun + noun combinations often change to single nouns

noun + noun	single noun
lap top	laptop
note book	notebook
work station	workstation
desk top	desktop

TASKS

1 Label the diagram.



2 Combine one word from A and one word from B and match it with the appropriate definition in C.

A	B	C
create	products	a monitor will do this on a computer screen
central	information	this describes the format of 0 and 1 in which information is stored
software	processing unit	these enable a computer to perform word processing, to create databases, and to manipulate numerical data
display	card	when two or more components are combined and then incorporated into a single package
digital	files	to make new programs, utilities or documents
expansion	network	a group of electronic machines connected by cables or other means which can exchange information and share equipment (such as printers and disk drives)
integrated	data	the principal microchip that the computer is built around
computer	circuits	you plug this into a slot to add features such as video, sound, modem and networking

3 Complete each gap in the following text with a phrase from the table above.

- The computer monitor will display information so you can see it on screen.
- Information is stored on a computer as Digital data.
- Spreadsheet and graphic software are examples of Software products.
- Digital communications and Integrated circuits have allowed developments in hardware to be made.
- In order to organise data you should Create file where you can store data.
- When several computers are linked together you have a Computer Network.
- The part of the computer which interprets and carries out instructions is the Central processing Unit.
- An Expansion Card can be inserted in your computer to give your computer extra capabilities.

6 Information technology 2

A

A network includes:

- – techniques
- – physical connections
- – computer programs

used to link two or more computers.

Network users can:

- – share files, printers and other resources
- – send electronic messages
- – run programs on other computers

Each network operates according to a set of computer programs called network **protocols** for computers to talk to one another. Computer networks can now be **interconnected** efficiently through **gateways**. The biggest network is the **World Wide Web**. It consists of a large number of smaller interconnected networks called **internets**. These internets may **connect** tens, hundreds, or thousands of computers. They can share information with each other, such as **databases** of information. The internet allows people all over the world to **communicate** with each other effectively and inexpensively.

B

Before a network can operate, it needs physical *connections* so that signals can be transmitted. After the network has been connected, it is ready for *operation*.

TAREA HACER DEFINICIONES EN LISTA

Network connections

- bandwidth • baud • bits per second (bps) • optical fibre • packet receive • signal • transmit • transmission speed • twisted pair

Network operation

- configure • download • hack • hub • install • internet service provider (ISP)
- local area network (LAN) • switch • transmit • upload • web page • website
- wide area network (WAN) • wireless

C

A prefix comes at the beginning of a word and usually has a specific meaning, for example *inter* = between.

Look at the following prefixes and their use in the above IT words/phrases:

prefix	meaning of prefix	example of use
inter-	between	internet, interconnect, interactive, international
intra-	within	intranet, e.g. company intranet
trans-	across	transmit, transfer, transaction
co-/com-/con-	with	combine, compatible, connect, configure
up-	up (to internet)	upload
down-	down (from internet)	download, downtime, i.e. when the network is down (not working)

1 Choose the correct word in each of the following.

- 1 The speed with which a modem can process data is measured in B.
 - a) bandwidth
 - b) bits per second (bps)
 - c) signal
- 2 Cables consisting of several copper wires each with a shield are known as A cables.
 - a) twisted pair
 - b) optical fibre
 - c) power cables
- 3 Computers that are connected together within one building form a C.
 - a) WAN
 - b) ISP
 - c) LAN
- 4 If you transfer a file from a remote computer to your computer, you B.
 - a) download
 - b) upload
 - c) run
- 5 To send out information is to C.
 - a) signal
 - b) packet
 - c) transmit
- 6 A document containing information and graphics that can be accessed on the internet is A.
 - a) a website
 - b) a web page
 - c) the World Wide Web

2 Complete the words in the following sentences by adding the prefix *inter-*, *intra-*, *trans-*, *com-*, *con-*, *up-* or *down-*.

- 1 Last month computer Intratime cost the company over €10,000 in lost production.
- 2 The computers in the production department have now been successfully Interconnected with those in the planning department.
- 3 Once you have completed payment details the data will be Transmitted via a secure link.
- 4 We cannot network these computers because the systems are not Compatible.
- 5 Many companies distribute internal documents on their own Intranet.
- 6 Once the home page has been completed, we'll be ready to Upload the site.
- 7 Cables are being laid throughout the building as the network requires physical Connections.
- 8 Using the network he was able to Combine the data from different reports.

3 Here is a list of instructions for someone wanting to set up a small network. Put the instructions in the correct order.

TAREA

- a Make wiring and layout plans for your network.
- b Hook up the network cables by connecting everything to the hub.
- c Check that each computer has an IP address and give it a name.
- d If you're installing a small network, twisted pair will be adequate. However, in order to span greater distances and to minimize magnetic and electrical interference use fibre optic cable.
- e Decide on the type of network you want to install. To enable you to transfer large amounts of data, choose Fast Ethernet (100BaseT).
- f Install network adapters in the computers.
- g Add an internet gateway to your network to set up a shared internet connection.
- h Install driver software for the adapter driver and install client software to share printers and files.
- i Check which protocols are installed and add any other protocols you require.
- j Get the hardware you need: an Ethernet adapter card for each computer that doesn't have an Ethernet port, a hub if you've got more than two computers, cables and wall jacks.

A Compound nouns

Compound nouns consist of two or more words used together as a single word, e.g. *hard drive*. In a compound there is a headword and one or more modifiers.



Modifiers can refer to different things:

- material, e.g. **silicon chip** = a chip made of silicon
- use or function, e.g. **search engine** = a program used to find information on the Web
- activity or profession, e.g. **software engineer** = a person who designs software
- place, e.g. **web portal** = a site on the Web that acts as a gateway to other sites

Compound nouns are written in different ways:

- as two separate words, e.g. **control panel** = a utility that lets you configure and adjust a system
- as two words joined with a hyphen, e.g. **self-test** = an automatic examination of a device
- as one word, e.g. **clipboard** = a holding place for text or graphics you've just cut or copied

Unfortunately there are no rules. For example, you may see *clip art*, *clip-art* and *clipart*.

