TEACHER'S NOTES. GENERAL INFORMATION

The activities presented in these materials could be done separately because the lesson plans for these units are aimed to an optional subject in 3rd of ESO, but some of them could be used in technology of 4th ESO or in a different level (as specific activities in English) in a subject taught mainly in L1 (mother tongue).

Many contents and activities are presented in a table format.

Some of these tables have extra content in case you want to go in a more detailed way into the subject. This extra content could be removed in order to obtain a lower order or shorter activity.

The table format presentation allows:

- to show the contents on the student's workbook
- use the tables to do different kinds of activities with the same content
- use the table as a part of a test

When you use the materials the colour on the tables and diagrams could be removed before printing to save colour ink.

UNIT 1 HARDWARE

The lesson starts with this definition:

A computer is a digital, programmable and electronic system that processes information

The teacher could explain the meaning of the words electronic, digital and programmable
For the meaning of processing information there are activities 1.1 (processing) and 1.3 (kinds of information).

Processing information is an expression that includes many different actions that a computer can do with information.

@ctivity 1.1

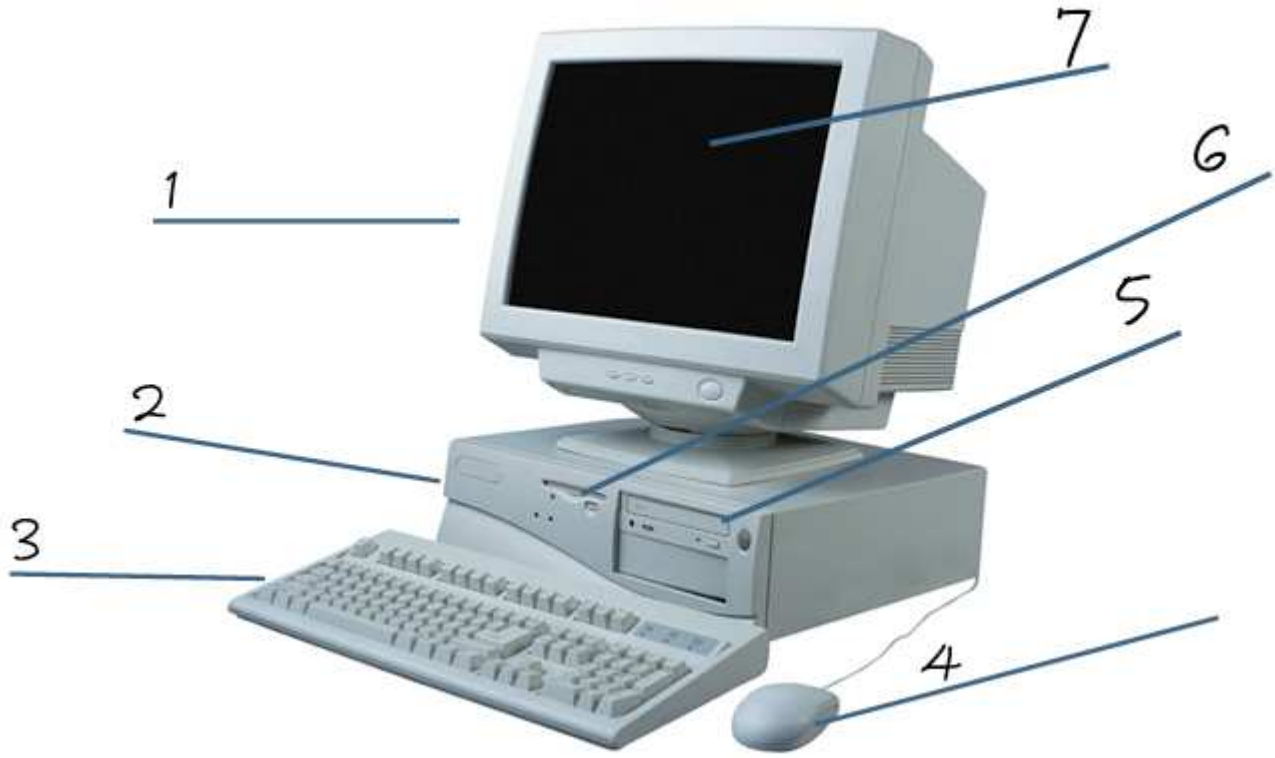
Brainstorm all the actions you think a computer can do with different kinds of data. Write these words down on your notebook.

ANSWER: (List of verbs related to information processing):
Read, write, delete, save, modify, create, print, copy, cut, paste, send, receive, import, export, convert, download, filter, add, select, calculate, draw, render, do, undo, present, set, format, insert, sort, correct, count, compress, encrypt, link, open, close, bookmark, share, search, replace, etc.

@ctivity 1.2

Label the parts of the computer using the words from the list at the bottom part of the page. Write the translation of the words you used.

ANSWER:
1 monitor
2 system unit
3 keyboard
4 mouse
5 CD / DVD unit
6 floppy disc unit
7 screen



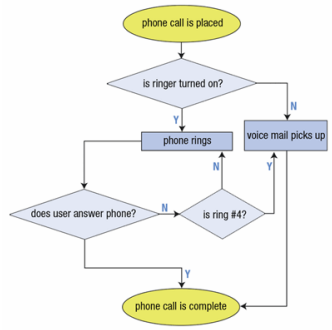
KEYBOARD, MONITOR, SYSTEM UNIT, SCREEN, MOUSE, FLOPPY DISC UNIT, CD / DVD UNIT

In our multimedia world there are many kinds of information. This matching activity will help you to find out more about it.

