# 5 TECHNOLOGY

## **5.1 LISTENING** Part 2

- 1 Discuss the questions.
  - 1 Do you think space tourism will become common in your lifetime?
  - 2 What are its pros and cons? Consider the ideas in the box.

adventure cost economy education environment personal growth research safety

- 3 Would you like to take a space tour? Why? / Why not?
- 2 ① 01 Listen to a talk. What is the speaker's main point?
- **3** Read the Test skill box. Then match the following words and phrases to the appropriate categories.

as noted as you'll hear moving on to nonetheless not only ... but also on the whole simply put / put simply stems from subsequently this exemplifies what's notable is



## 🤡 Test skill

#### Using signposting language

In Listening Part 2, the speaker may use signposting language to help you understand the structure of the talk or lecture.

For example, signposting language might be used to:

- sequence points: first, secondly, next, finally
- transition between points: having ... , let's now consider
- refer forward: as you'll learn, you'll later see that
- refer back: as I've mentioned
- summarize: in summary, all in all

Signposting language also shows relationships between ideas. For example, it is used to:

- define / clarify: that's to say, by that I mean
- add: additionally, as well as that, in addition
- contrast: whereas, conversely, in contrast
- show cause and effect: therefore, as a result, on account of
- give examples: such as, take ... , for example, in particular
- emphasize: the key thing is that
- 4 ② 02 Listen to five extracts. What signposting language does the speaker use to do the following?
  - 1 refer forward to how the computers were put together
  - 2 contrast the size of computers past and present
  - 3 add a new point about computer performance
  - 4 contrast the computer's memory with its performance
  - 5 signal a summary of the whole talk

computer's construction.

5 ① 01 Listen to the talk again and complete the notes with one or two words.

1	The computer on board the Apollo was s	similar in size to
	a	
2	The used to design the Apo	ollo computer's
	software was very basic.	
3	The computer's screen was like that of a	
4	People with expert skills in	assisted in the

6 Read the Test tip box. Then do the Test practice task.



## 🚰 Test tip

In Listening Part 2, each gapped item will be a single noun (e.g. space) or a two-word noun phrase. A noun phrase may take one of these forms:

- adjective + noun (e.g. outer space) or
- noun + noun (e.g. space exploration)

You must not change the form of the noun or noun phrase in any way, for example, by making a singular word plural.



## Test practice

## Listening Part 2: Note completion

① 03 Listen to a lecture about the possibility of humans colonizing the moon. Complete the gaps in the notes with a word or two-word phrase from the audio. Remember to check your spelling. You now have 30 seconds to look at the task.

### Establishing human settlements on the moon

#### **Potential benefits**

From a business perspective, it has been suggested that colonizing the moon could boost 1\_

It could help scientists gain greater understanding of the Earth's 2

#### Air, food and water

Oxygen is found in the moon's 3\_

Water would have to be either created or mined on the moon.

Farming on the moon could be possible if seeds are planted in a special kind of 4\_

#### **Energy and shelter**

Fluctuating levels of 5\_ \_\_\_\_\_ would make energy creation challenging.

Buildings may be constructed using 6\_ made from a raw material found on the moon.

Now listen again.

7 Do you think that humans will ever colonize the moon? Should they? Why? / Why not?

## **Vocabulary**

### Phrase-building: adjective + noun collocations

- 8 ① 04 Choose the best adjectives to complete the collocations. Then listen and check.
  - 1 Missions and observations could both offer fresh / far insights ...
  - 2 There's a common / high assumption that there's no oxygen on the moon ...
  - 3 However, an alternative / available approach has been proposed ...
  - 4 This location offers the added advantage of short / direct access to water.
  - 5 ... concerted / deep efforts are already being made to explore the possibility of a moon colony.
  - 6 There are strong / fundamental problems to overcome.

#### Phrase-building: idioms

- 9 Find idioms in the extracts below to match definitions 1–5.
  - A One driving force behind this idea has been commercial ... with state-of-the-art equipment already being developed ...
  - B ... breathable air [is] very much taken for granted here on Earth.
  - C ... harvesting could potentially be an option in the long run.
  - D But researchers have also gone down the route of investigating longer-term solutions ...
  - 1 be so used to something that you don't recognize its value
  - 2 developed using the most advanced techniques
  - 3 far in the future
  - 4 take a particular approach to achieving something
  - 5 the powerful cause of something
- 10 Complete the prompts with your own ideas. Then share them with a partner, giving more information.
  - 1 The driving force behind my English studies is ...
  - 2 I often take ... for granted.
  - 3 I think that if I ... , it'll benefit me in the long run.
  - 4 In order to ..., I might go down the route of ...
  - 5 I'd love to own a state-of-the-art ...

