2 IT systems

- give hardware specifications
- give instructions for using a GUI
- describe different multimedia types
- explain OS installation

System specifications

Speaking **1** Work in small groups. What is the difference between peripherals and internal hardware? Name as many of each as you can. Can you install any?

Vocabulary **2** Are these items *internal components* (I), *peripherals* (P) or *storage* (S)? For some items, there may be more than one possible answer.

1 external drive ___
2 hard disk drive ___
3 headphones ___
4 optical drive ___
5 keyboard ___
6 solid state drive ___
7 mouse ___
8 memory ___
9 monitor ___
10 power supply unit ___
11 printer ___
12 screen ___

Listening **3** 🔊 07 Listen to a technician describing the motherboard to a new trainee. Match these words to A–G in the photo below.

graphics card = video card

CPU = processor

1 audio socket ___
2 CPU socket ___
3 DIMM slot ___
4 Ethernet connector ___
5 graphics card socket ___
6 SATA socket ___
7 USB port ___

Language

Large and small numbers

For **decimal values**, we say 'point' for the decimal point and pronounce the next numbers individually. We don't always mention the 0 to the left of the decimal point for values less than 1.	*It's 0.54 millimetres long.* ('nought point five four' or 'point five four', NOT 'nought point fifty-four')
To express large and small numbers, we often use **prefixes**. For example, *kilo-* means '1,000'. The main stress is on the first syllable of the prefix.	*a 3.6-**kilo**byte file*

4 Match the prefixes in the box to these numbers.

| dual- | giga- | kilo- | mega- | micro- | milli- | nano- |
| quad- | tera- | | | | | |

1 1,000,000,000,000 _____ 3 1,000,000 _____ 7 1,000,000 _____
2 1,000,000,000 _____ 4 1,000 _____ 8 4 _____
   5 0.000000001 _____ 9 2 _____
   6 0.000001 _____

Pronunciation **5** ▶ 🔊 08 Listen and underline the stressed syllables in these words. Then practise saying the words with a partner.

1 a dual-core processor 5 18 nanometres
2 a quad-speed Blu-ray drive 6 a 26-kilobyte file
3 a 3.5-millimetre socket 7 2.4 megahertz
4 a micrometre 8 4 terabytes

Listening **6** ▶ 🔊 09 Listen to an IT manager and assistant talking about a problem with a delivery of new computers. Correct this delivery slip to show what was ordered.

Order for: Wood Publishing

5 × Expression 5710 laptop computers with the following specifications:
- Entel 2.73 GHz dual-core CPU
- 1 × 390 GB SDD
- 8 GB dual-channel DDR3 1666 MHz RAM
- Ladeon 3850 1 GB graphics card
- No optical drive
- 15.6-inch WLED 1920 × 1080 screen
- 4 × USB ports
- No operating system installed
- 1 year next business day on-site service

10 × Domination 8720 desktop computers
- Entel 3.4 GHz quad-core CPU
- 1 × Eastern Digital 2 TB 7200 rpm SATA HDD
- 16 GB 2000 MHz memory
- Ladeon 7950 2 GB graphics card
- 6 × Blu-ray combo optical drive (Blu-ray, DVD+/−RW & CD)
- 4 × USB ports
- 802.11n WLAN wi-fi mini card
- No operating system installed
- 1 year next business day on-site service

Dingle Digital Hardware Supplies

Speaking **7** Work in pairs. Roleplay the conversation the IT manager in 6 will have with the supplier, Dingle Digital.

Hi, we ordered some new computers from you but the order is wrong. We ordered laptops with ... but they came with ...