@ctivity 1.3

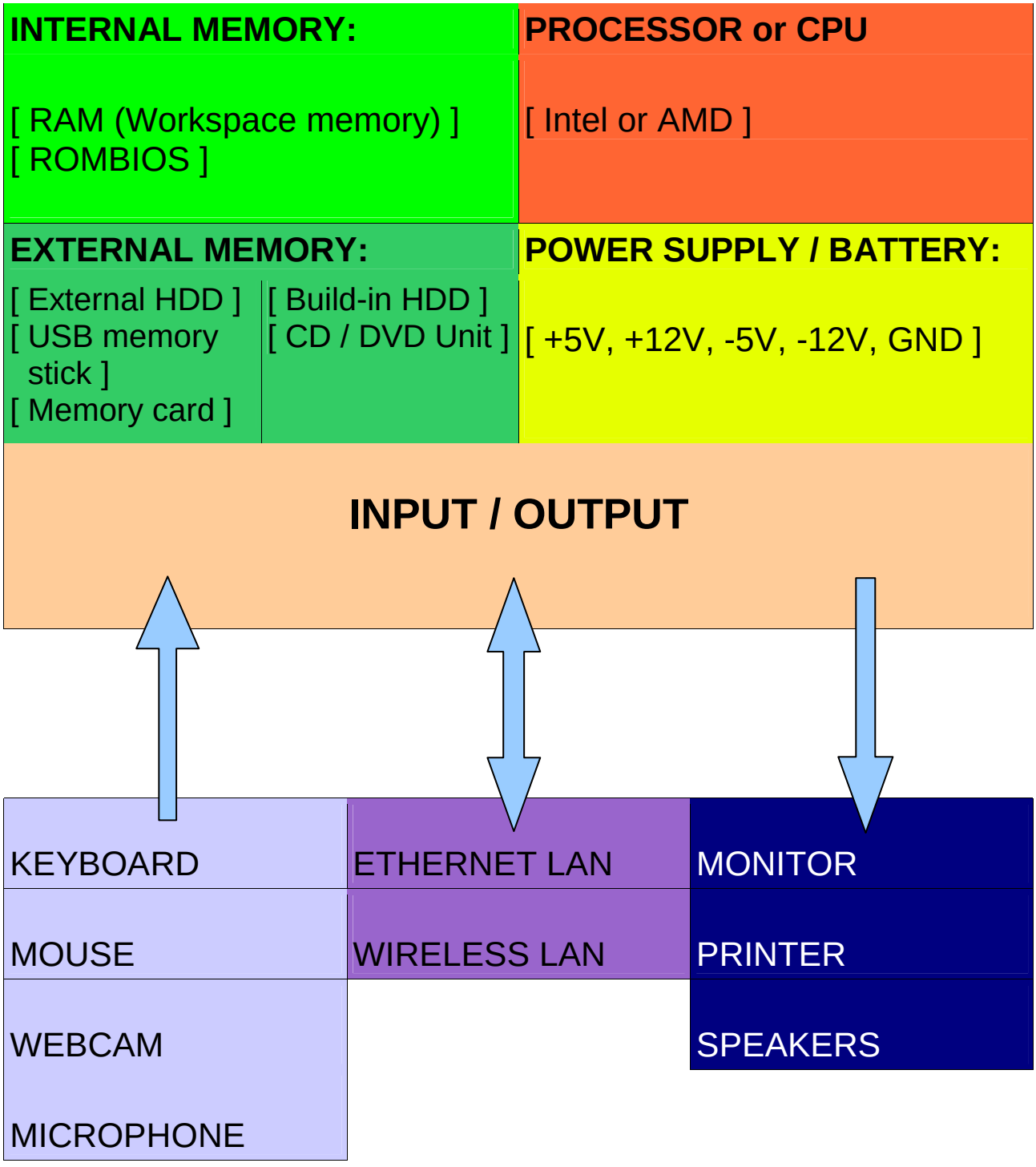
Put the following words in the column "KIND OF INFO" to match with the examples that are in the two first columns:

program instructions, music, voice, text, graphics, video clip, alphanumerical data, control signals, machine code, films, still image, sound, numerical data, video, figures, full motion picture, diagrams, schematics, drawings, pictures.

EXAMPLE	FILE EXTENSIONS	KIND OF INFO
This is a paragraph to show you one kind of information. This type of data is called text.	.txt .rtf .doc .odt	Text, alphanumerical data
1527,30 6,023 · E23	.xls .ods	Numerical data, figures
10010100 , LDA 4F Hex CR (Carriage Return) LF (Line Feed) <html><head><body>	.exe .dll .html	Program instructions, control signals, machine code
	.dwg .bmp .jpg .gif	Graphics, still image, diagrams, schematics, drawings, pictures
	.wav .mp3 .wma .mid	Music, voice, sound
	.avi .wmv .rm .divx .mov .vob .flv .mp4	Video clip, films, video, full motion pictures

The basic parts of a computer: (page 4)

Use the visual on this page to explain the parts of a computer and to introduce some peripheral devices (input / output). Notice the two different green colours for internal and external memory and the one way or bidirectional arrows for the input / output devices.



@ctivity 1.4

Match the terms with their correct definitions, then write down the translation of the word to L1 (mother tongue) in the correct place.

Terms: LCD screen, programmable, webcam, hardware, RAM, computer, software, ROM, peripheral device and USB memory stick.