## 5.2 READING Part 1

- 1 If someone from the early 1900s time-travelled to the modern world, what would surprise them the most? Why?
- 2 Read a description of a story. How closely do you think the author predicted life today?

In his 1909 short story *The Machine Stops*, EM Forster told a bleak apocalyptic tale of people living in isolation in underground bunkers and interacting via only screens and holograms supplied by 'the machine'. The machine fulfils their every need, their personal agency apparently lost to subordination.

3 Read the Test skill box. How did you deal with any unknown vocabulary in exercise 2?



## 🔽 Test skill

#### Dealing with unknown vocabulary

In all reading tasks, you are likely to encounter some vocabulary that you do not know. Reading expeditiously involves dealing with unknown words and phrases quickly and appropriately.

- 1 Decide if the unknown item is necessary for understanding. If not, ignore it.
- 2 If you do need to have a general sense of its meaning, try to guess it using contextual clues.
  - Identify any recognizable parts of the words.
  - Look for prefixes or suffixes and identify the root.
  - Look at the surrounding words. Could it be part of a collocation, fixed expression, idiom, etc.?
- 4 Read the first text in the Test practice task. Then decide if the statements are true or false. Which require you to understand the bold words? What do you think these mean?
  - 1 The Medical Man admired the quality of the machine.
  - 2 The machine was created in a few short months.
  - 3 All observers looked closely at the machine.
  - 4 The machine can move in two different directions.
- 5 Read the Test tip box. Then do the Test practice task.



## 🚰 Test tip

In Reading Part 1, each question has only one correct option. However, ideas related to all three options may appear in the text. Quickly check why the distractors (incorrect options) are wrong so that you are sure you have selected the correct answer.



## Test practice

### Reading Part 1: Short texts

You have 1 minute and 20 seconds to answer each guestion.

1 Read the extract from a novella and choose the correct answer.

The Medical Man got up out of his chair and peered into the thing. 'It's beautifully made,' he said.

'It took two years to make,' retorted the Time Traveller. Then, when we had all imitated the action of the Medical Man, he said: 'Now I want you clearly to understand that this lever, being pressed over, sends the machine gliding into the future, and this other reverses the motion. Presently I am going to press the lever, and off the machine will go. It will vanish, pass into future Time, and disappear. Have a good look at the thing and satisfy yourselves there is no **trickery**. I don't want to waste this model, and then be told I'm a quack.'

Adapted and abridged from an authentic source, acknowledged on page 112.

The extract suggests that the Time Traveller is attempting to ...

- A verify the effectiveness of a machine.
- B appraise claims made about a machine.
- C inspect modifications made to a machine.
- 2 Read the extract from a blog and choose the correct answer.

#### cuttingedgetech.oup.uk

While past feats of innovation are celebrated, little is said about the creations that even their inventors now regret. This refers not only to inventions which have caused irrevocable damage to the world but also to those which have made life just that little bit more convoluted. One is Tim Berners-Lee's decision to include the double slash within web addresses when inventing the World Wide Web. Another is Ethan Zuckerman's invention of the pop-up ad. There may be worse examples. After all, it doesn't take long to tap a symbol on a keyboard or close down a tab in your browser, but consider the hours that would already have been saved had billions of people not had to do that.

In the blogger's opinion, some technological developments ...

- A should receive praise even if they are frustrating.
- B are at their most valuable when they save time.
- C are less widely discussed than others.

3 Read the extract from a letter and choose the correct answer.

You recently participated in our online survey on the impact of social media on mood and indicated that you would be willing to participate in further research. Thus, we are formally inviting you to participate in our forthcoming study on the impact of social media withdrawal on both heavy and minimal social media users. If you agree to your inclusion in the study, set to begin in February, you will be required to abstain from using social media, including messaging apps, for the duration of one month. Should you feel that this is a manageable objective for you and wish to accept this invitation, please reply at your earliest convenience and no later than 31 January.

The writer places a condition on the acceptance of the invitation in order to ...

