3 Computer hardware

FOUNDATION: Hardware components

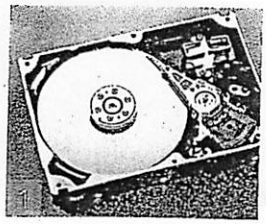
Situation: You are getting work experience as an IT salesperson at a large electronics store in the UK.
→ You help customers choose the right computer and understand the choices they are making.

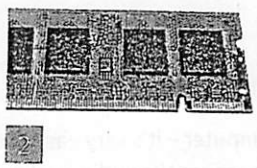
1 Identifying hardware components

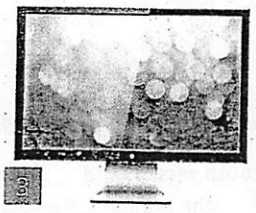
Before you start work, you check that you know the English names of the most important pieces of computer hardware.

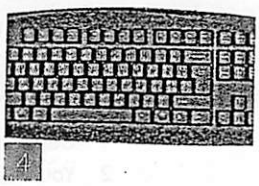
Match the names in the list to the photos (1–8).

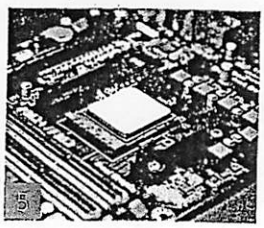
central processing unit (CPU) · graphics card · hard disk · keyboard · monitor · motherboard · mouse · random access memory (RAM)

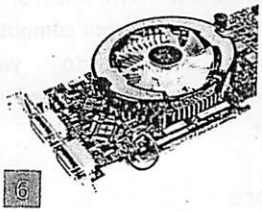

1 HDD

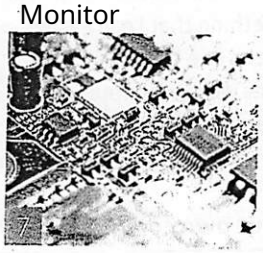

2 Ram

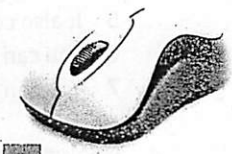

3 Monitor


4 Keyboard


5 CPU


6 GPU


7 Motherboard


8 Mouse

2 Explaining the functions of hardware components

A customer is interested in buying a gaming computer for his children but is worried about the price of some of the components.

Match the correct answers (a–g) on page 27 to the customer's questions (1–7) below.

1 Why do I need such a powerful graphics card?
2 Can I spend less on the CPU?
3 And the motherboard?
4 Do I need much RAM?
5 OK, what type of monitor do you recommend?
6 I suppose I'll need a big hard disk, too, right?
7 Can I at least get a cheap keyboard and mouse?

a Although it houses all of the components, such as the graphics card and CPU, you don't have to spend a lot to get a good one.
b It is important as it stores information that the CPU needs to use really quickly, for example things displayed on the screen. However, you can start with a mid-range amount and upgrade it easily later on.
c It's a key part of a good gaming system. It turns the information from the CPU into the pictures that you see on the monitor. It needs to be very fast for gaming so the game runs smoothly.
d Not necessarily. This is where your data gets saved, but online games don't take up much space because they aren't saved on your computer.
e Well, this is the part that lets you see what's happening in the game. It doesn't need to be bigger than 24" but it is important to have a fast refresh rate, otherwise the game will look unclear.
f You could, but because it processes every single instruction, I wouldn't recommend it. It's like the brain of the computer.
g You could, yes. These are your input devices and are how you interact with the game. Gaming versions may have extra keys and buttons, but they don't make a big difference.

3 Discussing peripherals and connectivity

A customer is talking to a colleague. She has just started doing freelance graphic design work from home. She wants to set up a home office and asks for advice on peripherals.

A 10)) **Listen to their conversation and match the peripherals (1–6) to the connection methods (a–f) your colleague recommends. Some of them have two possibilities.**

1 headset	a 3.5 mm jack
2 speakers	b Bluetooth
3 monitor	c Ethernet cable
4 external hard drive	d HDMI
5 printer	e USB-C
6 modem	f Wi-Fi

B 10)) **Listen again and complete the statements.**

1 Get a Bluetooth version and your computer – it's very easy and convenient.
2 You should the normal 3.5 mm jack because the audio quality is better.
3 I want something that I can easily and work with two screens.
4 You only need one USB-C cable to the monitor to your computer.
5 It also comes with an adapter in case someone else needs to your monitor.
6 You can even into this monitor so you don't have to plug and unplug it.
7 You can your Wi-Fi network and print.

4 Analysing your own computer hardware

To make sure that you know all the English names, you decide to make a list of the peripherals you sell and the ways that they can be connected to a computer or smartphone.