TERMS	DEFINITION	TRANSLATION
computer	Electronic, digital and programmable system that processes information	ordinador
hardware	Physical components of a computer	maquinari
software	Programs of the computer	programari
Peripheral device	Devices that communicate with the computer to transfer input / output data	perifèrics
RAM	Volatile read-write memory device (random access memory)	Memòria RAM
ROM	Memory device that can only be read	Memòria ROM (només de lectura)
LCD screen	Monitor that uses liquid crystal display technology	Pantalla LCD
webcam	Small video camera used with computers and internet	webcam
USB memory stick	Non volatile read-write memory device that plugs into the universal serial bus port	Llàpis de memòria (USB)
programmable	System or machine that runs following a set of instructions stored in a part called memory	programable

@ctivity 1.5

Watch one of these videos from youtube to see how a personal computer (=PC) is assembled. Write down in your notebook the name of the different computer parts that you see or hear on the selected video. The 1st one shows the names of the parts written on the screen and the only sound is background music. The 2nd one introduces the computer parts on the picture and at the same time the word is said but there is nothing written.

① **http://www.youtube.com/watch?v=_mHTKlc11Jg** (approx. 10 min.)

② **http://www.youtube.com/watch?v=D_E3ULURHkE&feature=related** (approx. 7 min.)

PERIPHERALS: are devices that communicate with the computer to transfer data from the outside world to the computer (input devices), from the computer to the outside world (output devices) or working both ways (input / output devices).

@ctivity 1.6

Look at the list of peripherals. Decide if they are input, output or both and tick the appropriate boxes. Then translate the word into L1. Choose one peripheral from the table and be ready to talk about it using the language frame provided below:

A _____ _____s	is are	(an)	input output I / O	peripheral(s)	which	is are	used for	....

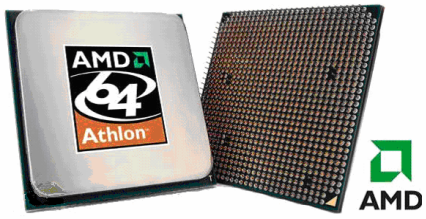
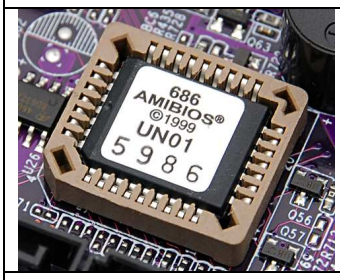
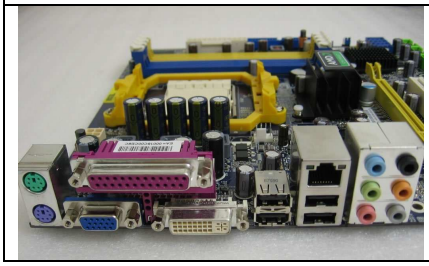
The ones marked with the star (*) are the basic ones.

PERIPHERALS	INPUT	OUTPUT	TRANSLATION
*Keyboard / Keypad	✓		teclat
*Mouse	✓		ratolí
*Laser Printer / Inkjet Printer		✓	Impressora de làser / d'injecció
*Scanner	✓		escàner
*Hard Disc Drive (HDD)	✓	✓	Unitat de disc dur
*LCD Monitor / Screen		✓	Monitor / Pantalla LCD
Bar Code Reader	✓		Lector de codi de barres
*Web Cam	✓		Webcam o càmera web
*Microphone	✓		micròfon
*Speakers		✓	altaveus
Digital Camera	✓		Càmera digital
*Memory Card	✓	✓	Targeta de memòria
Swipe Card Reader	✓		Lector de targetes magnètiques
*USB Pen Drive / Memory Stick	✓	✓	Llàpis de memòria
*CD / DVD RW Unit	✓	✓	Unitat de CD / DVD (gravar i reproduir)
*Multifunction Printer	✓	✓	Impressora multifunció (escaneja, copia, imprimeix)
Headphones		✓	auriculars
Plotter		✓	traçador
Joystick	✓		Palanca de control
Touch Screen	✓	✓	Pantalla tàctil
Modem – Router	✓	✓	Mòdem - encaminador
Sound Card	✓	✓	Targeta de so
Digitizer Tablet	✓		Tauleta digitalitzadora
*Network Interface Card	✓	✓	Targeta d'interfície de xarxa

@ctivity 1.7

In pairs, match the images with the words on the box below and the definitions you will be provided with.

Keyboard, RAM, mouse, HDD, monitor or screen, USB memory stick, I / O connections, memory card, processor, multifunction printer, power supply, external HDD, CD / DVD unit, ROMBIOS

IMAGE	WORDS	DEFINITIONS
	RAM	Random Access Memory. Refers to volatile (when power is turned off information is lost) and read / write chips (=integrated circuits) where information is stored. It's also called workspace memory.
	Processor	It's the main or central chip of a computer system. It controls the execution of program instructions and communicates with the other chips in the computer using a set of wires called BUS. This chip is called the "brain" of the computer. Common chips of this kind are Intel and AMD processors.
	ROMBIOS	Read Only Memory Basic Input Output System. It's also called bootstrap (BS) memory. (BS= process to initialise the computer) Nowadays it isn't a read only device but a read / write one.
	Power supply	System that converts and supplies energy to different electrical parts of the computer
	I / O connections	The various connectors or ports to connect the external peripheral devices.