- A allow people to participate only at certain stages.
- B encourage the participation of specific groups.
- C ensure participants avoid dropping out.
- **4** Read the extract from a newspaper editorial and choose the correct answer.

By 2070, experts will have been discussing the potential impact of machine learning for at least a century and the outcome of a failure to put plans and safeguards in place now will be known. With automation on the verge of transforming our lives today, it is going to be a prevalent feature of daily living by the middle of the century and beyond. However, the question remains whether there will be a resulting utopia or a dystopia. Will labour inequality and shortages have been eradicated and quality of life improved? Or will billions of people be living in poverty, having lost their jobs to androids? Only one of those options is surely desirable.

The writer's purpose is to ...

- A speculate about the timing of an anticipated event.
- B warn about the possible consequences of inaction.
- C make a comparison between the present and future.



**5** Read the extract from a report and choose the correct answer.

The results of this small-scale study suggest that artificial intelligence is commonly exploited by university students in their work but that some remain unaware of corresponding ethical issues.

The participants – 42 geology undergraduates about to embark on a research project – were almost all planning to use large language models as a means of support. In most cases, this was for the approved purposes of editing and proofreading. However, a fifth were also going to direct the tool to generate texts for their assignments based on research data they would supply. All but two of these students were ignorant of the privacy issues this may raise and unaware of the requirement to cite their use of artificial intelligence in their reference lists.

What does the extract suggest about the use of artificial intelligence in higher education?

- A Students largely remain undecided on how to apply it.
- B Some students require a more principled approach to using it.
- C It is most effective in helping to ensure linguistic accuracy.

#### **Grammar**

#### The future

- 6 Underline the future forms in texts 4 and 5. Then match these with 1–6 below.
  - 1 A prediction with present evidence
  - 2 A prediction based on belief
  - 3 An activity in progress at a future time
  - 4 An activity completed by a future time (with emphasis on its completion)
  - 5 An activity completed by a future time (with emphasis on its duration)
  - 6 A plan or intention as seen from the past
- 7 Use the prompts to write predictions about the year 2050. Include a variety of future forms.
  - 1 people / use / driverless cars
  - 2 employees / work / alongside robots
  - 3 people / take / holidays using virtual reality
  - 4 personalized medicines / revolutionize healthcare
  - 5 people / use / smartphones
- 8 Share your sentences. Do you agree with your classmates' predictions?



## 5.3 WRITING Part 2

- 1 How has social media changed your language? How do you and other people feel about this?
- 2 Read the textbook extract and identify the main ideas.

#### Textbook extract

Change is a natural part of language. The language used 500 years ago was considerably different from that of today and with technology developing ever faster, language will doubtless have evolved significantly 500 years from now. Language typically undergoes lexical changes, phonological changes and syntactic changes. Lexical changes refer to shifts in the use of vocabulary. Words fall out of usage as more fashionable vocabulary items take their place or as they become redundant and no longer required. New words may be coined or borrowed from other languages. Phonological changes refer to changes in sounds, stress patterns, or intonation. These can be influenced by exposure to other languages and dialects, for example. Finally, syntactic changes relate to grammar, and involve changes in the use of verbs, nouns, adverbs, etc. as well as in the structure of phrases and sentences.

3 Now read the lecture transcript and identify the main ideas.

#### Lecture transcript

'Technology has always had an impact on language, but the Internet appears to have been the driving force for particularly rapid change in recent decades. With the rise of online communication, written language has become more similar to spoken language, resulting in less formality and ... er ... a reduction in grammatical complexity. So, shorter sentences, fewer complex sentences, more ellipsis ... By "ellipsis", I mean the omission of words, so rather than "Are resulted in a huge number of new words entering the English language. Words like "blog" and "app" are widely used now but weren't in the 20th century. Existing words have also taken on new meanings. Take "the cloud", for example. It no refers to a computer network on which data is saved and

4 Read the Test skill box and summarize the key points.

## 🔽 Test skill

### Sequencing main ideas

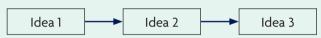
When synthesizing information from different sources, it is important to organize the main ideas logically.

Some summaries will have a **non-sequential** information structure. This means that the main ideas do not have an obvious logical sequence and can be presented in any order – for example, different categories, problems, causes, etc.



Some summaries will have a sequential structure. This means that the main ideas naturally follow a logical order – for example, problem-cause-consequence-solution or a chronological sequence of events.

