

9

Lab Report



Start thinking!

How often do you do these things?

use computers

send and get emails

send and get text messages

buy something online

Do you or does anyone in your family have:

a netbook


a tablet computer

a smartphone

What new technology do you expect to see in the next two or three years?



Reading

1  **2.01** Quickly read the magazine article. Write the number of a paragraph 1–6 next to each heading. There is one heading you do not need to use.

- a Better batteries _____
- b A huge number of uses _____
- c Reasons to be concerned _____
- d More functions, better functions _____
- e In the past _____
- f Tomorrow's world _____
- g Money matters _____

AN APPETITE FOR APPS!

'How did apps become such an important part of our lives, and where do we go from here?' asks Jemima Deacon.

- 1** A few short years ago, phones were firmly stuck on a piece of furniture, and were used mainly for calling people. Then we all got mobile phones and got into sending and receiving text messages on the go. Early mobiles did have a few handy little features such as a calculator and a calendar, but were still mainly used for communicating with people we knew. And taking a few poor quality photos that you didn't quite know what to do with. And then – all of a sudden, it seemed – this useful little device morphed into an enormously powerful computer with the potential to do ... well, to do everything your PC did at home, and sometimes more. What led to this development, and where does it go from here?
- 2** Several key aspects had to come together to create the modern smartphone as we know it. Firstly, battery life had to improve. If you use a mobile phone for more than just a few phone calls, you need a powerful

long-lasting battery. Batteries have become increasingly powerful over the past ten years or so, and will undoubtedly continue to do so.

- 3** Secondly, the cost of downloading large amounts of data onto a phone had to decrease. There's no point having the ability to check your email on your phone if you can't afford to use the service. Using the mobile phone network for data is still too expensive for many people, but they're able to make use of Wifi, which has become extremely widespread and is essentially free. If we didn't have wireless networks, we almost certainly wouldn't have smartphones.
- 4** Thirdly, the actual functionality of phones has improved enormously. They have much better cameras than they did just a few years ago, they can hold more data, their sound quality is much clearer and louder, they have touchscreens, and they know when they're being rotated or held or touched in a certain way.
- 5** If you combine all these elements, and have reasonably-priced smartphones being used by millions of people, you create an environment where the uses of a smartphone become almost infinite. All it takes is a little imagination to think of a new way to use it, and you've created something people want. And that's what happened with apps. At the time of writing this article, there are hundreds of thousands of apps that can be used for millions of different purposes. If you want an app to tell you where the nearest chemist to where you're standing is, it's available. If you need an app to send free

2 Read the article again. Underline a phrase in the article that has a similar meaning to the phrase given.

- 1 weren't mobile (paragraph 1)
- 2 while doing things out of the house (paragraph 1)
- 3 it was important for different things to combine (paragraph 2)
- 4 to become more powerful in the future (paragraph 2)
- 5 it's a waste of time (paragraph 3)
- 6 very common (paragraph 3)
- 7 have a situation (paragraph 5)
- 8 the chances are (paragraph 6)



messages to someone else with the same app, it exists. If you want an app to do your online banking, or play funny noises to your cat, or point out the names of all the stars and planets right above you, you can find it. And by the time you read this, there will be thousands more apps available.

6 But what about the future? It's always dangerous to predict what technology's going to be like in a few years' time and we often get it wrong, but it seems likely that the future apps will rely on sensors and functions that current smartphones don't have. For example, if future smartphones have some kind of air sensor, there will be a whole new range of apps which can tell you if the air you're breathing is too polluted, or, for people with allergies, how much pollen is in the air. As image-recognition and video-streaming become more effective, another range of apps might combine the real and the digital. For example, in the future there might be games we play on our smartphones where the background and setting is the actual room we're sitting in, or the street we're standing in.

3 Write a word or short phrase from the article to complete each sentence.

- 1 People started _____ while doing things out of the house.
- 2 The _____ of cameras on early mobile phones was not good.
- 3 It's important that a mobile phone battery is powerful and _____.
- 4 With smartphones today, _____ are downloaded onto the phone.
- 5 To access information, smartphones can use the mobile phone network, or _____.
- 6 A smartphone knows when it's _____ to the left or right.
- 7 Many people use _____ to pay bills through their phone, computer or tablet.
- 8 A(n) _____ in a future phone will be able to detect pollution and pollen.

