

Paraninfo

ELECTRICIDAD Y ELECTRÓNICA



All the listening
files of the student's
book are available at
www.paraninfo.es

LET'S SWITCH ON!

Inglés para Electricidad
y Electrónica



M. MILAGROS ESTEBAN GARCÍA

FE DE ERRATAS







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Paraninfo

FE DE ERRATAS

A continuación, se indican las erratas encontradas en el libro *Let's Switch On!* (9788428398817).

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VII			

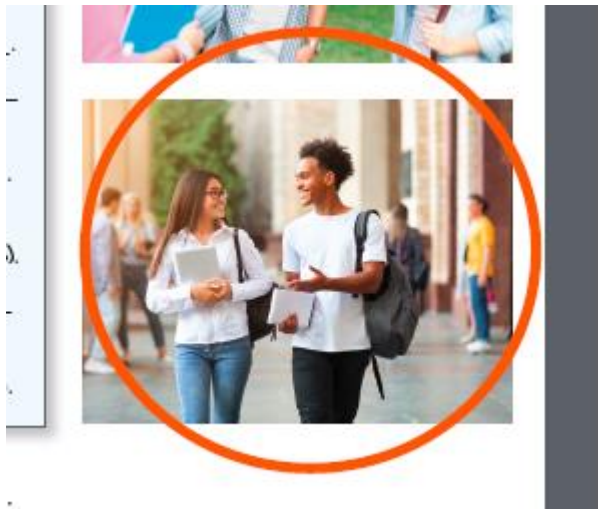
Página 1
En el punto 7., se ha eliminado **And** al comienzo de la frase, quedando así el texto:

7. Check your progress, Remember and Just for fun

At the end of every unit you can assess yourself with the **Check your progress** section, which will make you aware of your own learning process: what you have learnt and the areas where you still need to improve. You can review the grammar of every unit with the **Remember** section. And **Just for fun** ends the units with a quiz, wordsearch, cryptogram, etc.



Página 3
Se actualiza la imagen.



Página 5
Did you know that...?
Se actualiza el enlace web:

DID YOU KNOW THAT...?

We have used wind mills since 2000 B.C. They were first used in China and Persia.
Wind power is currently the fastest-growing source of electricity production in the world.
Find more information at www.windenergyfoundation.org

Página 15
Ej. 3
En el enunciado del ejercicio 3 se ha añadido **in the chart**, tal como se destaca en la imagen:


3. Electrician is a skilled profession. But electrical jobs fit many different skill levels. Not all electricians have the same status or responsibilities. Some of the words **in the chart** in Exercise 1 show the rank of an electrician. Which ones?

Página 18
Se añade punto final.


... thanks, thank you, see you...

* Trade is another word for job, profession.

Se modifica título y estilo en Grammar I.



Grammar I



Present Tenses

Verbs to be and to have (got)

Se actualiza la información resaltada en el cuadro de relativos.

WHO	to talk about people
WHICH	to talk about things
THAT	both for things and people (<i>only in defining relative clauses</i>)
WHOSE	indicates possession by people or things
WHERE	for places
WHEN	for time

Ej. 6

Se ha corregido la numeración de las frases, ya que faltaba la **e)**:

- d) Dell computers are good quality. Many people love them.

- e) Thomas is my best friend. He works in a multinational company.

- f) I know a girl. Her brother works for Google.

- g) Madrid is a very busy and cosmopolitan city. I live there.

Páginas 40-41

Se corrige *Covering* por *Cover* en los casos resaltados, se elimina la década en la fecha de la *Cover letter* y se actualizan los enlaces web resaltados.

Cover letters

A cover letter must be very clear. Three or four paragraphs are enough:

1. Say the job you're applying for and where you found out about it (advert on a ...)

2. Write a cover letter using the paragraphs written below. Copy them in the right order, following the structure outlined above:

a I am studying a vocational course as Electrician at the moment. I can speak English and Spanish fluently. I

Wires & More
London

November 7th, 20__

Vacancy Ref. 64237 - Electrician

Dear Sir or Madam,

3. EXTRA. Write your own cover letter in response to one of the jobs advertised in the Reading section of the unit. Include true information about you.



Internet

You can find information about jobs, recruitment, job interviews, how to write a CV and a cover letter, etc. at:

www.bbc.co.uk/worldservice/learningenglish

www.learnenglish.de/vocabulary/jobs.htm

Página 43

PRESENT SIMPLE

En el cuadro de *Present simple*, tercera fila/parte interrogativa, se ha quitado la negrita a algunas palabras, tal como se muestra aquí:

Do I/you/we/they wash
Does she/he clean

Página 44

PRESENT CONTINUOUS

En el cuadro de *Present continuous*, tercera fila/parte interrogativa, se ha quitado la negrita a algunas palabras, tal como se muestra aquí:

Am I studying

Is he/she repairing

Are you/we/they working

Página 45

Se corrige el nombre resaltado.

Down	Across
1. An Italian pioneer in the field of electricity. The unit of electric potential has got his name.	3. British physicist who discovered that light consists of electromagnetic waves.
2. British physicist and chemist, famous for his discoveries of electromagnetic induction and of the laws of electrolysis.	6. A Croatian inventor and pioneer of high-tension electricity.
4. American inventor who developed the practical electrical light bulb and promoted DC (direct current).	7. A French scientist who studied electrodynamics. The unit of electric current has his name.
5. A German physicist who invented the first oscilloscope.	8. The Italian electrical engineer who invented the radio-signalling system.

VoltaMaxwellFaradayBraunMarconiTeslaEdisonAmpere

Página 53

Ej. 1

En el enunciado del ejercicio, se han añadido las palabras: **and answer the questions**;, tal como se puede ver a continuación:

1. With the text masked, listen to Mike and Tom talking on the phone and answer the questions:

Se cambia el estilo de los números.

5.

Listen again and fill in the gaps:

Track 9

Supervisor

Let me show you around. These are the pegboards. They are very important here because they help us to keep the tools **1.** _____. Keeping the work area **2.** _____ and **3.** _____ is essential here.

Tom

Yes, indeed.

Supervisor

We think that a tidy work environment fosters **4.** _____, and it can also avoid potential safety hazards. That's why it's crucial.

Tom

Excuse me, what's that?

Supervisor

Those are the component drawers. We store tiny **5.** _____ in them. They are easily removable if you need to go rooting around. As you can see, there are tool boxes and tool trays everywhere.

Tom

OK, yes...


Supervisor

That's our changing room. We keep our overalls in there. This way, please. And this is your **6.** _____.


Se actualiza la imagen de la opción a)

3.