8 Work in pairs. Write some specifications for a computer. Then ask and answer questions about your partner's computer. Think about these things:

- processor speed
- memory
- hard drive size
- screen resolution

A: *How fast is the processor?*
B: *It's 2.84 megahertz.*

9 Work in pairs. Suggest specifications for computers for these people. Then compare your answers with another pair.

1 computers for administration staff
2 a computer for a designer
3 a server for a small business
4 a computer for a sales person

I don't think admin staff need a fast processor. They only need it for word processing and email. What about a two-gigahertz processor?
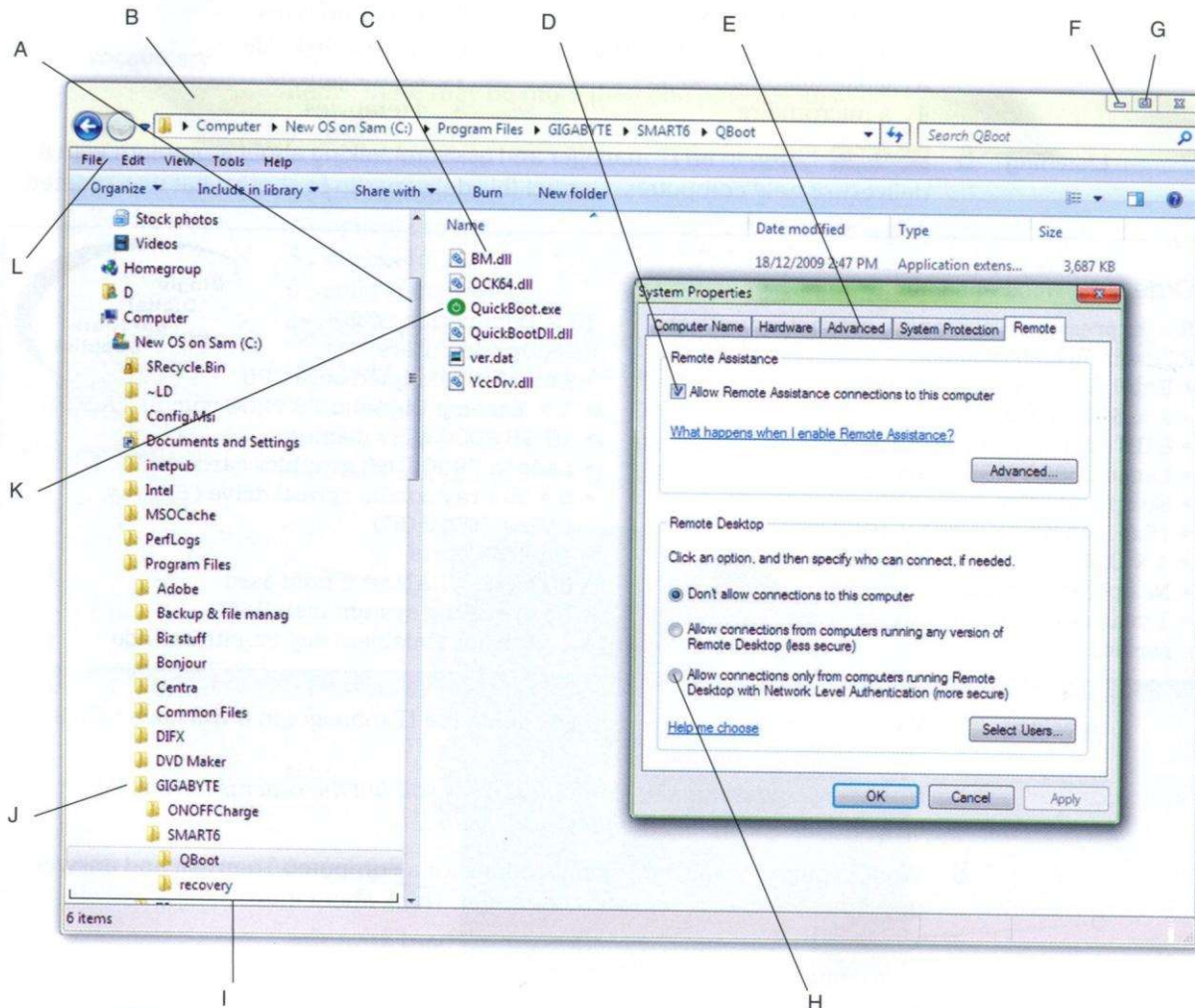
GUI operations

**GUI = graphical
user interface**

1 Work in pairs. Look at the screenshot in 2. What different things can you do to
a window?

You can resize it.