Some compounds change over time, for example two words – *web site* – become hyphenated after a time, and then eventually end up as one word – *website*.

The two parts may be:

- | | |
|------------------------------|---|
| 1 noun + noun | address bus = a set of wires that identifies locations, addresses, in the main memory
bandwidth = the rate at which data flows through a cable or network
mail merge = a tool that combines a standard letter with a mailing list to create personalized letters |
| 2 adjective + noun | broadband = high-speed connection, e.g. cable or ADSL Internet access
shortcut = a small file, 1KB in size, that links to a real file stored elsewhere
smart card = a plastic card that contains a small chip |
| 3 verb or verbal noun + noun | scrollbar = part of a window that lets you move through a document
recording head = a mechanism that transfers data to a disk |
| 4 verb + particle | add-on = a hardware or software module that can be added to a computer
set-up / setup = the way in which a program or device is configured |

Compound nouns normally have the main stress on the first part and a secondary stress on the second part, e.g. screen saver /skrɪn ,seɪvə(r)/.

B Compound adjectives

Compound adjectives are made up of two words, normally with hyphens between them. The second part is often a past participle.

- A menu-driven program lets you select a command from a menu.
- A voice-activated product is activated by the user's voice.
- Object-oriented programming is based on objects and their effects on each other, rather than on a series of instructions.

Other common patterns include:

- noun + present participle
Space-saving PCs take up very little desktop space.
- noun + adjective
A hands-free device does not require the hands for operation.
A stand-alone computer or business can operate on its own.



An experimental robot receiving voice-activated instructions

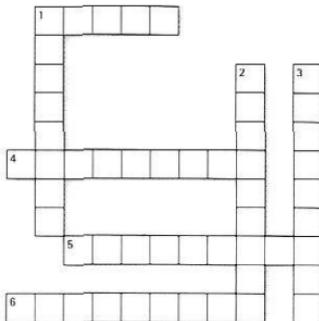
5.1 Look at A opposite. Which compound do these definitions refer to?

- 1 a small piece of silicon which is used in computers
- 2 a site that offers email, news, forums, web searching, online shopping and links to other sites
- 3 a utility used to adjust computer settings such as fonts, sound and networks
- 4 the read/write head of a disk drive
- 5 a computer bus used by the CPU to communicate memory locations

5.2 Complete these sentences with a compound from A opposite.

- 1 enables you to combine two files, one containing names and addresses and the other containing a non-specific letter intended for multiple recipients.
- 2 A USB headset is a useful , the ideal accessory for your computer games and music.
- 3 The printer's didn't identify any errors.
- 4 Because the Web has no central organization, every Web surfer needs a – a special site that locates other sites based on words or phrases you type in.
- 5 They are seeking a to help write and test a new operating system.

5.3 Complete the puzzle with compound nouns.



Across

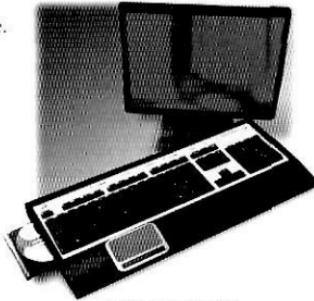
- 1 the configuration of hardware and software
- 4 a bar that allows you to select the portion of the document you want to see
- 5 an area that holds the things you copy, ready to be pasted anywhere else
- 6 a type of data transmission that provides fast Internet access

Down

- 1 a special file which redirects to another file or program
- 2 a small card with an embedded microchip
- 3 the amount of data that can be transmitted along a channel

5.4 Complete these sentences with a compound adjective from B opposite.

- 1 A - telephone allows people with limited mobility to dial and answer the phone with just the sound of their voice.
- 2 A fax machine is a - device, so it does not require any other device to function.
- 3 A - application is operated by making choices from menus instead of giving instructions on a keyboard.
- 4 In some countries it is obligatory to use a - car kit when you are using a mobile phone while driving.
- 5 An - language like C++ lets the programmer concentrate on individual units (e.g. a piece of text, a graphic or a table) and give each object functions which can be changed easily.
- 6 They've launched a new - computer, an entire PC embedded inside a keyboard.



A space-saving PC

You and computers



Access the *Professional English in Use ICT* website at www.cambridge.org/elt/ict. Then do the activity **Combinations with 'card' and 'web'**.

See also

Unit 61

Singular and plural nouns

Unit 62

Countable and uncountable nouns

A Sample sentences

- The cost of making a telephone call has fallen.
- The advertising campaign was a big success.
- I went for a job interview today.
- He handed me his business card.

B Form

A noun compound is a phrase with two or more nouns together, e.g.

computer software
noun + noun

1. The first noun is like an adjective; it gives more information about the second noun:

- A: I need some information.
 B: What type of information?
 A: I need some product information.

2. The first noun is normally in the singular:

finance director trade fair fax machine but sales manager

C Uses

We use noun compounds because:

1. They are shorter:

- A: What about Severcise?
 B: There will be a major product launch in 2012. (*rather than* the launch of the product)
 A: And Herbigrade?
 B: We are shortly going to launch an advertising campaign. (*rather than* the campaign of advertising)

2. They have more impact:

- A: This approach to management development requires a serious commitment by the organization. (*rather than* the development of management)
 B: I agree. We need more training seminars. (*rather than* seminars for training)

3. Usually stress falls on the first word of the compound.

Notes

Some noun compounds are written as one word:

chequebook taxpayer newspaper flowchart notebook

Some are written with a hyphen:

factory-worker work-force air-conditioning tape-recorder

Some are written as two words:

employment law insurance claim adult education growth rate



Vocabulary

Technology

- 1 Find and circle six technology words in the wordsnake.

laptop tablet app social networking site website instant messaging

- 2 Label the pictures with the words in the box.

charger e-reader games console
text message website



text message



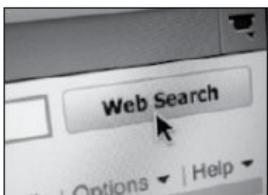
1 _____



2 _____



3 _____



4 _____

- 3 Complete the sentences with the words in the box.

cloud computing earphones
landline laptop reader

I store all my information on the internet – I think cloud computing is great!