Overarching main idea



Summaries may also have a hybrid structure: some main ideas may follow a natural order while others can be presented in any order. An example might be a problem with two or more different causes.



5 Complete the information for the textbook extract and lecture transcript combined.

Supporting details	

- 6 Look at your completed table from exercise 5 and answer the questions.
  - 1 Do the main ideas, or some of the main ideas, follow a natural and recognizable order?
  - 2 How would you organize these main ideas in a summary?
  - 3 Is the information structure therefore sequential, nonsequential or a hybrid of the two?
- 7 Read and evaluate a test taker's summary. Use the checklist below to help you.

Language change is a natural process which has been sped up by the invention of the Internet. There are three common features of language change. The first is lexical change, such as the creation of new words like 'blog' or the repurposing of existing words like 'the cloud'. Then there are syntactic changes. As online communication is informal, complex grammatical structures are often replaced by short, simple sentences and words are omitted. Finally, phonological changes can occur when people are exposed to other languages or language varieties.

## **Checklist: Writing Part 2**

- ✓ The summary includes the main ideas and relevant supporting details.
- ✓ The information is synthesized effectively, with a logical structure.
- ✓ The ideas are connected appropriately.
- ✓ The language is accurate.



Marking criteria for Writing Part 2 > page 109

8 Read the Test tip box. How much time will you allow in the test to review your summary?



## 🦢 Test tip

In Writing Part 2, aim to leave time to review your summary, considering the points in the checklist above.

9 Do the Test practice task. Then use the checklist in exercise 7 to help you review and edit your summary.



## Writing Part 2: Summary

You have 20 minutes to write a summary (80-100 words).

You have been learning about how new words emerge. You have read a textbook extract and attended a lecture and now your tutor has asked you to write a summary of the main ideas for your classmates to read. Write one paragraph, combining information from the textbook extract and the lecture transcript to summarize the main ideas. Your summary should provide the reader with enough information to understand the main ideas from both texts. Write full sentences, using your own words where possible. Do **NOT** write more than 100 words.

#### Textbook extract

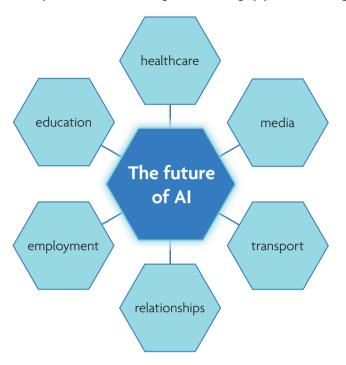
The emergence of new words is a feature of all living languages, and the history of the word 'blog' is a good example to illustrate the processes by which this occurs. It was first used in the 1990s, as the popularity of the Internet grew. The full term was 'web log', meaning an online log or record of information. Over time, it was reduced to the single word 'blog' and described webpages where individual authors published posts. Later, prefixes and suffixes were added to create additional words, such as 'bloggers' to describe people who write blogs. Then, when social media sites were established and posts were confined to a limited number of characters, 'micro-blogging' came into use to mean writing short blog posts. It can be used with or without the hyphen. At some point, the words 'blog' and 'sphere' were combined to describe the collective space where bloggers share their work: the 'blogosphere'.

#### Lecture transcript

'So, as we've seen, the English language is rich in vocabulary, and that vocabulary is ever changing ... new words are arising all the time. Let's explore three key ways new words are created. Affixation occurs when a prefix or suffix is added to a word to create a new form of the word or a word with a new meaning. Then there's clipping – the reduction of a word. It's often the first few or last few letters that are dropped. People are generally looking to make communication as efficient as possible and the omission of letters can make the word easier to say. Finally, ... um ... blending occurs when two words are blended, or mixed together. A classic example is 'brunch', where 'breakfast' and 'lunch' are combined to form a new word describing a meal eaten during the late morning – typically breakfast foods eaten close to lunchtime.'

## 5.4 SPEAKING Part 3

1 How do you think AI will affect these fields in the future? Do you think these changes will be largely positive or negative?





2 ① 05 Listen to an expert talking about AI-generated images. Note down the two main points and some supporting details.