Vocabulary **2** Match these words to A–L in the screenshot below.

1 scroll bar ___	5 title bar ___	9 left-hand pane ___
2 menu ___	6 icon ___	10 tab ___
3 'Minimise' button ___	7 folder ___	11 check box ___
4 'Maximise' button ___	8 filename ___	12 radio button ___

3 Work in pairs. Match actions 1–7 to their results a–g.

1	Double click on the title bar	a) to open a new menu.
2	Click on a menu	b) and the window fills the screen.
3	Right-click on an icon	c) if you want to move the window.
4	Slide the scrollbar down	d) to hide the window.
5	Click the 'Minimise' button	e) to scroll the window down.
6	Drag the title bar	f) to open it.
7	Select the icon	g) and its background changes colour.

Listening **4** ▶ 🎧 **10** Listen to a help desk technician talking to an IT user. What information is the technician looking for?

5 Listen again. Number the instructions in the order you hear them.

☐ Choose 'Properties' from the menu. ☐ Choose the 'Details' tab.
☐ Just select 'Manage'. ☐ Just right-click where it says 'Disk 0'.
☐ Select 'Install date'. ☐ Can you scroll up to the top?

Language

Giving instructions	
We often use **imperatives** to give instructions. We use **'softeners'** such as *could you*, *can you* and *just* to make the instructions sound more polite.	**Drag** the window to the left. **Could you just** double click on the bottom icon?
We use **sequencers** (e.g. *first, then, next, after that, finally*) to show the order of the steps.	**First**, just click on the 'Start' button. **Then** select 'Shut down' in the bottom right corner.

6 Look at the instructions in 5. Underline the imperatives. What softeners does the speaker use?

Speaking **7** Work in pairs. Take turns being an IT help desk technician and an IT user. Use these prompts to explain to your partner how to follow the steps for each action.

'Start' button → 'Control Panel' → 'System and Security' heading → under 'System': 'View amount of RAM and processor speed'

A: *First, could you click on the 'Start' button?*
B: *Sure.*
A: *Then select 'Control Panel'. A box will appear.*
B: *OK.*
A: *Click where it says 'System and Security', then 'View amount of RAM and processor speed', under 'System'.*
B: *Got it! Thanks very much.*

1 'Start' button → Mozilla Firefox → double click/title bar
2 right-click on 'c:' drive → 'Properties' → 'Sharing' tab → 'Advanced Sharing' → 'Share this folder' check box → 'OK' → 'Close'
3 press 'Start' key and 'E' key to open Windows Explorer → 'Uninstall or change a program' at top → find 'Anki' → right-click → select 'Uninstall'
4 find clock on bottom right of screen → right-click it → 'Adjust date/time' in pop-up menu → 'Change time zone' button → '(UTC+09.00) Osaka, Sapporo, Tokyo' in drop-down menu → 'OK' → 'OK'
5 'Start' button → 'Control Panel' → 'Appearance and Personalization' heading → 'Display' heading → 'Magnifier tool' link

8 Work in pairs. Take turns to explain these actions. Look at the prompts in 7 or use your own ideas.

how to close a program

First, go to the 'File' menu. Then click 'Exit'. Or click the 'x' in the top right-hand corner of the window.

1 how to open a program 3 how to change a program's settings
2 how to save a file 4 how to delete a file

Writing **9** Write an email explaining the steps for one of the actions in 7.
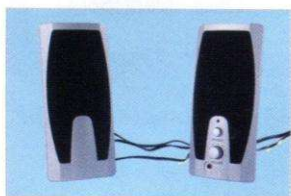
Multimedia hardware

Speaking **1** Work in pairs or small groups. Answer these questions.

1 What do you use computers for? List as many uses as you can.
2 Which items on your list from question 1 use the items in the box?
3 Which other computer tasks use the items in the box?

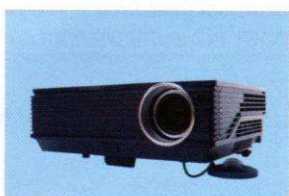> audio   graphics   images   video

Vocabulary **2** Label the photos with the multimedia equipment in the box.