- 1 Can I use your e-reader to listen to music? I can't hear anything with mine!
2 She hasn't got a laptop at home, she uses her mobile phone to make phone calls.
3 I need a new laptop but computers are so expensive!
4 I got an e-reader for Christmas. I'm reading *Harry Potter and the Philosopher's Stone* at the moment.

- 4 Circle the correct words.

I use my e-reader / laptop to do my homework.

- 1 She always sends text messages from her landline / mobile phone.
2 Can I use your charger / earphones, please? My battery's dead.
3 Cloud computing / A social networking site is used to store information online.
4 I can't download apps / earphones on my mobile phone because it's very old.

- 5 What types of technology do you use ...

- 1 at home?

- 2 at school?

- 3 when you are out with friends?

VOCABULARY

Technology around the home

- 1 Match these words with the technology (A–F) we can control with a phone app.

air conditioning dishwasher fridge
microwave washing machine



- 2 Complete the sentences with these words/phrases.

3D TV hair straighteners hairdryer
headphones iron plug speakers

- 1 There was a problem with the speakers at the party so they couldn't hear the music.
- 2 Ellie doesn't like her curly hair, so she uses her iron on it every day.
- 3 I'm buying some new headphones because my old ones are too big for my ears.
- 4 Go and get the hairdryer. It's cold, and you shouldn't go out with wet hair.
- 5 It's great watching action films on our new 3D TV because the picture is really good.
- 6 I don't know which plug is for the computer. There are too many cables here.
- 7 Be careful when you use the hair straighteners on those trousers. It's very hot.

- 3 3.1 Listen to six sounds. What are they? Use some of the words in the boxes in Exercises 1 and 2.

Word XP

Compound nouns

We can put two nouns together to make a compound noun. We usually do this in two ways, e.g. *washing machine* (two separate nouns), *hairdryer* (two nouns together).

- 4 Make a list of the different compound nouns on the page.

- 5 Match these phrasal verbs with the correct meanings (1–6).

pick up plug in switch off switch on
turn down turn up

- 1 connect a piece of equipment to the electricity supply: *plug in*
- 2 lift something or someone: *lift*
- 3 make the sound louder: *turn up*
- 4 start the electricity supply to something: *switch on*
- 5 make the sound quieter: *turn down*
- 6 stop the electricity supply to something: *switch off*

- 6 Complete the second sentence with the phrasal verbs in Exercise 5.

- 1 Don't leave your bedroom light on when you go out. Switch off the light when you leave the room.
- 2 The music is too loud. Make it quieter, please. Turn down the music, please. It's too loud.
- 3 They wanted to move the fridge, but it was heavy and they couldn't lift it. They couldn't lift the fridge because it was very heavy.
- 4 Can you start the dishwasher before you go out? Can you switch on the dishwasher before you go out?
- 5 Where can I connect my laptop to the electricity supply? Where can I plug in my laptop?
- 6 The cake isn't cooking because the oven isn't hot enough. The cake isn't cooking. Can you turn up the oven?

Game on

Work with a partner. On a piece of paper, take it in turns to draw a picture explaining one of the words or phrasal verbs from the page. Can your partner guess what the word or phrasal verb is?

Articles (*a / an, the* and zero article)

Form We use *a* when the next word begins with a consonant sound and *an* when it begins with a vowel sound:

a bill a European a house a magazine a union an ability
an estimate an hour an MBA an umbrella

Uses of *a / an, the* and zero article (Ø)

- 1 Before unspecified singular countable nouns:

He lives in **a** flat. (we don't know anything else about it)

- 2 Before professions:

She's **a** chemical engineer and he's **a** project manager.

- 3 In expressions of measurement:

The speed limit is 55 miles **an** hour.

It costs €1.15 **a** litre.

- 4 To describe 'all examples of the same kind':

A balance sheet is **a** document that lists assets and liabilities.

- 5 Before a specific noun that we have mentioned before:

I had a Jaguar and a Mercedes but I sold **the** Jaguar to my brother.

- 6 When it is clear what particular thing or place is meant:

I'll meet you in **the** staff car park behind **the** warehouse. Where are **the** toilets?

- 7 When two nouns are joined with **of**:

the history **of** commerce **the** balance **of** trade **a** mountain **of** photocopying **a** breach **of** contract

- 8 Before adjectives to specify a category of people or things:

the rich **the** poor **the** middle classes **the** mobile phone (a type of phone) **the** textile industry

- 9 Before some institutions:

the United Nations **the** IMF **the** Bundesbank **the** BBC

- 10 In superlative expressions:

General Motors is **the** biggest car manufacturer.

- 11 With uncountable nouns used in a general sense:

Nothing succeeds like **(Ø)** success. **(Ø)** Information is **(Ø)** power.

(Ø) Unity is **(Ø)** strength.

- 12 Before unspecified plural nouns:

(Ø) People often distrust **(Ø)** politicians.

- 13 Before the names of places and people:

(Ø) Oxford **(Ø)** Singapore **(Ø)** Dr Schweitzer **(Ø)** President Lincoln

Articles #01

Put the correct article, “a”, “an”, “the”:

_____ team	_____ giant	_____ answer
_____ tests	_____ dogs	_____ stars
_____ peach	_____ igloo	_____ house
_____ elephant	_____ sun	_____ island
_____ uniform	_____ hotel	_____ crocodile
_____ moon	_____ artist	_____ universities

Put the “a” or “an” in the sentences:

1. This is _____ easy question.
2. Would you like to see _____ movie?
3. I have _____ yellow dress.
4. This dog is _____ poodle.
5. Nick has _____ big nose.
6. Christmas comes once _____ year.
7. _____ doctor is coming to see you.
8. Is there _____ telephone here?
9. There is _____ museum in the city.
10. He has _____ old car.
11. There is _____ long line.
12. There is _____ dog in the street.
13. There is _____ ant in my tea.
14. France is _____ country.
15. David is _____ good student.
16. She needs _____ uniform.
17. It is _____ easy book.
18. Do you have _____ English dictionary?
19. Give me _____ hour.