	Keyboard	Input device used to type alphanumerical characters into the computer.
	Mouse	Input device used to click on different parts of the screen to enter information or to start a process.
	Monitor or screen	Output device used to display information such as text, graphics, pictures, videos, etc.
	Multifunction printer	Peripheral device used for several functions such as to produce printed paper copies, scan and/or photocopy a document.
	HDD	Hard Disc Drive. Mass storage device that contains a non removable disc inside and it's used to save information: programs, documents, pictures, videos, music, etc.
	CD / DVD Unit	Peripheral device used to read and/or write CD and DVD discs. If it is a ROM unit only reading is possible, but if it is a R/W unit it can read from and record to discs.

	External HDD	Mass storage device that contains a non removable disc inside and it's used to save information: programs, documents, pictures, videos, music, etc. It's an external and portable device usually connected to the USB port.
	USB memory stick or pen drive	Mass storage device that has a flash memory chip inside and can be inserted to a USB (Universal Serial Bus) port. It's a non volatile read / write memory.
	Memory card	Mass storage device that has a flash memory chip inside and is commonly used in digital cameras and computers. It's a non volatile read / write memory.

Units for measuring information:

- To measure the amount of information stored in a memory device:

1 bit = 1b = binary digit = is the minimum amount of information in computer science or digital electronics and it is represented using the lower case letter b.

1 byte = 1B = is equal to 8 bit and is represented using the upper case letter B.

1 Kilobyte = 1KB = 1024 bytes

1 Megabyte = 1MB = 1024 KB

1 Gigabyte = 1GB = 1024 MB

1 Terabyte = 1TB = 1024 GB

1 Petabyte = 1PB = 1024 TB

- To measure the speed of information transfer (sending and receiving):

bps = bits / second = bits / s = bits per second

Bps = bytes / second = bytes per second

Kbps = Kilobits / second

Mbps = Megabits / second

Some examples of information transfer speed:

CONNECTION	SPEED
Voice modem	56 Kbps
ISDN = Integrated Services Digital Network	128 Kbps
ADSL = Asymmetric Digital Subscriber Line	1, 2, 10, 20 Mbps
Ethernet LAN (Local Area Network)	100 Mbps
Wireless LAN (Wifi)	54 Mbps

Do the following activity as a predicting task, and then when you check it with your students you may use the table to explain and compare some devices and their capacities.

@ctivity 1.8

- Add the storage capacity of the different devices to the table below.
- Consider the capacity of single layer and double layer DVD discs and also single and double sided ones.
- Write the numbers and the units in each cell of the table.

MEMORY DEVICE	CAPACITY (units)
Floppy Disc Drive (old technology)	1,4 MB
Hard Disc Drive	250 GB, 320 GB, 500 GB, 1TB ...
RAM (computer's workspace memory)	1 GB, 2 GB ...
CD-ROM	700 MB (= 80 min. non compressed music)
DVD-ROM	Regular : 4,7 GB (one side-single layer) Max. : 17 GB (double side-double layer)
USB Memory Stick (Pen Drive)	1 GB, 2 GB, 4 GB ...
Memory Card	1 GB, 2 GB, 4 GB ...
HD-DVD	15 GB (one side-single layer) 30 GB (single side-dual layer)
Blu-Ray disc	25 GB (one side-single layer) 50 GB (single side-dual layer)

For this activity you can use any one page text only file saved as .doc (Microsoft Office Word). Then, you have to convert it to PDF format using the PDF Creator program or opening the .doc document from the Open Office Writer and saving it in PDF format.
The aim of this exercise is to get the students to think about the size the data takes depending on the file format or extension. The students will practice the units for measuring amount of information and comparative sentences using language frames.

@ctivity 1.9

The teacher will provide students with the **.doc** and the **.pdf** files for the activity.
The **TOOLS / WORD COUNT** could be a useful feature.

- Open the one page text document in WORD (**.**doc)
- Count the number of lines in that single page
- Count the number of characters in one line of the text (including blank spaces).
- Calculate when necessary and complete the table below.
- Compare the data in lines 6, 7 and 8.
- Practice some sentences using the language frames below.

#	CONCEPT	DATA (units)
1	Lines per page	
2	Characters per line	
3	Total characters in one page	
4	Bytes per character	1 byte / char.
5	Total bytes per page	
6	Total KB per page	
7	**.**DOC document size	
8	**.**PDF document size	

The _____ document size	is	bigger smaller	than	the _____ one

The _____ document size	is	_____ Kilobytes

@ctivity 1.10

- Fill the cells of the first column with data from the computer you are working with.
- Look for more information to complete columns 3 and 4 using the information found in one of the following web pages:

www.pcworld.co.uk www.packardbell.com
www.compaq.com www.acer.com

	ICT CLASSROOM	DESKTOP	LAPTOP
*Source of information	My PC and Desktop properties		
*Make & Model	MEDION MD 400		
*Processor type	Intel Pentium IV		
Processor speed (MHz)	2,80 GHz		
*RAM Memory size (GB)	512 GB		
*Hard Drive Capacity (GB)	60GB		
CD / DVD Drive & type	RW unit One side / one layer		
*Screen size (inches)	15 “		
*Screen type (pixels) (SVGA, XGA, WXGA)	XGA (1024 x 768)		
Graphics card make	NVIDIA GeForce FX		
Graphics card memory size			
Modem (56 Kbps)	Yes		
*Wireless	Yes 802.11g		
*Ethernet	Yes		
*Number of USB ports (rear + front = total)	4 + 0 = 4		
Firewire connections (IEEE 1394)	Yes one		
Memory card reader (types of cards supported)	Yes one SD Card		
*Operating System	Windows XP		
Software titles included			
Battery type	Li-Ion		
Battery life (holds up to)	1h 30min		
Weight (Kg)	3Kg aprox. (Laptop)		
*Warranty (years)	3 years		
*Price (currency)	1500 € (Year 2004)		

@ctivity 1.11

- Begin the tree next page on **START** and follow the sentences in order.
- If you think it's a true sentence, move up the tree.
- If you think it's a false sentence, move down the tree.