Can you label the components below?



b




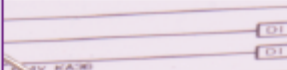
Se corrige el número de la actividad 3 por 4.

4.

What are these tools and components?

a





Past Tenses

Past Simple

Y en *-ed spelling rules* se corrige lo resaltado.

-ed spelling rules

- Verbs ending in **-e** add only **-d**. *love* → *loved*
- Verbs ending in **-y** change the **-y** into **-i** and add **-ed**. *try* → *tried*
- Some verbs ending in a single consonant + a single vowel + a single consonant, **double the last consonant** before adding **-ed**. *travel* → *travelled* (BrE) *stop* → *stopped*

Página 63
Ej. 1
Se reorganizan los términos.

1. Write the past simple of the regular verbs in the box and put them in the right column.

close	remove	carry	travel	stop	start	play	turn	grab	develop	try
decide	invent	grip	study	repair	switch	live	plug	create	design	fit

Ej. 2
Al final de la página, en el enunciado del ejercicio 2, se han modificado las páginas, que quedan como sigue:

2. Write the past simple of these irregular verbs. You can go to the list on pages 284-285 for help.

Página 65
Ej. 6
En el hueco 10., en vez de **(gave)** debe poner **(give)**, tal como se destaca en la imagen:

His first great invention was the tin foil phonograph, which 10. _____ (give)
Edison international fame.

Página 66
PAST CONTINUOUS
Al comienzo de la página, en la tercera línea de texto, se ha sustituido **happening** por **in progress**, tal que así:

It refers to an action **in progress** at a definite time in the past. It is in the Past Continuous.

Página 67

Ej. 3

Se añade la coma resaltada en la opción d).

c) I always _____ (ride) my bicycle when they _____ (phone) me.

d) I always _____ (want) to be an electrician, but when I _____ (start) to work I _____ (discover) that it _____ (not/be) for me.

Página 68

Ej. 4

Se añade la coma resaltada.

The Fisher Body company, which made the car bodies for the Ford Motor Company, was one of Robertson's first customers. They used over 700 Robertson screws in their Model T car. The Robertson drive was a revolutionary change in the fastener industry. Robertson screws and

Página 69

History of electronics

Se elimina la numeración de renglones; se reorganiza el párrafo resaltado y se prescinde de los superíndices en las fechas resaltadas del ej. 1.

History of electronics

I We deal with electronic devices several times every day. However, before the 20th century there was little to do with electronics in the daily life of a common man. Today's situation is the result of the effort and hard work of great minds over the ages. This review covers only the main ones.

II Electrical engineering is considered to be the parent of electronics. It started in the 18th century, when Franklin gave the explanation to the cause of lighting, which was still a mystery then. Coulomb's theory was the first mathematical expression that defined the electrical charge. Luigi Galvani discovered bio-electricity in his experiment using a frog's leg. Alessandro Volta made the first electric cell.

III Another important step was electromagnetism. Then Michel Faraday invented some electrical machines like the transformer and electric motors, and he also defined his laws of electrolysis. Another genius, Edison, invented electric bulbs. Tesla invented the induction motor and proved that AC can be more efficient than DC. More inventions and discoveries came: the telephone by Bell, radio waves by Hertz, the radio by Marconi a decade later, etc.

IV The history of electronics is a story of the twentieth century and three key components: the vacuum tube, the transistor and the integrated circuit. In the early 20th century Sir Ambrose Fleming discovered the vacuum tube and the diode. Einstein proposed his theory of relativity which was a complete revolution for science. The first computers started but they were not very efficient. The invention of the television was like a miracle.

V However, the real electronics started after the discovery of the transistor effect. Soon after, Integrated Circuit industries were born. In 1971 the first microprocessor, 4004, was invented by Ted Hoff. Computers improved, grew rapidly and became very popular. The future seems to be bright, with new fields like quantum communication and bioinformatics developing.

1. Are the following statements **True** or **False**?

- a) Electronics started in the 20th century.
- b) Many scientists worked hard in electronics.
- c) Einstein discovered the vacuum tube.
- d) There is still a promising future for electronics in the 21st century.

Página 71

Use

Se añaden :

Use

We use the present perfect simple for:

Página 72

Ej. 1

Se modifica la redacción de la opción c)

- c) **The latest car technologies** _____ (include) new energy sources and materials.
_____ (you/already/decide) which dishwasher to buy?

Se corrige el verbo en la opción resaltada del ej. 3

3. Present perfect or simple past? Complete the sentences with the right tense of the verbs in brackets.

- a) As soon as I _____ (see) her phone I _____ **(realise)** it was new.

Página 73

Ej. 6

Al final de todas las oraciones, de la a) a la h), se ha puesto signo de interrogación:

- a) work/repair shop?
Have you ever worked in a repair shop?
- b) have problems/PC?

- c) be to an English speaking country?

- d) lose/mobile phone?

- e) see/a windmill inside?

- f) suffer/electrical shock?

- g) repair/washing machine?

- h) install/domotics system?

Página 76
Ej. 2
Se cambia *for* por *to*.

Student A: You use a hammer **for hitting nails**. There are different types and sizes of hammer. The electrician's hammer is a bit different. It has an elongated flat head and straight claw. Now, what is a **screwdriver** used **to?**

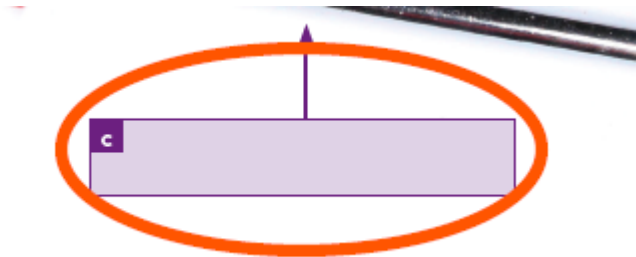
QUESTIONS
En el cuadro de **Questions**, al final de la página, se ha añadido **/an** así:

QUESTIONS	
What do you use a/an _____ for?	
What is the difference between a/an _____ and a/an _____?	
Why is a/an _____ necessary in a workshop?	

Página 77
A. What is it like? Describing tools
Se añade espacio de separación.

- It has got _____ and _____ (parts).
- It is **/** They are _____ and _____ (adjective).
- It's made of _____ (material).

Página 78
Ej. 3
Se reubica el elemento.



Página 84
REMEMBER

Se corrige el número de unidad.



PAST CONTINUOUS

En el cuadro de *Past continuous*, tercera fila/parte interrogativa, se ha quitado la negrita a algunas palabras, tal como se muestra aquí:

Was I/he/she fitting
Were you/we/they working

Antes de llegar al último cuadro

Se han modificado las páginas, que quedan como sigue:

For the past participle of irregular verbs, see the list on pages 284-285.