Articles #02

Put “a” or “an”:

1. Can I have _____ cup of tea?
2. Neil has _____ dog.
3. I need _____ new towel.
4. Let's read _____ story.
5. There is _____ man outside.
6. Let's read _____ English story.
7. My father is _____ engineer.
8. What _____ nice day!
9. Give me _____ piece of the cake.
10. He is _____ good player.
11. I know _____ old game.
12. Bill is _____ good friend.
13. Today is _____ hot day.
14. Hawaii is _____ island.
15. The Nile is _____ river.

Fill in the blanks with “the” or ∅:

1. _____ apples on the basket are good.
2. _____ birds sing.
3. I love _____ cats.
4. _____ sun is shining.
5. _____ cow is very big.
6. All _____ bears are nice.
7. There are giraffes and lions in _____ Africa.
8. _____ flowers are yellow.
9. _____ books on the table are new.
10. Sarah has _____ best computer.
11. _____ letter is in the envelope.
12. My cousin never drinks _____ tea.
13. _____ short boy is my brother.
14. Today is _____ Monday.
15. Carol is _____ best student in class.

Articles #03

Put “a”, “an” or “the”:

_____ apple	_____ dress	_____ early morning
_____ snail	_____ tests	_____ good book
_____ bulbs	_____ eagle	_____ hour
_____ sofa	_____ vest	_____ tasty pears
_____ elephant	_____ clever man	_____ young trees
_____ tables	_____ hot bottles	_____ doctor

A or An?

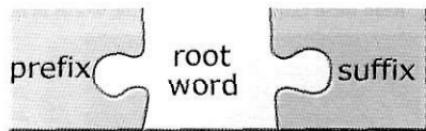
1. Lucy has **a** dog.
2. Let's sing _____ song.
3. Emily needs _____ new desk.
4. Ben has _____ old bike.
5. There is _____ English book on the desk.
6. They have _____ idea.
7. That man is _____ pilot.
8. This is _____ expensive bike.
9. My father is _____ honest person.
10. Peter has _____ aunt in Berlin.

Complete the text with the correct article, if necessary:

I am from Liverpool. Liverpool is _____ city in _____ England. I live in _____ house in _____ quiet street in the countryside. _____ street is called "Hudson Street" and _____ house is old, more than 100 years old! I am _____ English teacher at _____ college near _____ centre of _____ town. I like _____ books, music and taking _____ photographs. I usually have _____ lunch at college. I usually go _____ home by _____ car. We have all kinds of food in _____ England. I like _____ Italian food very much. Sometimes, I go to _____ Italian restaurants. _____ restaurant is called Nona's. _____ Italian food is delicious!

A**Common prefixes**

We can form new words by using prefixes and suffixes, e.g. **micro-process**-or
prefix + root + suffix.



Word parts are like puzzle pieces

Prefixes come before the root word and usually change its meaning. Here are some common ones in ICT.

■ Negative prefixes meaning 'not':

non- Non-volatile memory retains its content when the power is turned off.

un- An unformatted disk has not been 'initialized'; it doesn't allow data to be stored.

■ Prefixes of location:

trans- (= across) Data transmission can be wired or wireless.

inter- (= between) The Internet consists of millions of computers interconnected in a global network.

intra- (= within) An intranet is a private network, restricted to a company's internal use.

extra- (= outside, in addition to) An extranet links a company with its customers and suppliers.

tele- (= over a distance) Teleconferencing enables users in different places to talk to and see each other.

■ Prefixes of size:

super- (= large, better) A supersite offers links to other websites on a certain topic.

semi- (= half, partly) A semiconductor is neither a good conductor nor a good insulator (e.g. silicon, used to make computer chips).

micro- (= small) A microbrowser is designed to display web pages on PDAs and mobiles.

Prefixes of size are also used in units of memory like *megabyte* and *gigabyte*.

■ Another common prefix is **re-** in words like *reprint*, *rewritable* and *reboot*, to start the computer again.

B**Verb prefixes**

Prefixes used to form verbs which mean 'to cause to be something':

en- encrypt: to change data into a secret code so that only someone with a key can read it

up- update: to modify data in a file and thus ensure the file reflects the latest situation

upgrade: to add or replace hardware or software in order to expand the computer's power

upload: to send files to a central, often remote computer; compare with 'download'

Prefixes that mean 'the opposite of an action' or 'to reverse an action':

de- decrypt: to convert secretly coded (encrypted) data back into its original form

decompress: to restore compressed data back to its original size

debug: to correct errors in a program or system

defragment: to reorganize data stored on disk by putting files into contiguous order

un- uninstall: to remove hardware or software from a computer system

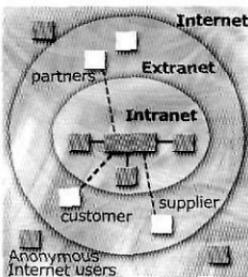
C**The prefixes e- and cyber-**

The e- prefix means 'electronic'; cyber- describes things relating to computer networks.

e- The term e-learning refers to the use of ICT to provide education and training.
An e-zine is a magazine or newsletter published online.

E-commerce is the buying and selling of products or services over the Internet.

cyber- The electronic space in which online communication takes place is called cyberspace.
Cyberslacking means using a company's Internet access for activities which are not work-related, e.g. emailing friends, playing games, etc.; it is also called 'cyberloafing'.



An extranet is like an extended intranet

A Common suffixes

Suffixes change the class of the root word. For example, by adding the suffix **-er**, the verb *publish* becomes the noun *publisher*. Suffixes can tell you if a word is a noun, adjective, verb or adverb.