WORD BOX

4 Find words or phrases in the article to match the definitions. You've been given the first letter to help you.

- 1 h _____ (adj) useful
- 2 d _____ (n) a machine or piece of equipment that does a particular thing
- 3 d _____ (n) progress, improvement
- 4 i _____ (v) get better
- 5 u _____ (adv) definitely, certainly
- 6 d _____ (v) go down, become smaller/lower
- 7 q _____ (n) how good something is
- 8 r _____ (adj) not too expensive
- 9 f _____ (n) the ability to do different things
- 10 d _____ (adj) electronic, not physical



Have your say!

- What are the most useful apps? Why are they so useful? Can you think of any other apps that someone might invent in the future?

G Grammar clinic

Conditionals (1): zero, first, second

👁 Look at *Grammar database page 185* before you do the exercises.

1 Read the sentences from the article on pages 78 and 79. Match them to the correct explanation.

- If you use a mobile phone for more than just a few phone calls, you need a powerful long-lasting battery. _____
- If future smartphones have some kind of air sensor, there will be a whole new range of apps. _____
- If we didn't have wireless networks, we almost certainly wouldn't have smartphones. _____
 - This expresses a present or future possibility.
 - This expresses a general truth.
 - This expresses an unlikely or hypothetical situation.

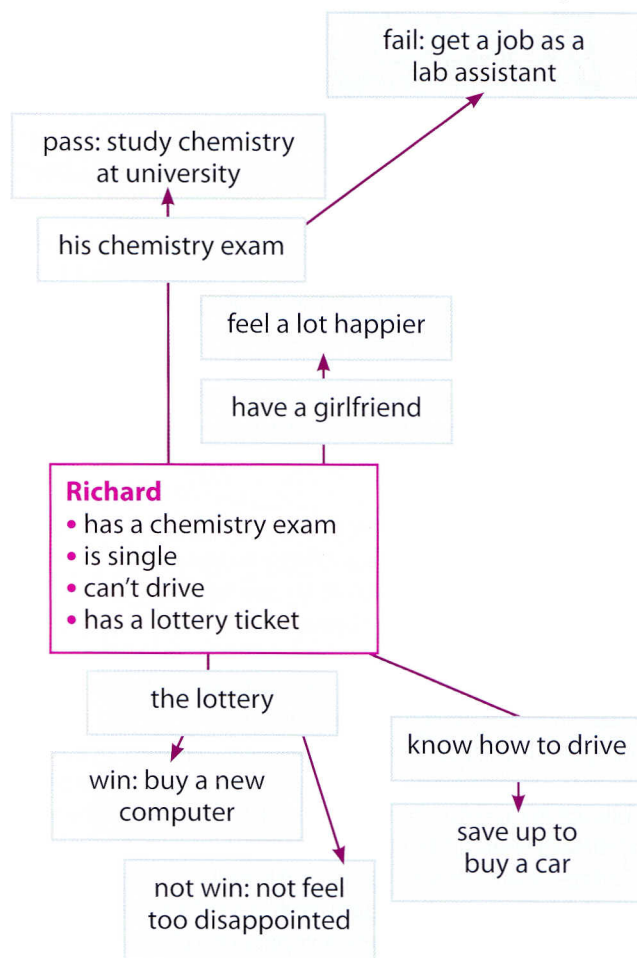
2 Choose the correct option in each sentence.

- If I were a scientist, _____ a new kind of computer.
 - I would invent
 - I invent
 - I will invent
- Smartphones _____ a possibility if we didn't have long-lasting batteries.
 - won't be
 - isn't
 - wouldn't be
- If you _____ nonsense into a computer, you get nonsense out.
 - would put
 - put
 - were putting
- You should think carefully about what you need if you _____ to get a computer.
 - are planning
 - were planning
 - would plan
- An air sensor in a smartphone will be useful if it _____ people with allergies.
 - would help
 - helped
 - helps

3 Put the verbs into the correct form to complete the sentences. Use contractions (*I'll, I'd*, etc) where possible.

- If I _____ (be) you, _____ (I/get) a smartphone.
- The browser opens a new tab if _____ (you/click) on any of these links.
- If the internet _____ (not/exist), we _____ (not/be) able to send emails round the world.
- If you buy a new tablet, _____ (make) sure you get one with a good-quality camera.
- If _____ (you/lower) the screen of a netbook, it goes into 'sleep' mode automatically.
- If _____ (you/use) a smartphone before, _____ (you/find) using a tablet very easy.