Página 85
Just for fun

Se elimina la cuadrícula.



Página 87

Looking for a job

Se actualizan los enlaces web.

Now surf the net and try to find the best job for you. You can visit the following websites for help, or any others you know as well:

www.agencycentral.co.uk

www.gov.uk

www.justlanded.com

Choose the job offer you think best suits your profile. Take into account all the advantages and

Se reorganiza la página e incluye información nueva.

2. Video CVs.

Today CVs and cover letters are changing too. Apart from the traditional paper CVs, you can also send a great **Video CV** which can help your job application stand out. Although video CVs do not replace paper CVs, they provide employers with more information about what a candidate has to offer.

Find information online on how to create a good video CV and prepare your own CV in English. Talk about your qualifications and skills, and explain why you are the best candidate for the job. It has to last from 60 to 120 seconds. Show it to your classmates and choose the best of all.



Página 94

UNIT 3

En el sumario de contenidos de la unidad, en el segundo punto, se ha eliminado **the**, quedando como sigue:

- use future tenses: future simple, *be going to* and the present continuous for the future

Página 97
Ej. 2
















Se ha modificado el orden de las palabras, que queda como sigue:

LED bulb	tungsten bulb	halogen	fluorescent
----------	---------------	---------	-------------

Página 101
Ej. 3

Se ha revisado y arreglado la numeración de las imágenes, quedando como sigue:

3. Do you know what these appliances are?

				
a _____	b _____	c _____	d _____	e _____
				
f _____	g _____	h _____	i _____	j _____
				
k _____	l _____	m _____	n _____	o _____

Página 102
Ej. 4

Se prescinde de los puntos suspensivos al inicio de las opciones.

4. Can you guess the name of a piece of equipment for...?

- | | |
|---|--|
| a | playing recorded music that produces high-quality stereo s |
| b | taking photographs, moving pictures or television pictures |
| c | reproducing sound or pictures recorded on DVDs? |
| d | playing games on a screen? |
| e | waking you up at a particular time? |
| f | watching programmes with moving pictures and sounds? |

Página 107

b. MICROWAVE OVEN

Se cambian los : por ,

These waves have an interesting property, they are absorbed by water, fats and sugars. Once absorbed, they are converted directly into atomic motion: heat.

Página 108

d. VACUUM CLEANER

Se eliminan los puntos finales.

- An intake port
- An exhaust port
- An electric motor
- A fan
- A porous bag*
- A housing that contains all the other components

* The latest models do not need a bag.

Páginas 110 y 111

Se modifica título y estilo en Grammar I.



Future tenses

There are several ways of expressing the future in English.

Future simple

It is formed with **will + infinitive**.

I will work in a big company in the future.

Be going to

This tense is formed with the present tense of **verb to be** (am/is/are).

I am going to buy a new TV set.

He is not going to work with us.

Are they going to travel to Italy?

It is mainly used to show the *intention* of the speaker to do something premeditated.

He is going to be an engineer.

They are going to show us the facilities.

It can be used for *predictions* too, when the person feels certain that something will happen (because of some signs or evidence).

Look at those clouds! It is going to rain.

Present continuous as a future form

Página 114

Ej. 1

Se corrigen los términos resaltados.

using them to access the Internet and a variety of entertainment and information services.

1. Look at this **old** mobile phone and label each of **its** basic parts using the words in the box:

Página 115

Track 17

Se cambia el estilo del texto y se actualizan los enlaces web.

Now read the following text.

PHONE WITH LINK SECOND

What will be next? What will mobiles be in the future?

www.bbc.co.uk
www.techcrunch.com

Se reorganiza la página para hacer hueco a los ejercicios.

PHONE WITH E-INK SECOND SCREEN LAUNCHED

A Russian company has launched a new attractive and original smartphone with two screens-one of which uses e-ink technology and is "always on".

The dual-screen phone has one LCD display, similar to those found on other smartphones, and a second e-ink screen which the company says lets users see the information they want without having to wake up the phone. E-ink displays are commonly used for e-book readers and consume very little power.

This Android-powered phone promises to extend battery life by transferring web pages and other applications to the e-ink screen. Experts said it may be more attractive to users fed up with drained batteries. The e-ink display can continue to display information even after the phone's battery has run out.

The dual-screen smartphone was first announced in 2012 and launched in December 2013. The company is

planning to launch it in more than 20 countries over the coming months. It also features a 1.5GHz dual-core processor and a 12-megapixel rear camera and will cost 499 euros approximately.

What will be next? What will mobiles be like in the future?

www.bbc.co.uk
www.techcrunch.com

1. Answer the following questions about the dual-screen phone:

a) When was the phone first announced?

b) When was it launched?

c) What are the company's plans for the future?

d) Why is this phone original?

e) What are the advantages of this mobile?

f) Would you like to have one?

2. Find words in the text that mean:

a) make a product available to the public for the first time

b) coloured liquid for writing and printing

c) the flat surface on which you see pictures or information

d) energy

e) the back part of something

3. Word families: complete the chart with the missing words.

verb

use

read

apply

noun

user

consumption

cost

4. In your opinion, what will mobiles and other computers be like in the future? Make predictions.

Página 116

Se reorganiza la información rodeada y se corrige la redacción de la frase resaltada.

Inferiority

Another way to talk about a person or thing **not as good as** someone or something else is by using **less + adjective + than**.

This smartphone is less expensive than that one.

Is Thomas less helpful than Anna?

Superiority

Short adjectives (one syllable) and two-syllable adjectives that end in **-y** form the **comparative** by adding **-er** and the word **than**.

Tom's laptop is lighter than mine.

My mobile phone was newer and bigger than Mary's.

For long adjectives the word **more** is inserted before.

Their house is more comfortable than Peter's.

My CV is more interesting than his.

See the **irregular comparative forms** in the chart, page 117.

Paraninfo

17

Se reorganiza el final de la página y se añade un Grammar tip.



GRAMMAR TIP

Before comparatives you can use: **much, a lot, a bit, a little, slightly.**

Our microwave is **slightly cheaper** than this one.

This TV set is **much more reliable** than yours.

You can also use **any** and **no** + comparatives:

I'm sorry, but I can't stay **any longer**.

Página 117
Se corrigen los textos resaltados.

SUPERLATIVES

Short adjectives (one syllable) and two-syllable adjectives that end in **-y** form the superlative by adding **-est**.
We put **the** before **the** adjective.

Their shop is **the nicest** in town.