Suffixes for jobs:

-er	<i>manufacturer</i> <i>webmaster</i>	The two major manufacturers of processor chips are Intel and AMD.
-eer	<i>engineer</i> <i>auctioneer</i>	Greg is a software engineer, which means he writes computer programs.
-or	<i>animator</i> <i>operator</i>	He worked as a computer animator on <i>Toy Story</i> .
-ant	<i>IT consultant</i> <i>IT assistant</i>	She's a computer consultant and specializes in e-commerce, data protection and IT strategies.
-ian	<i>technician</i> <i>electrician</i>	A computer technician installs, troubleshoots and upgrades hardware and software.
-ist	<i>typist</i> <i>scientist</i>	Anyone who works as a typist may develop a problem with their hands.

Other common suffixes in ICT:

Nouns	-ion, -ment, -ics, -ity (activity, state)	compression, management, robotics, electricity
Adjectives	-able, -ible (able to be) -ful (full of), -less (without)	programmable (keyboard), convertible (format) colourful, colourless (picture)
Verbs	-ize, -ise (to make)	synthesize (music – to make it with a synthesizer)

B Word families

It is useful to know how to build up word families by adding suffixes. Look at these examples:

Nouns	Verbs	Adjectives	Adverbs
magnet, magnetism	magnetize	magnetic, magnetized	magnetically
recorder, recording	record	recordable, recorded	
digitizer, digitizing	digitize	digital, digitized	digitally

Adding a suffix may change the pronunciation. Look at how the stress changes in these words:

photograph photographer photographic photographically

C We love 'wares'

The suffix **-ware** refers to products of the same type. In computing, *software* refers to programs executed by a computer, as opposed to the physical devices on which they run – the *hardware*. It is commonly used to form jargon terms for classes of software.

- **freeware:** available free of charge, but protected by copyright; it differs from 'free software', which can be changed and distributed subject to licence
- **shareware:** distributed similarly to freeware, except that it requires payment after a trial period
- **malware:** designed to infiltrate or damage a computer (e.g. viruses, trojan horses, spyware)
- **spyware:** designed to monitor the actions of your computer and send this data via the Net
- **adware:** devised to display advertisements; some includes spyware
- **groupware:** enables a group of people connected to a network to work on the same project



Be careful of spyware!

1 Which IT professionals from A opposite are described here?

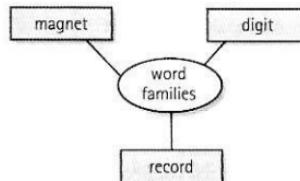
- 1 a person who designs and maintains software applications
- 2 a person who gives expert, professional advice
- 3 a person who uses graphics software to make or edit animated pictures
- 4 a person who is employed to type letters, reports and other documents
- 5 a person or enterprise that produces goods in large numbers, using machines
- 6 a specialist in the technical details of computers

2 Complete each sentence using the word in brackets and the correct suffix from A opposite.

- 1 IBM's BlueGene is the most supercomputer. (POWER)
- 2 Most library databases are via the Internet. (ACCESS)
- 3 I'll email my report to you as an (ATTACH)
- 4 This book will show you how to your small business. (COMPUTER)
- 5 An optical disc allows data to be deleted and new data to be recorded on it. (ERASE)
- 6 The growth of the Internet has increased the need for effective data (SECURE)
- 7 The combination of and new textile materials has made it possible to create musical jackets and smart shirts that can read our heart rate. (ELECTRON)
- 8 Bluetooth is a technology designed to connect computers, mobile phones and other devices, replacing direct cable links. (WIRE)
- 9 Aircraft flight is used to train pilots. (SIMULATE)

3 Look at the word families in B opposite and complete these sentences with the correct word.

- 1 From kitchen magnets to computer disks, plays a central role in the technology of everyday life.
- 2 Hard disks are storage devices.



- 5 A video is used to convert analogue video into digital video files.
- 6 Sound and pictures can be stored , as on a CD.

- 3 My digital voice has a storage capacity of 2 GB.
- 4 Blu-Ray Disc is a new optical disc format developed by nine electronic manufacturers.

4 Look at C opposite. What type of software do these descriptions refer to?

- 1 software that transmits data about your Web surfing habits without your consent
- 2 also known as 'try before you buy' software
- 3 short for malicious software
- 4 software that periodically pops up advertising material
- 5 collaborative software
- 6 programs that you don't have to pay for



You and computers



Access the *Professional English in Use ICT* website at www.cambridge.org/elt/ict. Then do the activity **More 'wares'**.

"Do you still refuse to run pirated software?"

A What a collocation is

A collocation is a pair or group of words that are often used together. You need to learn them in order to sound natural in English. For example, in computing we say 'attach a file', not 'enclose a file'.

New collocations are particularly common in ICT. Notice the combinations that are worth learning from these reviews.

With the Nokia 770 Internet Tablet you can **browse your favourite sites** and catch up on your email – from right where you are. Whether you're relaxing on the sofa or enjoying the moment at your favourite café, if you have broadband access over Wi-Fi, the Nokia 770 Internet Tablet gives you instant wireless access to the Web. You can also **stream¹** files, tune in to Internet radio and News Reader, or play your favourite videos and music.



A Blu-ray Disc is a new optical disc that provides five times more data storage than a DVD, with a capacity of 25 GB (single-layer), 50 GB (dual-layer) and 100 GB (four-layer). Unlike current DVDs, which use a red laser to read and write data, Blu-ray uses a blue laser (which is where the format gets its name). Blu-ray discs can record and play back high-definition television and digital audio, as well as computer data.



Blu-ray Disc players are **fully backward compatible²** with CD/DVD formats. They also let users go **online** and download subtitles.

B Some types of collocations

Verb + noun

The easiest way to **connect to the Internet** is by using a DSL modem.

A DSL modem can **transmit data** at high speed.

Your ISP will probably give you a CD with instructions on how to **install the software** on your PC.

Once you are online, you can **access the Web** or **send and receive emails**.

You may like to **burn CDs**, i.e. copy your favourite songs or important files onto CDs.

Verbs with particles

Can you show me where the microphone **plugs into the computer**?

If you want to **log onto your account** you will need your user ID and password.

Computer criminals are getting better at **hacking into** other people's computers.

Adjective + noun

High-speed networks and multimedia phones allow customers to view live TV.

To send **outgoing mail** and retrieve **incoming mail**, you need to configure the email settings. Most teenagers use **instant messaging** to chat with friends.