4 Use this information about a student to make six conditional sentences as in the examples.

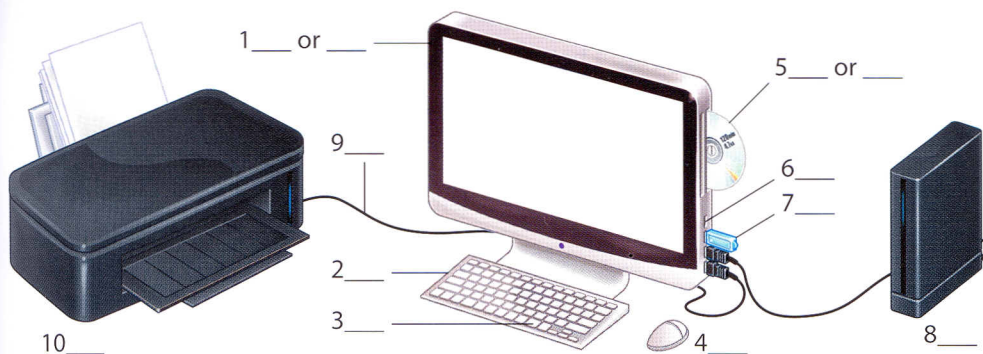


*If Richard had a girlfriend, he would feel a lot happier.
Richard would feel a lot happier if he had a girlfriend.*

V Vocabulary builder

Science and technology

1 Write the correct letter to label the picture using the words and phrases from the box.



- | | |
|-----------------------|----------------|
| a cable | g memory stick |
| b CD-ROM | h monitor |
| c DVD-ROM | i mouse |
| d external hard drive | g printer |
| e key | k screen |
| f keyboard | l USB port |

2 Complete the sentences using the nouns in the box. Some of them may need to be in the plural.

invention • discovery • theory • laboratory experiment • research

- The computer is one of the most important _____ of the late twentieth century.
- Dr Hawking has an interesting _____ about how the universe developed.
- Today's _____ have a lot of complicated scientific equipment in them.
- According to recent _____, most people don't understand modern science.
- This _____ with white mice is designed to test their intelligence.
- Astronomers have announced the _____ of a new planet.

Collocations

3 Write each word or phrase from the box next to all the verbs it can go with. Be careful! You will write some phrases more than once.

a memory stick • a theory • an experiment
research • software

- do _____
- carry out _____
- have _____
- come up with _____
- download _____
- install _____
- connect _____
- plug in _____

Phrasal verbs with off

4 Phrasal verbs with *off* often have meanings connected to removing, stopping or cancelling something. Match the phrasal verbs in the box with the correct definitions.

go off • make off • take off • put off
turn off • call off

- _____ stop liking something you used to like
- _____ remove an item of clothing, etc
- _____ delay something until a later time
- _____ cancel a planned event
- _____ escape, often after a crime
- _____ stop a machine

5 Complete the sentences using the correct form of the phrasal verbs from exercise 4.

- The burglars stole a flat screen TV and _____ in a white car.
- We've decided to _____ the experiment _____ until the weather improves.
- Before you go into the lab, please _____ your shoes.
- I've really _____ violent video games.
- My cousin was planning to marry a woman over the internet, but at the last minute they _____ it _____.
- Don't you think you should _____ your computer _____ and go and play football outside with your friends?



Listening

1 **2.02** You are going to listen to five people talking about new computer games. Decide which computer game each person enjoyed the most.

- | | |
|--------------------------|------------------|
| A <i>Night Thief</i> | Speaker 1: _____ |
| B <i>Cave Warrior</i> | Speaker 2: _____ |
| C <i>Mad Driver City</i> | Speaker 3: _____ |
| D <i>Tower of Evil</i> | Speaker 4: _____ |
| E <i>Cup Final</i> | Speaker 5: _____ |

2 You will now hear the five speakers again. For questions 1–5, choose the best answer (A, B or C).

- You hear a boy talking. What did he not like about *Cave Warrior*?
 - He couldn't find the lost treasure.
 - He knew what was going to happen next.
 - He thought there was too much action.
- You hear a woman talking. What was the problem she had with some of the games?
 - She doesn't like playing sports.
 - She couldn't react quickly enough.
 - She can't drive a car.
- You hear a girl being interviewed in the street. Why doesn't she like *Night Thief*?
 - It seems like hard work.
 - It involves criminal activities.
 - She isn't very good at maths.
- You hear a boy talking. What does he dislike about *Mad Driver City*?
 - He doesn't have enough time to play it.
 - His friend is much better at it.
 - They want to play at the same time.
- You hear a girl talking. What does she say about computer games?
 - Buying sports games is a waste of money.
 - You can waste money if you make the wrong decision.
 - Driving games are the best value for money.