He has **the fastest** computer.

For long adjectives the words **the most** are inserted.

Their boss is **the most reliable** person there.

This netbook is **the most convenient** for me.

SPELLING TIPS

1. One syllable adjectives ending in vowel + consonant, double the last consonant.

adjective	comparative	superlative
big	bigger	the biggest
fat	fatter	the fattest

2. Two syllable adjectives ending in **-y**, change the **y** to **i** before adding **-er** or **-est**.

EXCEPTIONS
El cuadro queda como se ve en la imagen:

adjective	comparative	superlative
friendly	friendlier	the friendliest
	more friendly	the most friendly
simple	simpler	the simplest
	more simple	the most simple

Página 121
Ej. 1

Se ha revisado la puntuación del cuadro que queda como sigue:

Student A: customer	Student B: salesman
Ask for information about a mobile phone 1. Explain your needs. 2. Ask questions about: <ul style="list-style-type: none">– available models– specifications: power, battery– functions: GPS, games, apps, etc.– camera characteristics– design: size and weight, colours, screen, covers, etc.– price	Give details and show the phone 1. Give advice. 2. Answer the questions and give recommendations.

Página 122
Describing gadgets

Se remaqueta.

Describing gadgets

Read this short description of an e-book.

I am going to describe my e-book. It was a present from my parents. They bought it online last month for my birthday, and I'm very happy with it.

It is rectangular with a black cover, it is not very big. It is flat and light (it weighs less than 200 grams), the screen is quite big and very neat and it uses e-ink, as you know.

I like it because I can navigate to a specific page number, and I can add notes, which is very useful. It has an interactive glossary too. I use it when I read books in English. When you click on a term in the text you can see the definition and the translation. It's great. You can also see pictures in it and it has some links which open media, such as videos.

They say this model is not very expensive. It costs less than 100 €, I think. It is cheaper than other models, but in my opinion it is the best.

In my opinion, it is a very nice e-book. You can read for hours and hours without your eyes feeling tired. I can say it is one of my favourite devices, probably only my mobile is more important to me.

I recommend you to buy an e-book, because it is so practical and handy. It's like a big portable library.

Patty



Página 123

USEFUL LANGUAGE

En el cuadro, se ha añadido **/an** así:

I am going to describe a/an ...

It is ... and ...

For me, ... / In my opinion, ...

To sum up, ...

Página 124

Se actualizan los enlaces web.

And all about mobile phones, new models and their specs at:

www.apple.com/es

www.samsung.com

www.sony.com

Página 130

Ej. 4

Se actualiza la imagen de la opción a.

Unit 4

4. Types of personal computers. There are handheld computers, smartphones and



a **b** **c**

Página 133

Vocabulary tip

Se corrige el texto resaltado.

VOCABULARY TIP

You can find lots of abbreviations and acronyms in the field of computers. **These are just some of them.**
Guess what the initials stand for, if you can't find them all, use a dictionary.

Página 134

Se cambia el guion por el cuadrado.

3. Tick the right option. What is the meaning of...?

a) Hold on a minute. <input type="checkbox"/> Wait a minute, please. <input type="checkbox"/> Please, phone back in a minute.	b) I'll put you through. <input type="checkbox"/> I'll connect you. <input type="checkbox"/> I'll go away.	c) Can you speak up, please? <input type="checkbox"/> Tell me what you want. <input type="checkbox"/> Please, speak a bit louder.
d) Would you like to leave a message? <input type="checkbox"/> Do you like messages? <input type="checkbox"/> You can leave a message if you want.	e) This is Emma Jones calling. <input type="checkbox"/> Please, call Emma Jones. <input type="checkbox"/> My name is Emma Jones.	

Página 136

Computer breakdowns

Se añaden puntos finales.

Computer breakdowns

These are some of the most common computer break

1. The computer does not start.
2. The screen is blank.
3. Abnormally functioning operating system or software.
4. Screen is frozen.
5. Strange noises.
6. Slow internet.
7. Overheating.
8. Blue Screen of Death (BSOD).
9. Abnormal applications behaviour.
10. The computer does not detect any external accessories or peripherals.

Página 151

Ej. 4

Se han reducido el tamaño de letra de la dirección de internet al final de la cita del ej. 4, que queda como sigue:

kerosene lamps, food was cooled in iceboxes, and rooms were coal-burning stoves." <http://interestingenergyfacts.blogspot.com.es/>

Se añade marco y fondo naranja para diferenciar mejor título de texto principal.

Computer case or system box It contains the CPU (Central Processing Unit). It can also house RAM (Random Access Memory).	Power supply (PSU) A computer's power supply unit regulates the electricity needed by the other components to operate. Most computers use between 300 and 500 watts. This can be provided by a battery or a power outlet.
Input devices The primary input devices are the keyboard and mouse.	d
a It is a television-like device that can display text, images and video. Most computers have flat screen Liquid Crystal Display (LCD) or LED monitors.	d Most motherboards provide one or more expansion slots for different types of card, including for example, for graphic cards, network cards and sound cards.
Motherboard The majority of parts making up a functional computer connect, directly or indirectly, to an electronic circuit board: the motherboard.	e
Central processing unit All computers process data. The hardware handling the majority of this workload is the Central Processing Unit, or CPU. It consists of one or more processing chips.	e Small receptors through which additional (or peripheral) external devices can be connected to the computer: serial, parallel and Universal Serial Bus (or USB) ports.
b As a computer operates, it needs a place to store and retrieve data. A computer's fast memory is in storage chips known as RAM. Data stored there is lost when the computer is shut down or restarted.	Cooling devices Fans are the most common device used to cool a PC. The CPU is also covered by a metallic block called a heat sink, which draws heat away from the CPU.
c The primary hardware used to store data for long-term access is the hard-disc drive.	Cables All the components are connected by a combination of cables designed to carry data, power or both. Any piece of hardware that isn't inside a PC's casing is called a peripheral. This includes monitors, keyboards and mice. But also printers, speakers, headphones, microphones, webcams and USB flash drives. Anything you can plug in to a port on the PC is one of its peripherals.
CD/DVD drive A method of storing data for the long-term is a compact disc (CD) or DVD (digital video disc). A CD or DVD drive is used to read, and sometimes write, these discs.	
Floppy drive	



CHANGING INTO THE PASSIVE VOICE

Se modifica el texto resaltado.

active verb and the **past participle** of the active verb.

3. The subject in the active sentence may be added in a prepositional phrase with "by" and **it** is called the **agent**. Put it only if it is needed (it is an optional element).

The supervisor organizes everything in the workshop.