Electronic commerce – from a PC, digital TV or mobile phone – offers competitive prices.

Wireless hotspots provide Wi-Fi Internet access in airports, hotels and other places.

Users can interact with a **virtual environment** through the use of VR displays and data gloves.

Typical interactive TV uses are voting in polls, video on demand and shopping from home.

Adverb + adjective

Don't send **highly sensitive information** via email or fax unless it is encrypted.

This movie is **freely available** on the Internet, so it can be downloaded free of charge.

Phrases

When you chat in a chat room, you are interacting in **real time** since it is immediate.

A USB device is a good example of **plug and play**; you install it and use it immediately.

To **drag and drop**, just click on the object and drag it to a different location.

5.1 Look at A opposite. Match each word on the left with its partner on the right.

- | | |
|-------------------|------------------------|
| 1 high-definition | a Internet radio |
| 2 read and write | b disc |
| 3 play | c videos and music |
| 4 tune in to | d television |
| 5 broadband | e data |
| 6 optical | f your favourite sites |
| 7 browse | g compatible |
| 8 fully backward | h access |

5.2 Answer these questions using collocations from B opposite.

- 1 What sort of locations or access points can be used to surf the Net without wires?
- 2 What feature allows an electronic device to be used as soon as it is connected to a computer?
- 3 If you are *gaining illegal or unauthorized access to computer data*, what are you doing?
- 4 If you want to move a picture to a new location, what do you do?
- 5 What expression is used to refer to personal, confidential or classified information?

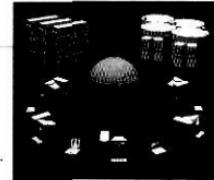
5.3 Read these statements by computer users and complete them with suitable collocations.

- 1 'I have a program that monitors both incoming and mail and also blocks spam.'
- 2 'With a webcam you can add video to online chats and messaging. Simply the software included, plug the webcam your PC, and start having video conferences.'
- 3 'This software enables you to burn and DVDs containing any data files.'
- 4 'I use a media player to audio and video files from the Web; I can play them directly.'
- 5 '*NetMeeting* allows us to perform video conferencing in time, without any delay.'
- 6 'We have decided to make the material available on the Web.'
- 7 'I often log my Internet bank account to make payments; I never forget to log off.'

5.4 Complete the collocations in this text.

Fast connections

Connecting to the (1) using DSL lines, cable TV and satellite increases bandwidth dramatically, making the Web more useful. Increased speed has ignited an explosion of (2) commerce, video on demand, telecommuting, collaborative scientific projects, video conferencing and (3) environments.



Internet2, shaping the future

Internet2 is not a single network, but a consortium of hundreds of (4) networks linked by fibre-optic backbones that span the United States and link to other countries. The network transmits (5) at speeds up to 2.4 gigabits per second – 45,000 times faster than a 56 Kbps modem – allowing scientists to test their laboratory discoveries in the real world.

The next-generation network went (6) in February 1999, linking a number of universities around the world. When it is in commercial use, services will be available like (7) television, virtual 3-D videoconferencing, and much more.

A new kind of Web

While PCs were once the primary means of accessing the Internet, we're now seeing Internet-enabled devices such as PDAs and cell phones that send and receive (8) and access the (9) Soon, everything from your car to your refrigerator will be connected to the global network, all communicating with each other wirelessly.

www.learnthenet.com

You and computers



Access the *Professional English in Use ICT* website at www.cambridge.org/elt/ict.
Then do the activity Word combinations relating to mobile phones.

1.2 Some useful verbs

A. Match the verbs with the nouns.

- | | |
|---------------------|----------------------------------|
| 1. recharge | a. digital photos |
| 2. click on | b. faxes |
| 3. dial | c. a number on your mobile phone |
| 4. give | d. a presentation |
| 5. move | e. something with the mouse |
| 6. print out | f. the battery |
| 7. send and receive | g. the mouse |
| 8. take some | h. twenty pages |

B. Choose the best verb.

9. To turn on the computer, _____ the "Start" button.
a. touch b. press c. switch
10. The printer has _____ of ink.
a. finished b. ended c. run out
11. Unfortunately, my scanner isn't _____ at the moment.
a. working b. going c. doing
12. Please _____ the CD ROM.
a. insert b. introduce c. inject
13. The projector isn't working because it isn't _____.
a. plugged b. plugged in c. plugged into
14. The batteries in my digital camera are nearly dead. They need _____.
a. to change b. exchanging c. changing
15. I have to _____ a computer screen for eight hours a day.
a. see b. look at c. watch
16. Switch off your computer, and _____ it from the wall socket.
a. de-plug b. unplug c. non-plug
17. I turned off the photocopier and _____ the plug.
a. pulled out b. extracted c. took away
18. _____ any key to continue.
a. Kick b. Smash c. Hit

WORDZONE

You can make your English sound more natural by learning which words go together.

access a website

do a search

write a blog



2.2 Using software: useful verbs

Match the words on the left with the words on the right.

Set 1

- | | |
|--------------------------------|--------------------------|
| 1. arrange the | a. a Microsoft Word file |
| 2. cut and paste | b. a new window |
| 3. install | c. photo. It's too big. |
| 4. open the document in | d. an application |
| 5. resize the | e. some text |
| 6. save it as | f. icons on the desktop |

Set 2

- | | |
|--------------------------|-----------------------------|
| 1. copy the | a. for a lost file |
| 2. customize your | b. a program |
| 3. launch | c. "search" function |
| 4. search | d. text into a new document |
| 5. send the file | e. to a different folder |
| 6. use the | f. desktop |

Set 3

- | | |
|-----------------------------------|--------------------|
| 1. accidentally deleted an | a. menu |
| 2. exit | b. important file |
| 3. click on that button | c. an application |
| 4. pull down a | d. as a web page |
| 5. replace the existing | e. on the task bar |
| 6. view | f. file |

Set 4

- | | |
|-------------------------|------------------------|
| 1. close down an | a. after a session |
| 2. log off | b. all folders |
| 3. look in | c. application |
| 4. put the file | d. hard drive |
| 5. run a | e. on a USB memory key |
| 6. wipe the | f. program |

