

3

PROGRESS

If there is no struggle,
there is no progress.

Frederick Douglass

Blazing a trail at thirty thousand feet.

OBJECTIVES

- make predictions about the future
- use persuasive language to sell something
- discuss progress and society
- evaluate costs and benefits
- discuss renewable energy
- write a persuasive email

Work with a partner. Discuss the questions.

- 1 Look at the picture. What does it say about progress? What other examples can you think of to illustrate the same idea?
- 2 Read the quote. What does Douglass mean?
- 3 How could you measure 'progress':
 - in your own life
 - in your city/country
 - in the world?

3.1 Progressive design

- Make predictions about the future
- Use persuasive language to sell something

- V sustainability; forming verbs from adjectives
- P sounding persuasive

- G future structures
- S listening to identify persuasive techniques

VOCABULARY

Sustainability

A Work in groups. Which of these sustainable / environmentally friendly solutions would most benefit your country?

- recycling
- biodegradable plastic
- electric vehicles
- beach clean-ups
- wind power

B Choose the correct words to complete these statements about sustainability.

- 1 We will *never / soon* run out of **renewable** energy sources like solar and wind power.
- 2 A sustainable building generates *less / more* electricity than it **consumes**.
- 3 To be carbon-**neutral**, you might *cut down / plant* some trees to **offset** the pollution caused by a plane journey.
- 4 A zero-**emission** factory causes no *air / water* pollution.
- 5 **Over-exploitation** of natural resources will *lead to / prevent* the **depletion** of those resources over time.
- 6 **Biodegradable** materials break down into *harmful / harmless* parts which don't **accumulate** in the environment.

C Go to the **Vocabulary Hub** on page 143.

D SPEAK Work in groups. Discuss the questions.

- 1 Can ordinary people be carbon-neutral/cause zero-emissions in the modern world?
- 2 Is it worth the effort? Can ordinary people make a difference?

READING

A SPEAK Look at the pictures in the article. What might be special or unusual about the buildings?

B READ FOR GIST Read the article quickly. Match the names below with the pictures (a–c).

- 1 Aequorea _____
- 2 Nautilus Eco-Resort _____
- 3 The Lilypad _____

C READ FOR DETAIL Read the article again. Which project(s) from Exercise B does each statement apply to?

- 1 Scientists will work there.
- 2 It takes its shape from the natural world.
- 3 It will collect its own water.
- 4 It will use less energy than it generates.
- 5 The buildings will move up and down.
- 6 It will move from place to place.
- 7 It will hold tens of thousands of people.

D SPEAK Would you like to live or stay in any of these places? What would be the benefits and drawbacks?



GRAMMAR

Future structures

A Look at the underlined sections (1–10) in the article. What time do they refer to?

B WORK IT OUT Match the sections (1–10) with the rules in the box (a–f).

Future structures

- a We use the future continuous to describe a situation that will be in progress at a particular point in the future (___), or to emphasise that it will cover an extended period of time (___).
- b We use the future perfect simple to describe changes that will be completed before a particular point in the future (___).
- c We use the future perfect continuous to focus on the future results of an earlier future process, and/or to measure the length of time of that process (___).
- d We can use a modal verb (e.g. *might, could*) instead of *will* in these structures (___).
- e After words like *if, unless, when, while*, etc, future tenses (e.g. future continuous) usually become present tenses (e.g. present continuous) (___, ___).
- f Other future structures include *be on the brink/verge of (doing)* (___) and *be about / due / set to (do)* (___, ___).

C Go to the **Grammar Hub** on page 126.

SPEAKING

SPEAK Work in pairs. Ask and answer the questions about the times in the box.

ten years from now the end of this lesson
this time next year

- 1 Where will you be? What will you be doing?
- 2 What will you have achieved? How will the world have changed?
- 3 How will you be feeling? Why?

ONE ARCHITECT'S VISION

TO BRING US BACK FROM THE BRINK

The world of 2100 will look considerably different to the world of today. ¹By then, much of the ice around the north and south poles will have melted, according to the Intergovernmental Panel on Climate Change. ²Sea levels could well have risen by as much as 88 cm. ³Many of the world's low-lying islands and coastal regions will be disappearing – or will already have disappeared – beneath the rising tides. Millions of people will have lost their homes. In short, ⁴we're on the brink of witnessing irrevocable changes to our world.

A visionary Belgian architect, Vincent Callebaut, has an innovative answer to the problem of rising sea levels: The Lilypad, a futuristic-looking city that will drift around the world following ocean currents like a giant ship. If his plans come to fruition, ⁵this self-contained city is set to become home to around 50,000 climate refugees.