Soundbite /s/ and /ʃ/

2.03 Listen and circle the words you hear.

- Only half of the people were *saved/shaved*.
- Could you get me a *seat/sheet* from the office, please?
- Did you *sew/show* all of them?
- They have lots of different *sorts/shorts*.



Speaking

1 What do you want to do in the future?

I'd like to go to university, if I get good exam results.

I want to get married if _____.

I hope to have a family if _____.

It'd be nice to work as a(n) _____ if _____.

I'd love to visit _____ one day if _____.

I'd like to live _____

if _____.

2 In pairs, ask and answer the questions. Try to say as much as you can. Use the phrases below to help you.

- What would you like to do when you leave school?
- What job would you like to do in the future?
- Do you have any ambitions?
- What are your hopes for the future?
- Is there anything you'd really like to do one day?

Useful Phrases

That seems like a long way in the future. I'd say that ...

I'm quite an ambitious person. One thing I'd like to do is ...

Well, if I had the chance, I think I'd love to ...

Look at *Speaking database - Expressing preferences* on page 165.



Use of English

Unless, in case, as long as

Look at *Grammar database page 186* before you do the exercises.

1 Rewrite the sentences using *unless, in case or as/so long as*.

- 1 Promise to give it back tomorrow and you can borrow my new computer game.
You can _____.
- 2 I have to finish my homework before I can play on my computer.
I can't _____.
- 3 Save your documents on an external hard drive or memory stick – your computer might get a virus.
Save your documents _____.

Word patterns

2 Choose the correct option in each sentence.

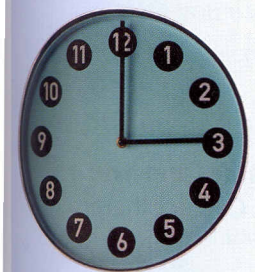
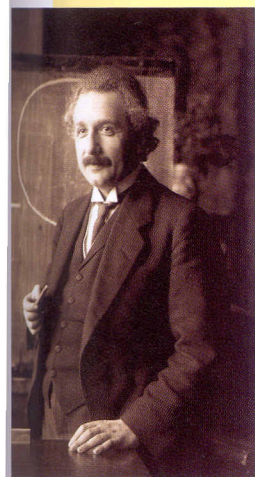
- 1 I think I'm a little scared of computers _____ I don't know much about them.
a because of b because
- 2 Some people have complained about this game _____ the violence.
a because of b because
- 3 I didn't _____ Jason when he said he'd got a new mobile phone.
a believe b believe in
- 4 Some people don't _____ UFOs.
a believe b believe in
- 5 When you buy the new K256 mobile, a handsfree set is _____.
a provided with b provided

3 For questions 1–12, read the text below and think of the word which best fits each gap. Use only one word in each gap. There is an example at the beginning (0). Write your answers IN CAPITAL LETTERS.

Time Travel

Scientists still aren't sure whether the laws of physics allow us (0) TO build a time machine. Some scientists argue that it's (1) _____ possible, using this logic: if we built a time machine and travelled back into the past, we (2) _____ be able to stop our parents meeting. Then we'd never be born! (3) _____, however, argue that that isn't a real problem. We just wouldn't be born in this universe, but we'd still be born in a parallel universe. Strange, isn't it? (4) _____ you want to travel into the past, it's actually very easy. Just look (5) _____ at the night sky. When you see a star in the sky, (6) _____ you see it as it is right now? No, you see it as it was millions of years ago. This is (7) _____ the light from the star has taken millions of years to travel across the universe to reach your eyes.

Travelling into the future is more difficult, but Einstein proved (8) _____ is theoretically possible. You can achieve this so (9) _____ as you have a spaceship that goes really fast – nearly at the speed of light, (10) _____ is very fast indeed. If you go off in your spaceship and fly around for, let's say, six months, when you come back (11) _____ Earth you'll be in the future. How much in the future? If your spaceship goes at 99.99% of light speed, all your friends you left behind (12) _____ be almost 50 years older than you. It's incredible, but it's true!