#### **Pronunciation**

#### **Connected speech**

- 3 ① 06 Listen to extracts 1–5, focusing on the bold sounds. What happens to these sounds in connected speech?
  - 1 ... can you spot an Al-generated image?
  - 2 ... participants were asked to identify the photos of genuine people among images of people created by A.J.
  - 3 The participants struggled ...
  - 4 ... looking at fingers, eyes and teeth in particular
  - 5 ... real an**d f**ake images ...
- 4 ① 07 Listen and complete the extracts with two or three connected words. Notice how the sounds change in connected speech. Then listen and repeat.

1	In a	
2	photos of	···
3	despite	···
4	they	_ analysing the images
5	likely to	the way we relate to
	the media	

- 5 ① 08 Listen to a second expert talking about AI-generated images. Note down the main points and supporting details.
- 6 Share your notes with a partner. Then work in pairs to complete the table with your notes from exercises 2 and 5.

Main points	Supporting details
1	Expert 1:
	Expert 2:
2	Expert 1:
	Expert 2:

7 Look at two test takers' plans for their summaries of the two talks. Which do you think is more effective: A or B? Why?

^
Study: real vs AI images –
can't tell difference
Animal images: people
believe them & share
Media: no trust

Can't identify AI images: animals, study re. ppl Lose trust in media: will stop using / be charged for trusted media 8 Read the Test skill box. Which plan in exercise 7 reflects this advice?



## Test skill

### Organizing an oral summary

In Speaking Part 3, you will hear two short academic or professional monologues. These will contain the same two main points in the same order. You will then need to synthesize these to produce a short oral summary.

Organizing an oral summary is similar to structuring a written one. You need to present the main points in turn, each with at least one relevant supporting detail:

- State main point 1
- Provide relevant supporting detail(s)
- State main point 2
- Provide relevant supporting detail(s)

Present the main points in a logical order. (This may not be the same as the order in which they are presented in the monologues.)

Follow each main point with at least one supporting detail. You do not need to include all supporting details. Note that supporting details may sometimes come before the corresponding main points in the monologues.

- 9 10 09 Read and listen to a test taker's summary of the two talks and answer the questions.
  - 1 Does the speaker include the main points?
  - 2 Does the speaker follow the structure suggested in the Test skill box? What impact does this have?
  - 3 What is the overall impact of this summary on the listener?

Artificial intelligence is so powerful that it's becoming really hard for people to discern what's real and what isn't. And in the future, we might not believe images of our friends. And it'll be hard to trust what we see in the media. This includes images and video. Already, these days, people are fooled by fake animal photos or fake interviews with celebrities in videos. A study has also found that people cannot determine who's real and who isn't in photos. We may not trust many media sources in the future.

**10** Give your own summary of the two talks to a partner. Evaluate your partner's summary, using the checklist in exercise 12 to help you.

11 Read the Test tip box. Then complete the Test practice task. If possible, type your notes and record yourself speaking.



## 🚰 Test tip

In Speaking Part 3, you will have 50 seconds to give your summary. If you struggle to finish your summary within this time, you may need to work on your fluency, conciseness or both.

A summary should be concise, so do not worry if you finish a few seconds early, providing you include the two main points and some supporting details.

## Test practice

## **Speaking Part 3:** Summary

10 You are going to give a summary. First read and listen to the task. You can make notes while you listen. You will then have some time to think about what you want to say. You have 50 seconds to give your summary. Start speaking when you hear the tone.

Your tutor has asked you to summarize some research for your tutor group. Listen to two experts talking about technology and friendships. The two experts make the same two main points. You should:

- combine the information from the two experts and
- summarize the **two main points** the experts make.

Now listen to the two experts.

You now have 40 seconds to think about what you want to say.

12 Use the checklist to evaluate your performance.

## **Checklist: Speaking Part 3**

- ✓ The two main points are addressed in turn.
- ✓ At least one supporting detail is provided for each main. point.
- ✓ The summary is structured clearly.
- ✓ The speaker uses their own words where possible.
- ✓ The speaker speaks fluently, using connected speech.



Marking criteria for Speaking → page 108

## 5.5 TEST SKILLS PLUS Connecting ideas

1 Read the definition below. Then answer the questions.

An algorithm is a set of rules which govern a social media platform and determine what each user sees.

- 1 What social media platforms do you use and how do they employ algorithms?
- 2 What do you think are the positive and negative effects of social media algorithms?
- 2 What do you understand by the terms 'coherence' and 'cohesion'? Read the Test skill box and check.