SENTENCES:

1. The scanner is an output device
2. RAM is a kind of read / write memory
3. ROM is a chip that contains the Central Processing Unit
4. The operating system is part of the computer's hardware

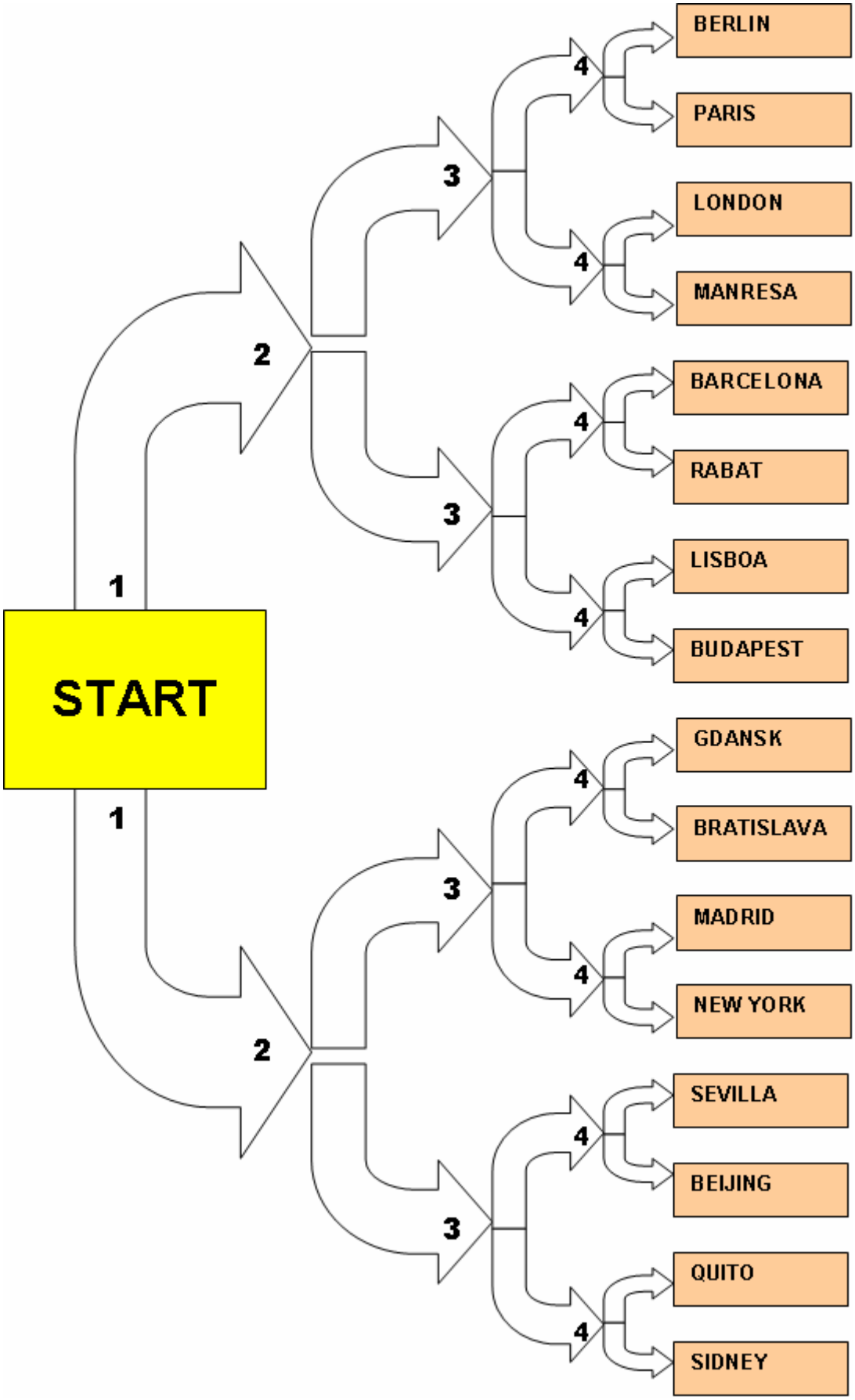
Where have you finished?

ANSWERS:

1. false (move down)
2. true (move up)
3. false (move down)
4. false (move down)

You will finish in NEW YORK

The teacher could prepare different sets of true and false sentences and use the same tree again (even in a new unit).