> headphones   microphone   projector   speakers   video camera
> virtual reality goggles   webcam

1 _____   2 _____   3 _____   4 _____

5 _____   6 _____   7 _____

Speaking **3** Work in pairs. Who might use each of the items in 2? What might they use them for?

Reading **4** Read this email quickly. What does Kamal want to do?

| Delete | Junk | | Reply | Reply All | Forward | | Print | To Do |

📨 **Inbox**

Subject: Connecting a projector

Hi Kamal,

It should be quite easy to connect your laptop to a projector. First, check that both the laptop and the projector are off. Then connect the projector cable to the laptop: just plug it into the video socket. Most laptops have one, usually at the back or side. After that, insert the projector's power cable into a power socket and turn on the computer and the projector. Next, the computer has to find out the projector's resolution: press the 'Function' key ('Fn') on the laptop and, at the same time, press the key with a picture of a screen on it. The 'Fn' key is usually on the bottom left, near the 'Shift' key, and the key with the screen picture on it is usually on the top row of keys, on the left.

Don't forget to switch off the equipment and unplug the projector from the computer when you've finished.

Best wishes,

Natasha

Vocabulary **5** Match words 1–8 from the email in 4 to words a–h with a similar meaning.

1 cable
2 plug (into)
3 insert
4 power socket
5 turn on
6 press
7 unplug
8 switch off

a) push
b) put (into)
c) connect
d) connector
e) turn off
f) electricity socket
g) switch on
h) disconnect

6 Complete these prepositional verbs.

1 connect _____
2 plug _____

3 unplug _____
4 disconnect _____

Language

Sentences with two objects

Some sentences have **two objects**. We often use a preposition between the two objects (verb + object of verb + preposition + object of preposition).	I unplugged **the cable from the computer**. Insert **the plug into the socket**.

7 Read the email in 4 again and complete these instructions. Use two objects where appropriate.
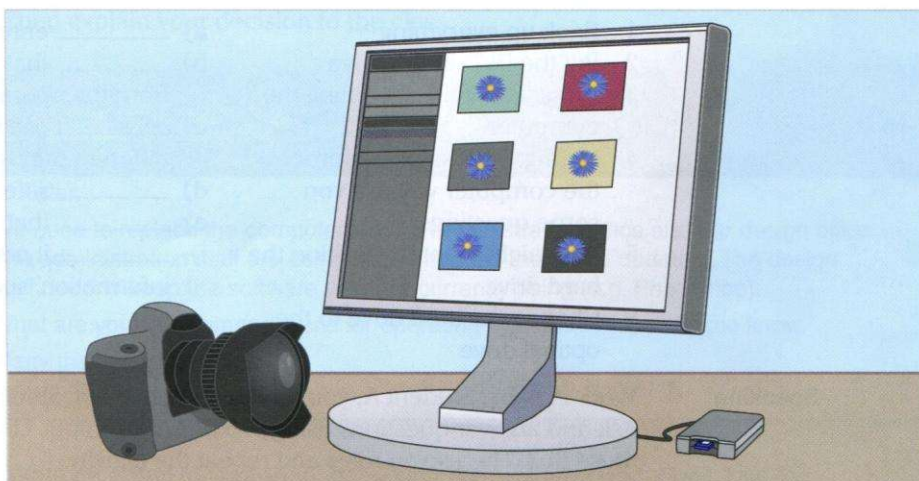
Switch *off the computer and the projector.*

1 Plug _____ .
2 Plug _____ .
3 Switch _____ .

4 Push _____ .
5 When finished, turn _____ .
6 Disconnect _____ .

Writing **8** Work in pairs. Read the email in 4 again and mark the features below. What other forms of greetings and signing off can you think of?

* the greeting
* a paragraph
* signing off

9 Write an email explaining how to transfer photographs from a digital camera to a computer. Give instructions for the steps below. Include the features from 8 in your email.