### Test skill

#### **Understanding coherence and cohesion**

Coherence refers to the clarity of a spoken or written text. It is achieved through appropriate organization – for example, by stating a main idea followed by supporting details.

Cohesion refers to the way ideas are linked within a text. It is achieved through the use of cohesive devices, such as conjunctions and discourse markers.

Cohesion contributes to coherence by making ideas easier to follow. Writers and speakers create cohesion:

• within sentences:

Social media feeds are personalised, as platforms use algorithms to direct content of interest to users.

• across sentences:

Algorithms collect information from our search history. This is one way that they learn about our interests and habits.

• across paragraphs or sections of a text:

Despite the advantages mentioned above, there are issues with algorithms used in social media.



## Writing Part 1: Essay

3 Read the first part of an essay. What is the writer arguing?

Social media platforms use algorithms to direct content to users. Is this a good or bad thing?

Algorithms are a key feature of social media platforms, determining what content users are exposed to. **While** some people criticize the use of algorithms, I would argue that **they** serve useful purposes.

Algorithms identify content that may benefit users, saving them from having to scan posts and ignore **ones** which seem irrelevant. **Instead**, the algorithm offers content and resources which the users will gain insight from or find amusing. Thus, **this functionality** can make social media use more convenient in some cases, and **in others, more enjoyable**.

**4** Read the Test skill box. Then categorize the bold cohesive devices in the essay extract.



### 🔽 Test skill

### Using cohesive devices

The following devices are often used to create cohesion in written and spoken texts:

1 Transitional or linking words / phrases

Algorithms are powerful. However, ...

2 Pronoun reference and summary nouns

Algorithms push certain posts to users. **This** may limit users' access to different perspectives on a topic.

Algorithms may contribute to misinformation, and **this issue** has become a cause for concern.

3 Substitution

The platform uses algorithms. Its rivals do the same.

4 Ellipsis

Algorithms provide several benefits. **One** is speed.

5 Lexical chains

**Social media** users receive **content** related to **posts** they have previously viewed.



#### **Grammar reference**

- 5 Find words in the introduction and first main body paragraph which form a lexical chain.
- **6** Read the second main body paragraph below. Use the words and phrases in the box to improve the cohesion, making other changes as necessary.

However In addition Such This This means that

An algorithm acquires information about users and their preferences. It can ensure that inappropriate content is not directed to them. Content moderation makes the user's experience on social media safer. Ensuring a secure experience is imperative given that many users are between the ages of 13 and 18. It is not only users who benefit.

## Speaking Part 4: Debate

7 ① 11 Listen to and read part of a debate on the same topic as the essay. Answer the questions below.

While algorithms can direct content to users who'll appreciate it, I'd say that their use does more harm than good because an algorithm narrows the range of content a user sees. What I mean is that the algorithm pushes particular content to people based on their past interests, which prevents them from seeing content they may actually benefit from, now or in the future.

- 1 Is the speaker arguing the same point as the writer?
- 2 How does the speaker connect ideas? Are these similar to or different from the devices a writer might use?
- **8** Read the speaker's next main point. Improve its cohesion, using the words and phrases in the box to help you. Make other changes as necessary.

and so either ones then there's also the fact that these this

Algorithms can distort people's perceptions of the world. It can happen when social media users only see content that portrays particular views. It's easy for them to assume that such views are majority views when they may actually be minority views. Users may not see content that challenges their views. They may only ever be exposed to one perspective.

- 9 12 Listen and compare your ideas.
- **10** What do you think about the speaker's points? Explain and justify your opinion. Pay attention to cohesion.

#### UNIT 5 REVIEW AND REFLECT

Spend some time reflecting on the skills and language you have studied in this unit.

Then indicate your confidence in each area. (1 = not at all confident; 5 = very confident).

Test skills	1	2	3	4	5
Listening:					
Using signposting language					
Reading:					
Dealing with unknown vocabulary					
Writing:					
Sequencing main ideas					
Speaking:					
Organizing an oral summary					
Test Skills Plus:					
Connecting ideas					

Grammar		2	3	4	5
will vs going to					
Future continuous					
Future perfect					
Future perfect continuous					
Future as seen from the past					

## Grammar reference

Vocabulary	1	2	3	4	5
Adjective + noun collocations					
Idioms					



Which of these areas do you most need to work on? How will you do this and what resources can you use?