A **Work with a partner and make a list of the ways that you connect hardware to your computer, smartphone and/or tablet. How do you connect and why?**

B **Present your list to the class and discuss any differences in how you choose to connect peripherals.**

› *Useful phrases: Giving presentations, page 151*

TOOLBOX

connectivity – *Anschlüsse* peripheral – *Peripheriegerät*

from the top down [frəm ðə ˌtɒp ˈdaʊn] — von oben nach unten
model [ˈmɒdl] — Vorbild, Modell
entertainment [ˌentəˈteɪnmənt] — Unterhaltung
to waste [weɪst] — verschwenden, vergeuden
to innovate [ˈɪnəveɪt] — innovativ sein, kreativ sein
founder [ˈfaʊndə] — Gründer/in
opportunity [ˌɒpəˈtjuːnəti] — Gelegenheit, Möglichkeit
to take risks [ˌteɪk ˈrɪsks] — Risiken eingehen
to see sth through [ˌsiː ˈθruː] — etw zu Ende führen
barrier [ˈbærɪə] — Hindernis, Barriere
to claim [kleɪm] — behaupten
to be at the heart of sth [bi ət ðə ˈhɑːt əv] — zentral für etw sein
to stop sb from doing sth [stɒp] — jdn daran hindern, etw zu tun
responsibility [rɪˌspɒnsəˈbɪləti] — Verantwortung
talented [ˈtæləntɪd] — begabt, talentiert
to be capable of doing sth [bi ˈkeɪpəbl əv] — fähig sein, etw zu tun; etw tun können

UNIT 3

26 work experience [ˈwɜːk ɪkspɪərɪəns] — Praktikum
to identify [aɪˈdentɪfaɪ] — identifzieren, bestimmen
central processing unit (CPU) [ˌsentrəl ˈprəʊsesɪŋ juːnɪt] — Hauptprozessor
graphics card [ˈgræfɪks kɑːd] — Grafikkarte
hard disk [ˈhɑːd dɪsk] — Festplatte
keyboard [ˈkiːbɔːd] — Tastatur
motherboard [ˈmʌðəbɔːd] — Hauptplatine, Motherboard
mouse, mouses/mice [maʊs, maʊsɪz, maɪs] — Maus, Mäuse
random access memory (RAM) [ˌrændəm ˌæksəs ˈmeməri] — Arbeitsspeicher
to suppose [səˈpəʊz] — vermuten, annehmen, glauben

27 to house [haʊz] — beherbergen, aufnehmen, unterbringen
to display [dɪˈspleɪ] — *(auf dem Bildschirm)* anzeigen
screen [skriːn] — Bildschirm
mid-range [ˌmɪd ˈreɪndʒ] — Mittelklasse-, im mittleren Preissegment
to upgrade [ˌʌpˈgreɪd] — hochstufen, upgraden
later on [ˈleɪtər ɒn] — später, zu einem späteren Zeitpunkt
to turn sth into sth [ˈtɜːn ɪntə] — etw in etw umwandeln
smooth(ly) [ˈsmuːðli] — reibungslos
not necessarily [nɒt ˌnesəˈserəli] — nicht unbedingt
fast refresh rate [ˈfɑːst rɪˈfreʃ reɪt] — hohe Bildwiederholfrequenz
unclear [ˌʌnˈklɪə] — unklar, undeutlich
to process [ˈprəʊses] — verarbeiten
instruction [ɪnˈstrʌkʃn] — Befehl, Kommando
brain [breɪn] — Hirn, Gehirn
input device [ˈɪnput dɪvaɪs] — Eingabegerät
to interact with sth [ˌɪntərˈækt wɪð] — auf etw einwirken, Informationen mit etw austauschen
version [ˈvɜːʃn] — Ausführung, Modell
button [ˈbʌtn] — Taste, Knopf, Schalter
to make a difference [ˌmeɪk ə ˈdɪfrəns] — sich unterscheiden
peripheral [pəˈrɪfərəl] — Peripheriegerät
connectivity [ˌkɒnekˈtɪvəti] — Anschlüsse
freelance [ˈfriːlɑːns] — freiberuflich, selbstständig
graphic design [ˌgræfɪk dɪˈzaɪn] — Grafikdesign
to set up sth [ˌset ˈʌp] — etw einrichten

T mostly [ˈməʊstli] — hauptsächlich, meistens
hands-free [ˌhændz ˈfriː] — Freisprech-, freihändig
to pair sth with sth [peə] — etw an etw koppeln, etw mit etw verbinden
convenient [kənˈviːniənt] — praktisch, bequem
speaker [ˈspiːkə] — Lautsprecher
via [ˈvaɪə] — mit, mittels, über, durch
jack [dʒæk] — Buchse
audio quality [ˌɔːdiəʊ ˈkwɒləti] — Tonqualität
to plug [plʌg] — anschließen, einstecken, verbinden
to charge [tʃɑːdʒ] — laden, aufladen
to come with sth [ˈkʌm wɪð] — *(Ware:)* über etw verfügen, etw haben
in case [ɪn ˈkeɪs] — für den Fall, dass; falls
port [pɔːt] — Anschluss
at least [ət ˈliːst] — mindestens
to stick [stɪk] — stecken
to unplug [ˌʌnˈplʌg] — ausstecken, *(Kabel)* herausziehen
to hook sth to sth [hʊk] — etw mit etw verbinden
backup [ˈbækʌp] — Reserve, Ausweich-

28 to expand [ɪkˈspænd] — expandieren, (in Märkte) vordringen
augmented [ɔːgˈmentɪd] — erweitert
virtual [ˈvɜːtʃuəl] — virtuell
to install [ɪnˈstɔːl] — installieren
instruction manual [ɪnˈstrʌkʃn mænjuəl] — Bedienungsanleitung
warning [ˈwɔːnɪŋ] — Hinweis, Warnung
to shut down [ˌʃʌt ˈdaʊn] — herunterfahren, ausschalten
to cool [kuːl] — abkühlen
to disconnect [ˌdɪskəˈnekt] — trennen
power adapter [ˈpaʊər ədæptə] — Netzteil