Página 152
Ej. 8
Se reorganiza el texto.

8. Read the following paragraph and underline the passive tenses. Then translate into Spanish.

The appliance must be grounded. In the event of an electrical short circuit, grounding reduces the risk of fire by providing an escape wire for the electric current. This appliance is equipped with a cord which is grounded. The plug must be plugged into an outlet that is properly installed and grounded.


Página 155
Writing effective emails
Se elimina el enlace web.

Language tip
En la columna central, se ha añadido el doble significado de LOL:

For your information

LOL laughing out loud, lots of love

Página 157
Se actualizan los enlaces web.

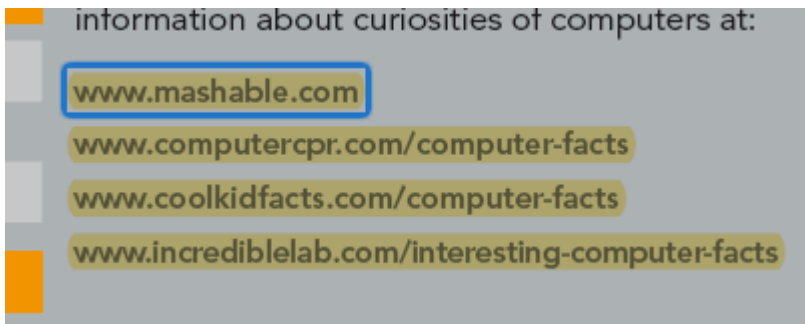
 **Internet**

You can find more information about computers and how they work at the following websites:

www.wikipedia.com
www.computerhope.com
www.gcflearnfree.org/computerbasics
www.computer.howstuffworks.com/pc.htm

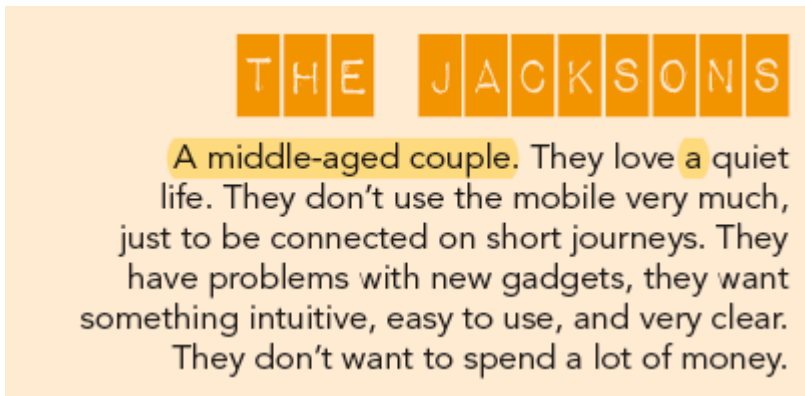
Página 161
Just for fun

Se actualizan los enlaces web.



Página 163
The Jacksons

Se corrige el texto resaltado.



Página 169

Se corrigen los verbos resaltados.

Home automation refers to the use of computer and information technology to control home appliances. Systems can include **centralised** remote control of lighting, HVAC (heating, ventilation and air conditioning), sensors, security locks on doors, and other systems to improve comfort or energy efficiency.

Home automation has become more popular recently because it is now easy to use through smartphone and tablet connectivity.

A home automation system has different elements:

Sensors	temperature, daylight or motion detection.
Controllers	PCs, centralised controllers.
Actuators	motorised valves, light switches, motors.
Human-machine interface devices	specialised terminals, smart phone applications or tablets.

Página 172

Se elimina el enlace web.

Página 175

Se añade espacio antes de paréntesis y se actualiza enlace web.

houses on a scale of A (most efficient) to **G (least)** efficient).
The most efficient homes are in band A. In Great Britain, the certificate is valid for 10 years.

You need an Energy Performance Certificate when a property is:

- built
- sold
- rented

Adapted from www.gov.uk

Página 176

Listening, ej. 1

Se ha eliminado **Type** del cuadro, que queda como sigue:

SPARE PARTS DELIVERY					
ORDER form					
Ref. number _____			Date of order _____		
Workshop _____			Date of delivery _____		
Spare parts type/model	Units	Price	Spare parts type/model	Units	price
Lamps			<input type="checkbox"/> Amplifiers		
<input type="checkbox"/> Tungsten bulb			<input type="checkbox"/> Battery clips		
<input type="checkbox"/> Fluorescent			<input type="checkbox"/> Capacitors		
<input type="checkbox"/> Halogen bulb			<input type="checkbox"/> Diodes		
<input type="checkbox"/> LED bulb			<input type="checkbox"/> Integrated circuits (chips)		
<input type="checkbox"/> Wires/cables			<input type="checkbox"/> LEDs		
<input type="checkbox"/> Plugs			Resistors		
<input type="checkbox"/> Sockets			<input type="checkbox"/> Variable resistors		
<input type="checkbox"/> Switches			<input type="checkbox"/> Stripboard/breadboard		
<input type="checkbox"/> Batteries			<input type="checkbox"/> Transistors		
			<input type="checkbox"/> Wire		
_____ €					
_____ % VAT					
TOTAL _____ € VAT inc.					

Se añade imagen al margen.

2. Translate these electrical problems into your language:

- a) It overheats.

- b) The filter is not clean.

- c) The motor is noisy.

- d) The cooling system doesn't work.

- e) The oven/washing machine, etc. doesn't turn on.

- f) The oven does not heat.

- g) Programme time does not countdown.

- h) The lights don't work/aren't working.



Se añade punto final en todos los casos.

3. Match the problems with lights and fixtures in A and the possible solu

A	
1.	A wall switch gets rather warm.
2.	The lights are blinking.
3.	A light fixture goes off sometimes and later works again.
4.	There are lots of spikes and surges in this area.
5.	Some lights get extra bright while others dim.
B	
a)	Don't worry, it is normal.
b)	There is a poor connection somewhere in the circuit.
c)	It probably has the wrong type or wattage of bulb.
d)	Put a plug-in surge protector.
e)	It is from a bad main neutral connection; bulbs may pop.

Página 180

Se revisa el enlace web.

When the client approves and signs the estimate, it becomes a contract.

Adapted from www.wikihow.com

Página 182

Remember that

Se ha cambiado coma por punto tal como se muestra a continuación:

- The **feeling produced** is described with the **-ed** ending.









Se ha rediseñado la maquetación de la página que queda como sigue:

1. Read the instructions “How to use a multimeter to test a socket” again. Pay attention to the verbs in bold.

When you read a text in English you may find words you do not know. But you can usually **guess** their meaning if you pay attention to the **context** and use the “**clues**” it offers you.