START
1
1
2
2
3
3
3
3
4
4
4
4
4
4
4
4
BERLIN
PARIS
LONDON
MANRESA
BARCELONA
RABAT
LISBOA
BUDAPEST
GDANSK
BRATISLAVA
MADRID
NEW YORK
SEVILLA
BEIJING
QUITO
SIDNEY

@ctivity 1.12

Do a loop game with the terms and sentences below:

1 BIT
In a memory device when power is turned off stored information is lost
2 PIXEL
In a device that stores information it means it can be read, written or deleted
3 WIRELESS
Binary digit. In computer science it's the minimum amount of information
4 VOLATILE
Electronic integrated circuit
5 READ / WRITE
Communication done by means of electromagnetic waves (radiofrequency waves), that is, not using wires
6 BOOT or BOOTSTRAP
Data that may contain letters, numbers and punctuation characters
7 ALPHANUMERICAL
It's a way of coding information using ones and zeros (binary code)
8 DIGITAL
Each one of the input / output connections the computer has to communicate with the outside world and plug devices into.
9 MULTIMEDIA
Physical place or device to store information
10 PORT
It's related to all different kinds of information such as: text, numerical quantities, pictures, sound and video.
11 CHIP or MICROCHIP
Internal process that initialises and checks the hardware components in a computer and then transfers control to the Operating System (OS)
12 MEMORY
Picture element or picture dot

To do this activity (1.12) you have to cut in strips a copy of page 16. Each strip has a word at the top and a definition at the bottom and is given to a student. A student starts reading its definition from the paper and the rest of them have to listen to it. The student with the word that matches the definition says the word aloud and then reads its definition and the task goes on until the loop is closed.

ANSWERS:

	WORD	DEFINITION
1	Bit	Binary digit. In computer science it's the minimum amount of information
2	Pixel	Picture element or picture dot
3	Wireless	Communication done by means of electromagnetic waves (radiofrequency waves), that is not using wires
4	Volatile	In a volatile memory device when power is turned off stored information is lost
5	Read / Write	In a device that stores information it means it can be read, written or deleted
6	Bootstrap (BS) or boot program	Internal process that initialises and checks the hardware components in a computer and then transfers control to the Operating System (OS)
7	Alphanumerical	Data that may contain letters, numbers and punctuation characters
8	Digital	It's a way of coding information using ones and zeros (binary code)
9	Multimedia	It's related to all different kinds of information such as: text, numerical quantities, pictures, sound and video.
10	Port	All the input / output connections the computer has to communicate with the outside world and plug devices into.
11	Chip or Microchip	Electronic integrated circuit
12	Memory	Physical place, microchip or device to store information (data)

@ctivity 1.13

Complete the words with the missing letters:

ACRONYMS	MEANING
*HDD	H_ _d D_ _c D_ _ _e
FDD	F_ _ _ _y D_ _c D_ _ _e
*ROM	R_ _d O_ _y M_ _ _ _y
*RAM	R_ _ _ _m A_ _ _ _s M_ _ _ _y
*CPU	C_ _ _ _ _l P_ _ _ _ _ _ _ _g U_ _t
*LCD	L_ _ _ _d C_ _ _ _ _l D_ _ _ _ _y
*USB	U_ _ _ _ _ _ _l S_ _ _ _l B_s
*DVD	D_ _ _ _ _l V_ _ _ _ _ _ _e D_ _c / D_ _ _ _ _l V_ _ _o D_ _c
EPOS	E_ _ _ _ _ _ _ _c P_ _ _t of S_ _e
OCR	O_ _ _ _ _l C_ _ _ _ _ _ _r R_ _ _ _ _ _ _ _ _n
WAN	W_ _e A_ _a N_ _ _ _ _k
*LAN	L_ _ _l A_ _a N_ _ _ _ _k
*PDA	P_ _ _ _ _ _l D_ _ _ _ _l A_ _ _ _ _ _ _t
BIOS	B_ _ _c I_ _ _t / O_ _ _ _t S_ _ _ _m
*I / O	I_ _ _t / O_ _ _ _t
CD-A	A_ _ _o C_ _ _ _ _t D_ _c (CD)
*CD-ROM	R_ _d O_ _y CD (for computers)
*CD-R	R_ _ _ _ _ _ _ _ CD (only once, non erasable)
CD-RW	R_ _ _ _ _ _ _ _e CD (readable, writable and erasable many times)
*DVD-ROM	R_ _d O_ _y D_ _ _ _ _l V_ _ _ _ _ _ _e D_ _c (DVD)
*DVD-R	R_ _ _ _ _ _ _ _e DVD (only once, non erasable)
DVD-RW	R_ _ _ _ _ _ _ _e DVD (readable, writeable and erasable many times)
*ICT	I_ _ _ _ _ _ _ _n and C_ _ _ _ _ _ _ _ _ _ _n T_ _ _ _ _ _ _ _y
SVGA	S_ _ _r V_ _ _o G_ _ _ _ _ _s Array (800 x 600 pixels)
XGA	E_ _ _ _ _ _ d G_ _ _ _ _ _s A_ _ _y (1024 x 768 pixels)
WXGA	W_ _e E_ _ _ _ _ _ d G_ _ _ _ _ _ _s A_ _ _y (1366 x 768 pixels)
MODEM	M_ _ _ _ _ _ _r D_ _ _ _ _ _ _ _ _r device
VDU	V_ _ _o D_ _ _ _ _y U_ _t

ANSWERS:

ACRONYMS	MEANING
HDD	Hard Disc Drive
FDD	Floppy Disc Drive
ROM	Read Only Memory
RAM	Random Access Memory
CPU	Central Processing Unit
LCD	Liquid Crystal Display
USB	Universal Serial Bus
DVD	Digital Versatile Disc / Digital Video Disc
EPOS	Electronic Point of Sale
OCR	Optical Character Recognition
WAN	Wide Area Network
LAN	Local Area Network
PDA	Personal Digital Assistant
BIOS	Basic Input / Output System
I / O	Input / Output
CD-A	Audio Compact Disc (CD)
CD-ROM	Read Only CD (for computers)
CD-R	Recordable CD (only once, non erasable)
CD-RW	Rewritable CD (readable, writeable and erasable many times)
DVD-ROM	Read Only Digital Versatile Disc (DVD)
DVD-R	Recordable DVD (only once, non erasable)
DVD-RW	Rewritable DVD (readable, writeable and erasable many times)
ICT	Information and Communication Technology
SVGA	Super Video Graphics Array (800 x 600 pixels)
XGA	Extended Graphics Array (1024 x 768 pixels)
WXGA	Wide Extended Graphics Array (1366 x 768 pixels)
MODEM	Modulator Demodulator device
VDU	Video Display Unit

The acronyms marked with the star (*) are the basic ones. This activity could be made shorter using only the basic terms or could be used in different ways for extension and lower level students.