* card reader → computer
* open software
* select card reader/drop down menu

* select destination folder
* 'OK' button

Operating systems

1 Work in pairs. Put these steps in reinstalling an operating system in the correct order.

☐ During the process, the computer will restart by itself several times.

☐ Near the end of the process, you can partition the hard drives.

☐ In the BIOS, set the first boot drive to DVD. Then reboot again.

☐ At the end of the process, the operating system will ask for the product key, time, date, network type and details for user accounts.

☐ First, put the installation DVD into the optical drive. Then reboot the computer while you press the 'F2' key. The BIOS will now start.

☐ This time, the computer will boot from the DVD and installation will begin.

☐1 Before you start, back up everything.

☐ Near the start of the process, it will ask you to agree to the licence terms.

2 Find words in 1 that match these definitions.

1 start again _____
2 split a hard drive into parts that act like separate drives _____
3 software built into a computer that controls how it starts up _____
4 the drive that the computer reads first when starting up _____
5 software comes with this to show you are the owner _____
6 settings for a user _____
7 switch a computer off and on again _____
8 a series of actions to do something _____
9 copy data to another place so that you don't lose it _____
10 rules about how you can use software _____

Expressing reason and purpose	
We can use these forms to express reason and purpose: • *for* + noun phrase • *so that* + clause • *to*-infinitive • *because* + clause	*Why should I update my OS?* **For** *the new features.* **So that** *you can use the new features.* **To use** *the new features.* **Because** *it has new features.*

3 Work in pairs or small groups. Match 1–6 to a–f. Then complete the gaps with *because*, *so*, *to* or *for* to make sentences.
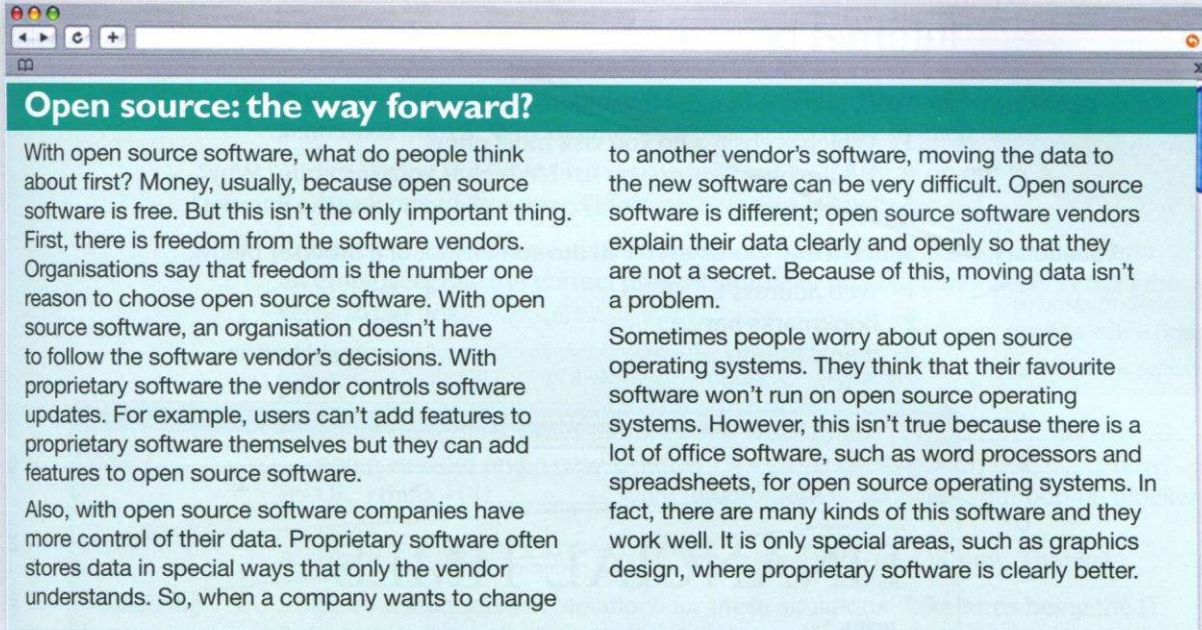
1 Back up everything
2 Put the DVD in the drive
3 Press 'F2' while rebooting the computer
4 During the installation process, the computer will ask you some questions
5 You might want to partition the hard drive
6 Change the boot drive to the optical drive

a) _____ enter the BIOS.
b) _____ that the computer restarts from the operating system DVD.
c) _____ use the different partitions for different purposes.
d) _____ safety.
e) _____ that the process can start.
f) _____ it needs to know some information, such as where you are.