In small groups try to translate the text into your language. Decide on the best way of translating the ideas expressed in each step. You don’t have to do it literally, but you have to understand what it means.

2. Write down a verb for each of the actions in the pictures below:

turn	tighten	loosen	measure	plug in	remove	press	peel
							
a	b	c	d				
							
e	f	g	h				

Página 187

Se elimina el enlace web.

Página 188

Ej. 1

Se ha añadido al enunciado lo destacado en la siguiente imagen:

1. According to the text on page 187, are these statements **True** or **False**?

Página 190

Se corrigen lo resaltado.

Note that...

The main clause in a first conditional can also have an **imperative**, a **modal verb** or the **present simple** for permanent situations (conditional zero):

- If you are not an electrician, working here **can be** dangerous.
- If you don't know how to change the socket, **don't do it!**
- If the bulb is red, it **means** "danger".

In the result clause of a sentence in the second conditional you can also have a **modal verb** or **would** + base form.

*If you helped me, I **could/might** succeed.*

For giving recommendations or **advice**, use the second conditional:

*If I **were** you, I **would** work harder.*

Ej. 1

Se eliminan los puntos suspensivos al inicio de las frases en el cuadro B.

B

I would enjoy watching films.

there is a bad fuse.

you can fill in a complaint form.

it saves money.

she would be the happiest woman in the world.

more people would buy it.

it will cause fuses to blow.

Se ha eliminado una línea de respuesta, quedando como sigue:

Write the sentences here:

- a) *If you are not fully satisfied with the repair work you can fill in a complaint form.*
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____

Página 193

USEFUL LANGUAGE FOR APOLOGIZING

Se añade el texto resaltado y se elimina la primera frase en And accepting responsibility.

Oh, I am sorry

Excuse me.

And accepting responsibility

It won't happen again.

Página 194

Se corrigen los símbolos fonéticos.

PRONUNCIATION TIP

Pay attention to the difference!

apology, in plural apologies, is a noun. It is pronounced

/əˈpɒlədʒi/

This is a good apology.

apologise, is a verb. It is pronounced:

/əˈpɒlədʒaɪz/

I want to apologise.

Página 195

Se corrige el título; se elimina doble espacio entre *complain* y *about*; se añade punto final a la opción a) del cuadro; se corrige el verbo *apologise* y se pasa a minúscula *or*.

Complaining situations

Imagine you have just collected your computer from a computer repair workshop after having it fixed. You are not happy with the work done and you complain to the technician.

5. **Work in pairs.** Decide who is A and who is B. Student A has to **complain about** two of the situations below and student B has to give a logical apology to convince student A. Student B can also offer compensation. Then students B and A exchange roles.

Student A. Customer	Student B. Computer technician
a) You told the technician to check the CPU, but the computer is still very slow .	You have to apologise in the right way.
b) The screen on your computer is badly scratched.	
c) You cannot start the computer after having it repaired last week.	
d) The invoice is too expensive and you think there is a mistake. The estimate was lower.	


6. **Work in pairs again.** You can choose another partner if you want. Talk to him/her and describe a situation in which you or someone you know had to complain in a repair shop. It may be **TRUE or FALSE**. Your partner has to guess if it really happened or not. Take your time to prepare the anecdote.

Página 196

Ej. 1


Se ha añadido lo destacado y corregido lo resaltado en las siguientes imágenes:

1. What are the things to do and not to do in the case of an electrical injury? Write down a list of affirmative or negative **first aid instructions** using the imperative:



- Turn off the electrical current.
- Call your local emergency number (112).
- When the person is away from the source of electricity, check airway, breathing, and pulse.
- Give first aid for burns.
- Stay with the person until medical help arrives.

- Attempt to rescue a person near active high-voltage lines.
- Use a wet or metal object to push the person away from the current.
- Touch the person with your bare hands if the body is still touching the source of electricity.
- Apply ice, medications or adhesive bandages to a burn.
- Remove dead skin if the person has been burned.
- Move the person unless there is a risk of fire or explosion.



Se cambia el verbo resaltado.

USEFUL TIPS FOR MAKING COMPLAINTS

When **making** a complaint form, remember:

- Remain calm. Don't show you are so angry.

Se reorganiza la página y actualizan los enlaces web.

Complaint



Internet

Domotics

www.smart-homes.nl

www.wisageek.com

www.smarthomeenergy.co.uk

Complaints

www.sampleemails.org/job-application-email-template.html

www.usa.gov/complaint-letter

www.sampleletterword.com

Página 200
Conditionals

Se han sustituido los ejemplos por los que aparecen en la siguiente imagen:

Notes on the 1st conditional

The most common form is: *if* + present simple in the *if clause* and future simple (**will + base form**) in the result clause.

But you can also use an **imperative** or a **modal + base form** in the result clause:

If you are sleepy, stop right now to have a coffee.

If you call an electrician now, he may come to fix the lamp this afternoon.

When you refer to something that always happens, natural facts, for example, you use the present simple in the result clause too:

If we use LED lights, we save electricity.

Notes on the 2nd conditional

Apart from a simple conditional (**would + base form**), you can use a **modal (might/could + base form)** in the result clause.

If you had a smart home, you could control all the devices from your mobile.

If I were you... is used to give advice:

If I were you, I would buy a new computer.

If the verb "**to be**" appears in the **if clause**, always use "**were**" and translate it as a subjunctive.

If he were here, he would help me with this lamp.

Notes on the 3rd conditional

In the result clause of sentences in the 3rd conditional you can use a modal perfect (might have/could have) + past participle.

If she had seen the new model, she might have bought it.

Página 205
Se revisan los enlaces web.

You can find more information at:
www.technologystudent.com
www.electronics.wikia.com/wiki/Digital_electronics
www.schoolelectronic.com
www.electronics-tutorials.ws
For vocabulary, go to:
www.cram.com/flashcards

Página 207
Ej. 3

Se pasa la primera letra de cada una de las opciones a minúscula.

3. What expression does Ann use to...?
- a) welcome the audience

b) introduce herself

c) show visual aids

d) ask for questions
-

Página 217
Ej. 6

En el segundo párrafo del apartado Use, se ha cambiado el final por lo destacado en la imagen:

Have a look at the following charts. They show how to transform direct speech into reported speech. The structure is different depending on whether you want to transform a **statement**, a **question**, **an order** or a **suggestion**.