@ctivity 1.14

In pairs, predict the missing words in the left column and write them down. Complete the data about your computer at home individually and then compare it with your partner.

	☐ Desktop ☐ Laptop		Make:	
YEAR				
	INTEL ☐ Celeron ☐ Centrino ☐ Pentium IV, Pentium D ☐ Dual Core ☐ Quad Core ☐ _____		AMD ☐ Sempron ☐ Athlon 64 ☐ Athlon x2 ☐ Phenom x4 ☐ _____	
	☐ 1GB	☐ 2GB	☐ 3GB	☐ _____
	GB			
	☐ CRT ☐ LCD		Inches:	
	☐ INJECTION ☐ LASER ☐ MULTIFUNCTION		Make:	
_____ Ports	Front ( ) + Back ( ) = TOTAL ( )			
FIREWIRE Port (IEEE 1394)	☐ YES		☐ NO	
_____ Units	How many? ☐ DVD-ROM ☐ DVD-R/W		☐ Multisystem +/- ☐ Double Side ☐ Double Layer	
WIFI	☐ YES		☐ NO	
ETHERNET LAN Connection	☐ YES		☐ NO	
VIDEO Capture	☐ YES		☐ NO	
TV Tuner	☐ YES		☐ NO	
	☐ 56Kb	☐ ADSL 1M	☐ ADSL 2M	☐ _____

ANSWER:

COMPUTER	☐ Desktop ☐ Laptop		Make:	
YEAR				
PROCESSOR	INTEL ☐ Celeron ☐ Centrino ☐ Pentium IV, Pentium D ☐ Dual Core ☐ Quad Core ☐ _____		AMD ☐ Sempron ☐ Athlon 64 ☐ Athlon x2 ☐ Phenom x4 ☐ _____	
RAM MEMORY	☐ 1GB	☐ 2GB	☐ 3GB	☐ _____
HARD DISC DRIVE	_____ GB			
SCREEN	☐ CRT ☐ LCD		Inches:	
PRINTER	☐ INJECTION ☐ LASER ☐ MULTIFUNCTION		Make:	
USB Ports	Front ( ) + Back ( ) = TOTAL ( )			
FIREWIRE Port (IEEE 1394)	☐ YES		☐ NO	
DVD Units	How many? ☐ DVD-ROM ☐ DVD-R/W		☐ Multisystem +/- ☐ Double Side ☐ Double Layer	
WIFI	☐ YES		☐ NO	
ETHERNET LAN Connection	☐ YES		☐ NO	
VIDEO Capture	☐ YES		☐ NO	
TV Tuner	☐ YES		☐ NO	
INTERNET Connection	☐ 56Kb	☐ ADSL 1M	☐ ADSL 2M	☐ _____

@ctivity 1.15

ICT QUESTIONNAIRE . Individually answer this questionnaire. Then, in pairs, comment on some answers (questions from 1.4 to 1.9, 2.4, 2.6, 4.2, 4.14, 4.16 and from 5.10 to 5.14). The teacher will ask you to share with the rest of the class some of your answers and opinions about the topic.

TELEVISION	**Home**	
	YES	**NO**
1.1 Have you got cable TV ?	❑	❑
1.2 Have you got a satellite dish ?	❑	❑
1.3 Have you got a TV set with panoramic screen (wide format, 16:9) ?	❑	❑
1.4 Have you subscribed to a PPV (Pay Per View) TV system ?	❑	❑
1.5 Have you got digital terrestrial TV broadcasting ? (DVB-T = Digital Video Broadcasting-Terrestrial)	❑	❑
	❑	❑

1.6 How many hours per day (average) do you watch TV at home on weekdays ?			
1.7 How many hours per day (average) do you watch TV at home at weekends ?			
1.8 How many TV sets have you got at home ?			
1.9 How many hours per day (average) do you play video games (video console) on your TV or on your computer ?			
1.10 How many TV channels are available in every language ? (TERRESTRIAL CHANNELS ONLY, DIGITAL AND ANALOGUE BUT NOT SATELLITE)		**#channels**	**language**
	Analogue		
	Digital (DVB-T)		
	Cable		

VIDEO and DVD	**Home**	
	YES	**NO**
2.1 Have you got a VCR (Video Cassette Recorder) ?	❑	❑
2.2 Have you got a DVD player (DVD-ROM unit) ?	❑	❑
2.3 Have you got a DVD recorder (DVD-R/W unit) ?	❑	❑
2.4 Have you got a digital video camera ?	❑	❑
2.5 Have you got a digital picture camera ?	❑	❑
	❑	❑

2.6 How many video movies (DVD) does your family rent per week ?	

TELEPHONY		
	YES	**NO**
3.1 Have you got a mobile (cellular) phone ?	❑	❑
3.2 Are there different phone companies in your country ?	❑	❑
	❑	❑