10



COMPUTER UPDATE

Vocabulary in context

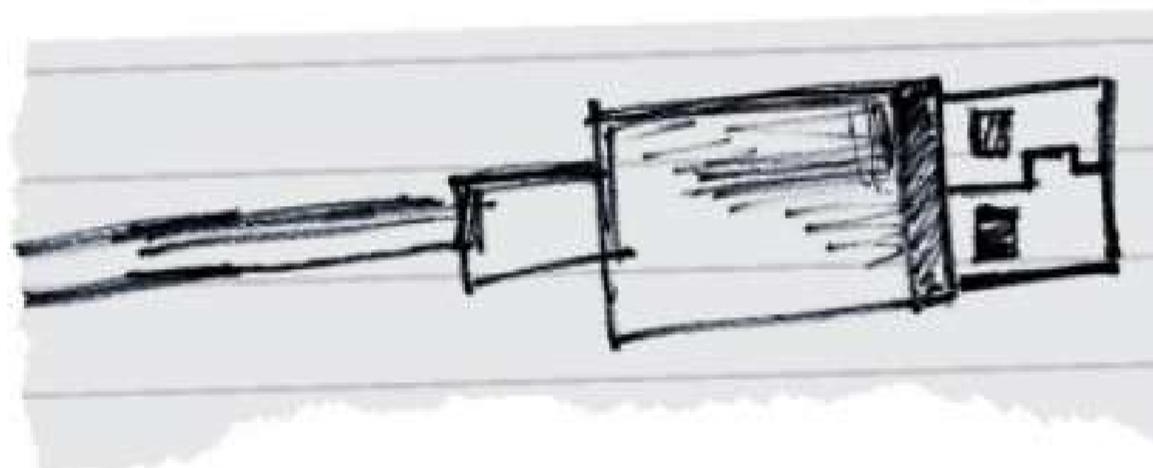
Computers and accessories

Using a computer and the Internet

- 1 **SPEAKING** Take it in turns to draw one of these words and see if your partner can guess the word. Use a dictionary if necessary.

72 Computers and accessories

desktop • (external) hard drive • flash drive •
headset (headphones/microphone) • keyboard •
monitor/screen • mouse • printer • scanner • speaker •
touchpad • touchscreen • USB cable • USB port • webcam



I think it's a
USB cable.

- 2a Read this text. Check that you understand the words in bold. Use a dictionary if necessary.

A BASIC GUIDE TO SETTING UP A NEW COMPUTER

The first thing you should do is to (a) **set up** your operating system. Then there are certain things you need to (b) **install** on your computer. One of the most important is your favourite (c) **browser**, which you need to (d) **download**. Then you should (e) **update** your new computer's security. Maybe there's already an (f) **antivirus software** on the computer, but you may decide you need a stronger one. Don't forget to choose a good password for when you (g) **log in** to your computer or any personal accounts.

It can also be a good idea to search for any extra apps that came with the computer but that are not really necessary. If you find any of these, just (h) **delete** them. Then look for useful free (i) **software**. Remember to (j) **subscribe** to your favourite newsletters and YouTube channels.

Finally, don't forget to (k) **back up** your hard drive on an external drive. That way, if your computer (l) **crashes**, you can still (m) **restart** it.

- 2b Are any of the words in 2a in your language? If so, which?

3a Some of the words in 2a can be verbs and nouns. Look at the words in **italics** in each pair of sentences. Write V for verb and N for noun. Is there any difference in the way they are written?

- 1a I want to *download* this song.
1b The *download* didn't work.
2a I always make regular *backups* of my documents.
2b Did you remember to *back up* the computer?
3a The *set-up* is taking forever.
3b It takes time to *set up* a new computer.
4a My antivirus software has automatic *updates*.
4b I need to *update* my operating system.
5a You need to remember to *log in* each time.
5b I can remember my *login*, but not my password.

COLLOCATIONS

Computer technology

- 1 Choose the word or phrase, A, B, C or D, that best completes each sentence.

- 1 If you want to get more information, just ... on this link.
A upload **B** send **C** click **D** surf
2 Most websites employ designers to make the text and look good.
A codes **B** links **C** graphics **D** blogs
3 Computers are great for storing large amounts of in one place.
A data **B** users **C** chat rooms **D** message boards
4 It's quite easy to music from your home computer to an MP3 player.
A access **B** download **C** receive **D** protect
5 ICT lessons at school help many young people to become literate.
A chat **B** message **C** surf **D** computer
6 I've just signed to a great new website.
A up **B** off **C** out **D** over
7 The teacher told us to a web search to find information for our project.
A have **B** do **C** take **D** send
8 A good security system will stop people trying to dangerous websites.
A go **B** sign **C** access **D** get
9 Angela has already me ten instant messages today.
A received **B** answered **C** published **D** sent
10 I don't know how to these photos to the school website.
A give **B** surf **C** click **D** upload

Technology Uses

Which objects can...

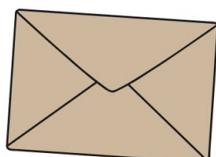
play music:



make a picture:



send a photo:



help you write a letter:



Electronic devices (vocabulary)

1) Choose six words and label the pictures.

tablet PC / smartphone / HD TV / notebook / digital photo frame / camcorder / games console / ebook reader / satellite TV / digital radio / MP3player / hard disc recorder / satnav /

1 _____
3 _____
5 _____

2 _____
4 _____
6 _____



2) Complete the names of the electronic devices with the words from the box.

reader	frame	book	TV	PC	nav	player	recorder	TV
1 sat _____	2 ebook _____	3 MP3 _____						
4 tablet _____	5 hard disc _____	6 note _____						
7 satellite _____	8 digital photo _____	9 HD _____						

3) What electronic devices should these people buy?