Writing

An informal letter/email

👁️ Look at *Writing database - informal letters/emails* on page 154 before you do the exercises.

- 1** Read this writing task. Why should your email be informal?



You have a friend who lives in another country. She/He is writing a report for school on technology and has asked you for some information about how you and your family use technology in your daily life. Write an email to your friend, telling her/him what she/he needs to know.

Write an **email** of between **120** and **180** words in an appropriate style.

- 2** Decide if the statements are true (T) or false (F). In informal letters/emails ...

- | | |
|---|--------------------------|
| 1 we usually ask our friend about their health/news/etc first. | <input type="checkbox"/> |
| 2 we never use contractions (<i>I've, don't, can't</i> , etc). | <input type="checkbox"/> |
| 3 it's sometimes okay to write incomplete sentences. | <input type="checkbox"/> |
| 4 you should never use exclamation marks (!). | <input type="checkbox"/> |
| 5 you don't need to write in paragraphs. | <input type="checkbox"/> |
| 6 you don't need to worry about answering the question. | <input type="checkbox"/> |

Working model

- 3** Read the answer to the writing task. The writer has not used paragraphs. Decide where new paragraphs should begin.



Dear Miss Ashley Williams,

How are you? How did your French test go? I bet you passed! You asked me about tecnology. Well, the first thing I should tell you is that I've got a new computer! So far, I've used it for playing games and for serfing the internet. It's not as complicated as I thought. I'm even teaching my dad how to use it! What else? Of course, we've got things like a TV and a DVD player. We watch a few hours of TV every day, and we watch a DVD once a weak. My brother watches more than I do. Lazy boy! My dad says he's thinking of getting satelite TV, so maybe I'll start watching a bit more. The only other thing I can think of is my mobile phone. It's a smartphone and it's really cool! I never go anywhere without it. I use it all the time and send about twenty text mesages every day! (Luckily, Mum and Dad pay the bill.) Got to go. Love to your sister.

Take care,
Jessica Saunders

- 4** There are mistakes with the names and five spelling mistakes in the email. Correct them.

Ready to write!

- 5** You are going to answer the same question. First, look at this extract from your pen-friend's last email.

... and then there's this football match on Saturday. If we win that, we're in the final. Who knows? Oh, yeah. I wanted to ask you something. We have to write a report on technology for school. Could you tell me a few things about how you use technology in your life? You know, computers, mobiles, TV, that sort of thing. Oh, and tell me something about the other members of your family, too, and how they use technology. Anyway, I was talking to Sam the other day and he says that ...

Which of these things does your friend want to know about?

- your opinion on violent video games
- what kind of computer you want to get
- how much television you watch
- whether you have a computer at home
- how good you are at football
- whether your parents have mobile phones
- what the best model of mobile phone is

- 6** Make a plan of your answer. Use your imagination.

- How are you going to start your email?
- What news are you going to ask your friend about first?
- What's the first kind of technology you want to talk about?
How do you use it?
- What's the second kind of technology you want to talk about?
How do you use it?
- What's the third kind of technology you want to talk about?
How do you use it?
- Which phrases are you going to use in your email?
- What name are you going to write at the end?

Now complete **Writing Planner 9** on page 159.

Now write!

- 7** You are now ready to write your email to your friend. Use informal language.

Check it out!

- 8** Check your work. Tick (✓) what you have done.

A clipboard with a silver clip at the top, holding a white sheet of paper with a checklist. The clipboard has a blue border. The checklist items are written in purple ink, and each item has a small square box to its right for marking.

- I have started and ended the email in the right way.
- I have asked my friend something about her/himself.
- I have talked about different kinds of technology.
- I have mentioned the other members of my family.
- I have used paragraphs.
- I have checked my spelling and my grammar.
- My email is between 120 and 180 words long.

◀ Look Back

Can you answer these questions? If you can't remember, look through the unit for the answers.

- 1 What's another way of saying 'a wireless network'?
- 2 Do you *carry out* or *come up with* a new theory?
- 3 How many parts of a computer can you name?
- 4 What's the difference between *put off* and *call off*?
- 5 Which phrase means 'only if'?