3.3 How many mobile phones has your family got ?	
3.4 How many messages (average) do you send per day ? (SMS = Short Message Service)	
3.5 What make is your mobile phone ?	❑ Alcatel ❑ Mitsubishi ❑ Motorola ❑ Nokia ❑ Samsung ❑ Siemens ❑ SonyEricsson ❑ Other

PERSONAL COMPUTERS (PC)	**Home**	
	YES	**NO**
4.1 Have you got a personal computer (PC) at home ?	❑	❑
4.2 Have you got a portable computer (Laptop)?	❑	❑
4.3 Have you got a CD-ROM unit in the computer you use ?	❑	❑
4.4 Have you got a CD-R/W unit (CD recorder) in the computer you use ?	❑	❑
4.5 Have you got a DVD-ROM unit in the computer you use ?	❑	❑
4.6 Have you got a DVD recorder unit in the computer you use ?	❑	❑
4.7 Have you got a scanner at home ?	❑	❑
4.8 Have you got a webcam ?	❑	❑
4.9 Do you use Microsoft Windows operating system ?	❑	❑
4.10 Do you use Linux operating system ?	❑	❑
4.11 Do you play video games on your computer ?	❑	❑
	❑	❑

4.12 How many computer rooms are there at your school ?	
4.13 When you use the computer at school during a lesson, how many students per computer work on it?	❑ 1 student per computer ❑ 2 students per computer ❑ 3 students per computer
4.14 How often do you play video games on your computer?	❑ every day ❑ more than twice a week ❑ twice a week ❑ once a week ❑ less frequently
4.15 What kind of processor is installed in your computer ?	❑ INTEL (Pentium or similar) ❑ AMD (Athlon or similar) ❑ Other

4.16 How old is the computer you have got at home ?	❑ less than 1 year old ❑ between 1 and 2 years old ❑ between 2 and 3 years old ❑ more than 3 years old	
4.17 How many computers have you got at home ?	Desktop	
	Laptop (portable)	

INTERNET	**Home**	
	YES	**NO**
5.1 Have you got an internet connection ?	❑	❑
5.2 Is it a broadband (fast) connection (ADSL or similar) ?	❑	❑
5.3 Have you designed a web page ?	❑	❑
5.4 Have you ever participated in an internet forum ?	❑	❑
5.5 Have you got e-mail address ?	❑	❑
5.6 Do you use e-mail services to communicate with other people ?	❑	❑
5.7 Do you use internet chats ?	❑	❑
5.8 Are there cybercafes in your town ?	❑	❑
5.9 Do you listen to MP3 music ?	❑	❑
5.10 Do you download MP3 music from internet?	❑	❑
5.11 Do you download films from internet ?	❑	❑
5.12 Have you designed your own blog ?	❑	❑

5.13 How often do you connect to internet chats (Messenger, Skype, Gtalk, etc.?	❑ every day ❑ more than twice a week ❑ twice a week ❑ once a week ❑ less frequently
5.14 How many films did your family download last month from internet ?	

TEACHER'S NOTES:

In the next page there is a multiple choice test that covers in ten questions many of the hardware topics seen on unit 1.

TECHNOLOGY DEPARTMENT / COMPUTER SCIENCE **3rd ESO** exCS1t

Name _____Class _____ Date_____

1/ A computer peripheral device is ...
- a/ an external program
- b/ used to communicate the mouse with the printer
- c/ used to communicate data between the processor and the RAM memory
- d/ an external device for data input/output

2/ A USB pen drive memory may have a storage capacity of ...
- a/ 512 GB
- b/ 2 MB
- c/ 1 KB
- d/ 2 GB

3/ Nowadays multifunction printers ...
- a/ are only input data peripheral devices
- b/ print, scan and copy documents
- c/ are only output data peripheral devices
- d/ none of the above

4/ Nowadays a hard disk drive unit of a new computer ...
- a/ has a capacity of 250 KB
- b/ works slower than 3,5" floppy disc drive unit
- c/ is able to have 200 GB capacity or more
- d/ has an approximate capacity of 1 GB

5/ A computer mouse ...
- a/ sends a video signal to the internal memory
- b/ is an input peripheral device with 2 or 3 buttons
- c/ is directly connected to the screen
- d/ is used to start the computer

6/ A computer sound card is:
- a/ an input-output peripheral device
- b/ only an input peripheral device
- c/ only an output peripheral device
- d/ a broad band device that works at a speed of 56 Kbps (Kilobits per second)

7/ RAM memory is ...
- a/ an external read only memory
- b/ an internal read-write memory
- c/ an internal read only memory
- d/ an external read-write memory

8/ A Gigabyte ...
- a/ is equal to a 1024 MB
- b/ is an information transfer speed unit
- c/ is equal to a 1000 MB
- d/ is a memory access speed unit

9/ One byte ...
- a/ is equal to 8 bits
- b/ is the minimum amount of information
- c/ is equal to 256 Megabits
- d/ none of the above

10/ Mark the correct sentence:
- a/ ROM means Random Operation Memory
- b/ ROM means Recordable Optical Media
- c/ DVD means Digital Versatile Disk
- d/ HDD means Hyper Dual Drive

@ctivity 1.16

SELF ASSESSMENT UNIT 1

Name:	**Date:**		
Can do:	**Very well**	**Quite well**	**Needs to be reviewed**
Identify the parts of a computer			
Classify peripheral devices (input/output)			
Explain the basics about parts and peripherals			
Define some terms related to computers			
Differentiate hardware from software			
Work and calculate using digital information units properly			
Give different opinions about the importance of computers			
Communicate what you have learnt			