1. Mike: 'My laptop is a bit old, and quite heavy.' _____
2. Mary: 'I like to listen to music while I'm walking in the park.' _____
3. Ted: 'My sister is always getting lost in her car.' _____
4. Sam: 'I want to make a film of my summer visit to China.' _____
5. Jane: 'I like to read books, but they take up too much space.' _____
6. Ann: 'I like to take pictures, and I can store them on it.' _____
7. Paul and Jim: 'We can record over 100 hours of television programmes on it.' _____

4) Find 7 electronic devices in the word search.

C	H	U	O	I	J	G	B	N	E
S	A	T	N	A	V	A	M	V	N
Z	E	M	E	C	O	T	H	P	O
X	F	A	C	S	S	R	D	E	H
C	E	B	O	O	K	I	T	A	P
V	H	Y	P	R	R	U	V	O	T
B	K	H	A	U	C	D	D	T	R
M	P	3	P	L	A	Y	E	R	A
O	L	M	Y	I	N	M	I	R	M
T	A	B	L	E	T	P	C	E	S

5) These are phrasal verbs connected with the use of electronic devices. Match the opposites.

- | | |
|--------------|---------------|
| 1. turn on | A. pull out |
| 2. put on | B. put away |
| 3. turn up | C. switch off |
| 4. take out | D. turn down |
| 5. plug in | E. turn off |
| 6. switch on | F. take off |

6) Complete the sentences. Use one word in each gap.

1. _____ up the radio. I can't hear it.
2. Everybody pulls _____ the plug on his/her TV before going to bed.
3. Your music is too loud. Can you turn it _____, please, or _____ on your headphones.
4. The museum is a special area. Please, switch _____ your mobile phones.
5. I need to charge my battery. Can I _____ in my phone at your house?
6. Don't take _____ your tablet PC. Someone might steal it. Leave it in your bag.
7. Sam! Your room is a mess. Please put _____ all these clothes.
8. Ted, can you turn _____ the radio? There's a really good music programme on in a minute.

7) Choose one of the electronic devices and make a short advertisement for it. (Work in pairs).

LISTENING & SPEAKING

2 Using mobile devices



Listen to John talking about his smartphone. Tick the uses that he mentions.



- | | |
|-------------------------------|--------------------------|
| making phone calls | <input type="checkbox"/> |
| listening to music | <input type="checkbox"/> |
| sending text messages | <input type="checkbox"/> |
| GPS navigation | <input type="checkbox"/> |
| checking the weather | <input type="checkbox"/> |
| following the news | <input type="checkbox"/> |
| reading ebooks | <input type="checkbox"/> |
| watching videos | <input type="checkbox"/> |
| taking pictures | <input type="checkbox"/> |
| playing games | <input type="checkbox"/> |
| keeping important information | <input type="checkbox"/> |

SPEAKING:

What do you use your smartphone for?

E.G.: I use my smartphone to make calls.

// I use my smartphone for making calls.

Things you can do with your mobile

Match the verbs on the left to the words on the right.

- | | |
|----------------------------|---------------|
| 1. click/tap | a. a file |
| 2. enter/forget/reset | b. a link |
| 3. log into/browse/like | c. an email |
| 4. send/receive/write/read | d. a password |
| 5. download/upload/share | e. a video |
| 6. watch/stream/download | f. a website |

Now complete the questions below. More than one word is possible for each question.

1. How often do you _____ spam emails?
2. How often do you _____ online videos?
3. What kinds of files do you _____ with your friends?
4. Do you sometimes _____ your password?
5. Which websites do you _____ every day?
6. Do you always _____ interesting links?

Answer the questions. You must speak for 1 (ONE) minute.

What verb tense is used in the questions?

Talking point - Websites

Do you use any of the websites below? What for?

Add any other website that you currently use. Share your answers with your classmates and your teacher.

Yahoo.com
Twitter.com
YouTube.com
Facebook.com
Spotify.com Google.com
Amazon.com Paypal.com
ebay.com

1.7 Some useful adjectives

Choose the best adjective.

60 I can explain similarities and differences

Labradors

In looks, Boss and Sam are almost **identical except that** Sam is a bit bigger. Jake and Boss are **similar except for** their colour. The **similarity between** Sam and Jake is that they both have large ears. In character though, they're not **alike**. **Compared with** Jake and Boss, Sam is very lazy. In fact, he's **completely different** from the other two, **apart from** the fact that he's **greedy** – all labradors are greedy given the opportunity. With the other two, **the main difference** is that Boss is rather quiet in **comparison with** Jake.



Boss

Sam

Jake

Glossary

identical without a single difference. **SYN exactly the same.**

except not including sb/sth (**except that** + clause or **except for** + noun).

similar (to sb/sth) like sb/sth but not the same. **similarity N** (a **similarity between** things).

alike very similar (don't use **alike** before a noun).

completely different different in every way.

apart from sb/sth **SYN except for** sb/sth.

greedy wanting to take more than you need (usually food).

the main difference the most important difference.

spotlight compare v. comparison

When you **compare** people or things, you say how they are different.

If you **compare** dogs **and/with** cats, dogs are usually more greedy.

Compared with/to dogs, cats are very clean.

In comparison with dogs, cats are more independent.

1 Replace the underlined words with a different word or phrase with the same meaning.

► Barley is like my other dog. similar to

1 She's very tall compared with Elena.

2 I liked all of them except for the blue one.

3 The two boys aren't very similar.

4 The most important difference is colour.

5 Poland is very big in comparison with Hungary.

6 The twins are exactly the same.

2 Complete the sentences.

► If you compare the two books, it's amazing how different they are.

1 She is very _____ to her mother; they both laugh all the time.

2 _____ with his last album, the new one's a bit boring.

3 There is a _____ between the two tables: they're both made of the same wood.

4 This chair is like the one in your bedroom, _____ that this one's a bit softer.

5 Max always tries to eat his brother's food as well as his own; he's a _____ dog.

6 Some people say my brother and I are _____, but I think we're _____ different.

7 I didn't like the film, _____ from the ending, which was great.

8 The main _____ between the two students is that Carlo has better pronunciation.

3 ABOUT YOU AND YOUR COUNTRY Write sentences about the similarities and differences between two members of your family or two cities in your country.