Página 221
Ej. 5

Se han eliminado los puntos suspensivos al final de las tres primeras respuestas , añadido la , donde se indica, y revisado los enlaces web, quedando como sigue:

5. What are they saying? Report their comments.

a



"Pete works as an electrician", they told me.
They told me that

b



"I'll phone him now", she said.
She said that

c



"Connect the yellow cable carefully!", he ordered me.
They told me that

d



He told me, "There is a problem with the aerial."
He told me

e



"Can I speak to a technician?", he asked.

You can find extra online practice at:
www.isabelperez.com
www.mansioningles.com
www.ego4u.com
www.englishgrammarssecrets.com
www.bbc.co.uk

Página 227

Se añade punto final en A., B. y C.

A. Public speaking tips

- Rehearse, train before presenting
- Try to control nervousness, be confident
- Speak slowly and clearly.
- Use varying tones to give emphasis
- Wear smart but simple and comfortable clothes
- Maintain eye contact with the audience
- Mind your body language: be natural
- Know the audience



B. Presentation design

- Use visual aids: clear, legible

C. Final advice

- Focus on the audience

Página 228

Se añade el texto resaltado.

I'll be pleased to answer
Any questions?

For more information, visit <http://www.bbc.co.uk/>



Página 238

Se revisan los enlaces web resaltados.

 Internet

You can find more and updated information about new gadgets and the world of telecommuni

www.sciencefocus.com

www.techterms.com

www.itbusinessedge.com

www.esa.int

www.techradar.com

<http://gadgets.ndtv.com>

www.tiaonline.org

<https://global.britannica.com>

Página 232

TIME AND PLACE EXPRESSIONS

Se pasa a minúscula.

that those

there

Página 233

Se eliminan espacios detrás de /.

Main Body

Paragraph 2. Arguments for & justifications, examples and/or reasons.

Paragraph 3. Arguments against & justification, examples, and/or reasons.

Página 234

Se elimina la cuadrícula.

R F R K J R B E C T T E U M

B E A E G M K D C H E J D G

L K M A L Y S O R E L Y K R

A Z X O S I M I Y P E B F N

Y E W U T P B D R R V R V J

K I P Z U E C O L A I R E A

X A O T D R C G M I S K I K

Z M E G F B G O J D I V J T

V R I L B N N C N S O B W M

O T D X Y X H X O T N F Y K

D U R B V B Z B H F R C F S

T K V G F Z L R L F K O E T

V X R P K A B K O K W N L W

T F R Y W X P P Z U R J X M

Página 238

Se revisa el enlace web.



Página 240

Se revisa el enlace web.



Página 242

Se elimina la numeración de renglones y se revisa el enlace web.

3 Washing machines

Read the text and answer the questions that follow.

- I A washing machine is a popular electronic home appliance. There is one in almost every house. In fact, washing machines are one of the essential gadgets in modern daily life. A washing machine is a great help in today's era where time and effort has become very expensive!
- II That big white box in your kitchen is really a technological marvel, able to wash and rinse your clothes at the touch of a button. It does the laundry fast, saving a lot of time and labour. It basically works in three cycles: washing, rinsing and spinning. Different mechanical parts work together to carry out each cycle.
- III There are different types of washing machines. They can be either front or top loading. Front loading machines cannot be stopped once you start the process, whereas in top loading machines you can add clothes at any time during the washing process. Front loading machines are more efficient in terms of use of resources, like water and power.
- IV Regarding function they can be either semi or fully automatic. A semi-automatic machine involves some manual work. A fully automatic machine only requires you to load the dirty laundry and unload it again after the wash. Just a few years ago the standard load for washing machines was generally 5-6 Kg, but larger loads are now becoming standard these days. A bigger drum means the clothes crease less, which also means easier ironing.

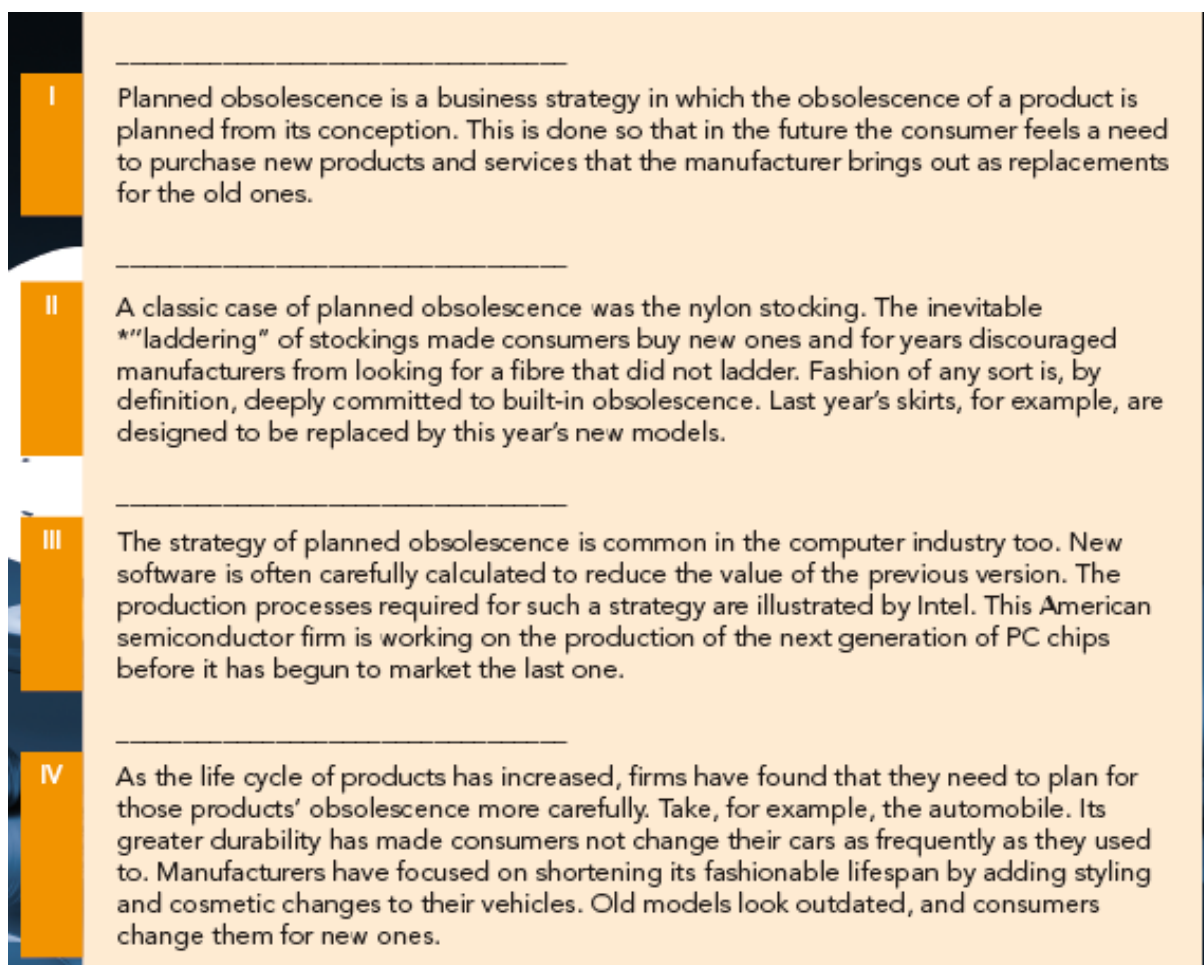
Adapted from <http://wash.vkhorio.co.in/>

Página 243

Para mejorar la legibilidad de los textos inferiores se elimina espacio de respuesta en los ejercicios 2 y 3.