4 Work in pairs. Student A, you are an IT technician. Student B, you are an IT user. Ask and answer questions using 1–6 in 3 as prompts. Give different reasons from those in 3. Then swap roles and repeat the activity.

Business matters

1 Work in small groups. What do you know about open source software? How is it different from proprietary software? Think about cost, who writes it and how much people use it.

2 Read this web article and check your answers in 1.

Open source: the way forward?

With open source software, what do people think about first? Money, usually, because open source software is free. But this isn't the only important thing. First, there is freedom from the software vendors. Organisations say that freedom is the number one reason to choose open source software. With open source software, an organisation doesn't have to follow the software vendor's decisions. With proprietary software the vendor controls software updates. For example, users can't add features to proprietary software themselves but they can add features to open source software.

Also, with open source software companies have more control of their data. Proprietary software often stores data in special ways that only the vendor understands. 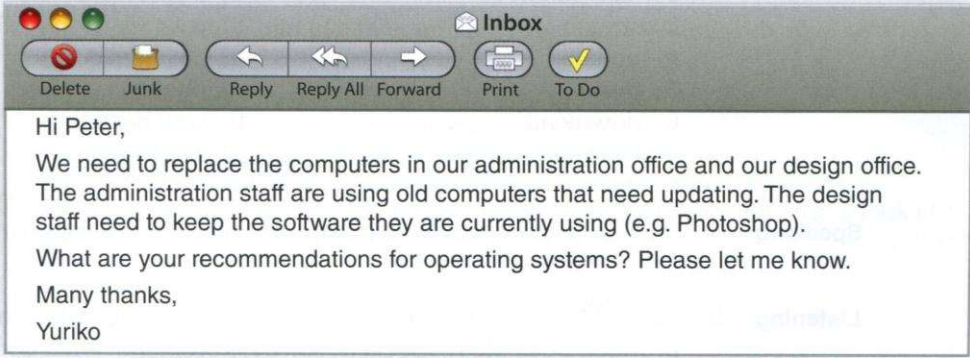So, when a company wants to change to another vendor's software, moving the data to the new software can be very difficult. Open source software is different; open source software vendors explain their data clearly and openly so that they are not a secret. Because of this, moving data isn't a problem.

Sometimes people worry about open source operating systems. They think that their favourite software won't run on open source operating systems. However, this isn't true because there is a lot of office software, such as word processors and spreadsheets, for open source operating systems. In fact, there are many kinds of this software and they work well. It is only special areas, such as graphics design, where proprietary software is clearly better.

3 ▶ 🔁 11 Listen to a spokesperson for a major operating system company giving a speech: 'Why open source is a bad idea'. What reasons does the speaker give to use proprietary software? Make a list.

4 Use the article in 2 to make a list of reasons to use open source software. Then work in pairs. Give reasons for your answers and discuss any differences.

5 Work in small groups. You are technicians in an advertising company. You look after operating systems and software. Look at this email from your manager and decide whether to use an open source OS, a proprietary OS or some of each. Then explain your decision to the class.

	📧 Inbox	
⊘ Delete	🗑 Junk	↩ Reply ⇤ Reply All → Forward	🖨 Print	✓ To Do

Hi Peter,

We need to replace the computers in our administration office and our design office. The administration staff are using old computers that need updating. The design staff need to keep the software they are currently using (e.g. Photoshop).

What are your recommendations for operating systems? Please let me know.

Many thanks,

Yuriko

6 Write an email to your manager giving your recommendations. Use the Language box on page 18 and the information about writing emails on page 17.