Páginas 244, 246 y 248

Se elimina la numeración de renglones.




I Planned obsolescence is a business strategy in which the obsolescence of a product is planned from its conception. This is done so that in the future the consumer feels a need to purchase new products and services that the manufacturer brings out as replacements for the old ones.

II A classic case of planned obsolescence was the nylon stocking. The inevitable "laddering" of stockings made consumers buy new ones and for years discouraged manufacturers from looking for a fibre that did not ladder. Fashion of any sort is, by definition, deeply committed to built-in obsolescence. Last year's skirts, for example, are designed to be replaced by this year's new models.


III The strategy of planned obsolescence is common in the computer industry too. New software is often carefully calculated to reduce the value of the previous version. The production processes required for such a strategy are illustrated by Intel. This American semiconductor firm is working on the production of the next generation of PC chips before it has begun to market the last one.

IV As the life cycle of products has increased, firms have found that they need to plan for those products' obsolescence more carefully. Take, for example, the automobile. Its greater durability has made consumers not change their cars as frequently as they used to. Manufacturers have focused on shortening its fashionable lifespan by adding styling and cosmetic changes to their vehicles. Old models look outdated, and consumers change them for new ones.



- I When your refrigerator, dishwasher or washing machine break down, you may feel lost about whether to call a technician or just throw the unit away and buy a new one. The first thing you should do is make sure the appliance is not still under warranty. Most warranties cover both parts and labour for a specified time, followed by a period when just parts are further covered.
- II If an appliance is no longer under warranty, check its age. If it is close to the end of its average useful life, it is best to replace it rather than repair it. For example, if most refrigerators last an average of 14 years, it may not be financially prudent to repair a 12-year-old model.
- III If your appliances are still in the first part of their useful life, consider the 50% rule. If the cost of the repair will be more than half the price of a comparable replacement, it's generally wise to replace it, says Celia Kuperszmid Lehrman. To help make your decision, get a repair estimate. Service calls come with a price whether or not the appliance gets fixed, so consider that when making your decision.
- IV Take into account that present-day appliances are so much more energy and water efficient than previous models, so it can be wise to upgrade rather than repair. New dishwashers get plates every bit as clean as older machines while using a fraction of the water and energy.

En la p. 248 se corrige, además, lo resaltado, se revisa el enlace web y se elimina el superíndice.



- I In 1972, Ray Tomlinson sent the first electronic message, now known as e-mail, using the @ symbol to indicate the location of the e-mail recipient. Tomlinson, using a Model 33 Teletype device, understood that he needed to use a symbol that would not appear in anyone's name to avoid confusion. He chose the "at sign" because it was unlikely to appear in anyone's name and also because it represented the word "at".
- II However, before the symbol became a standard key on typewriter keyboards in the 1880s, the @ sign had a long history of use throughout the world. Linguists are not sure of when the symbol first appeared. Some argue that the symbol dates back to the 6th or 7th centuries when Latin scribes adapted the symbol from the Latin word *ad*, meaning at, to or toward. The scribes, to simplify the amount of pen strokes they were using, created the ligature (combination of two or more letters) by exaggerating the upstroke of the letter "d" and curving it to the left over the "a." Other linguists say that the @ sign is a more recent development, appearing sometime in the 18th century as a symbol used in commerce to indicate price per unit, as in "2 chickens @ 10 pence".
- III In 2000 Giorgio Stabile, a professor of the history of science at La Sapienza University in Italy, discovered some original 14th-century documents clearly marked with the @ sign to indicate a measure of quantity, *the amphora*, meaning jar. The amphora was a standard-sized terra cotta vessel used to carry wine and grain among merchants, and, according to Stabile, the use of the @ in trade led to its contemporary meaning of "at the price of."

Adapted from www.wikipedia.com

2. Are these statements **True** or **False**? Find evidence in the text to support your answer.

- a) The @ symbol was first used in 1972.
- b) The origins of the symbol are well known.
- c) Linguists agree that the history of the symbol is long.
- d) Giorgio Stabile discovered the sign in some 14th century documents.
- e) The current meaning of @ dates from its use in trade.

Página 249
Se quita el entrecomillado a la palabra arroba.

7. In Spanish, @ means **arroba**, an old unit of measurement for liquids. Do you know its equivalent amount in litres? Find out about it.

Páginas 250 a 259
Se remaquetan a doble columna las pp. 250 a 257 y se reorganizan las pp. 258 y 259.
Además, en la página 252 se cambia el color al nombre de uno de los intervinientes en el diálogo;

	He is a senior electrician. You are going to work together.
David Lord	Nice to meet you, Tom. And welcome.

en la página 255 se elimina espacio detrás de guion y en la página 257 se elimina el enlace web.

Receptionist	All right. Can you tell me the model and reference number, please?
Customer	Yes, it's a Compact Desktop N-700-23 PC , and the reference is 8627-B.
Receptionist	Ok, a Compact Desktop N-700-23 PC. That's it. Did you say 8627-B?

Página 271
Transistor symbols
Se cambia la cifra en número por letra.

Darlington Transistor	Made from two bipolar transistors. Has total gain of the product of each gain.
------------------------------	---

Página 274
Se revisa el enlace web.

Adapted from <https://www.rapidtables.com>

Página 275

Se revisa el enlace web.

More information at www.wikipedia.com, <http://www.digikey.com>

Página 282

Se eliminan las comillas de la palabra resaltada y se revisa el enlace web

// It means this is a compute [protocol](#).

Adapted from www.lifewire.com

Página 283

Se revisa el enlace web

g "ear"
[Adapted from www.wikipedia.com](http://www.wikipedia.com)

Al final de esta fe de erratas se han puesto a disposición del usuario las **páginas 76, 97, 123, 155 y 200** completas y corregidas.