The Lilypad's design is inspired by the shape of the *Victoria amazonica* lily. At its centre will be a lake to catch, store and purify rain water, surrounded by three 'mountains'. Thanks to a series of renewable energy sources, this eco-city will produce more energy than it consumes. All its carbon dioxide and other waste will be recycled, making the Lilypad entirely zero-emission.

The Lilypad isn't Callebaut's only attempt to re-think the design of buildings and cities. Back in 2015, he revealed spectacular plans for the world's first underwater skyscrapers, called Aequorea, which will be 500 metres wide, have 250 floors and be capable of holding 20,000 people. These eco-friendly structures will be self-sufficient, as they'll produce all their own energy, heat, food and water. They'll also be made of 100% recycled plastic, collected from the world's oceans.

Each oceanscraper will have a jellyfish-like structure: the entrance will be located at the surface and then the structure will spiral down to depths of 1000 metres. Inside will be homes, offices and workshops, science laboratories, sea farms and fruit and vegetable gardens. Fresh drinking water will be produced using in-depth pressure to separate salt from seawater.

The Aequorea will be moored off the coast of Brazil, rather than in the open ocean. Residents will certainly be glad of the chance to visit the mainland and soak up some much-needed sunshine at the end of each working week – ⁶they'll have been breathing processed air and staring out into the deep, dark ocean all week, after all.



Mr Callebaut's latest project, the Nautilus Eco-Resort in the Philippines, takes its name and inspiration from a mollusc, the nautilus. The hotels themselves will also be shaped like seashells, which will rise and fall as they rotate around a central coil. Visitors can expect uninterrupted sunshine throughout the day as the towers follow the course of the sun. Some rooms will even disappear underground ⁷when they're not being used. But before you book your ticket, be warned that ⁸the resort isn't about to open any time soon – like most of Mr Callebaut's designs, it's still some way from actually being built.

The Nautilus Eco-Resort aims to be a 'zero-emission, zero-waste, zero-poverty' project, built entirely from reused or recycled materials from the islands. Visitors will also be actively involved with scientists, engineers and ecologists to ensure their experience encourages sustainable progress. So if you do decide to take a luxury holiday there, ⁹you won't be spending all your time lounging around by the pool. You'll also get some practical lessons on sustainability ¹⁰while you're collecting rubbish from the beach!

Glossary

brink (n) the point in time when something very bad or very good is about to happen

irrevocable (adj) impossible to change or stop

moor (v) to stop a ship or boat from moving by fastening it to a place with ropes or by using an anchor

sustainable (adj) using methods that do not harm the environment

visionary (adj) original and showing a lot of imagination

LISTENING

A SPEAK Work in pairs. Read *(Very) Smart Materials*. Discuss why each material mentioned might be useful.

Glossary

smart materials (n) technologically advanced materials with properties (e.g. colour, shape, magnetism, etc) that can change in response to stimuli such as light, temperature, pressure or moisture

(VERY) SMART MATERIALS**COLOUR-CHANGING PAINT:**

The roof and walls of a building automatically change colour during the day, depending on the temperature.

**PIEZOELECTRIC SHOES:**

Walking in the shoes causes crystals in the soles to change shape, generating an electric current.

**SHAPE-CHANGING AEROPLANE WINGS:**

The wings detect the plane's height (using atmospheric pressure) and change shape automatically.

**SELF-REPAIRING RUBBER TYRES:**

The rubber contains tiny balls of glue. If the tyre is damaged, the balls open, glue is released and solidifies, and the holes are repaired.

3.1 **B LISTEN FOR DETAIL** Listen to a conversation about smart materials. Choose the correct options (a, b or c) to answer the questions.

- What is the woman trying to do?
 - make friendly conversation
 - teach the man something
 - sell something
- How does the hat work?
 - Its fibres change shape to control air flow.
 - It uses electricity to warm your head.
 - You can adjust its shape based on the weather.
- What must the man do to keep the hat?
 - write a detailed report about his experiences of wearing it
 - pay £50
 - test it in the rain
- Why does the woman phone her boss?
 - to ask for advice about the jacket
 - to persuade her boss to lower the price
 - to put the man under pressure to buy the jacket

3.1 **C LISTEN FOR TECHNIQUES** Listen again. Which persuasive techniques does the woman use for 1–6? Use the information in the box to help you.

Listening to identify persuasive techniques

People sometimes use tricks to persuade us to do things. When someone is trying to persuade you, listen out for these tricks.

Exaggeration: listen for words like *absolutely* and *extremely*.

Leading questions: listen for questions that 'push' you towards a particular answer, including question tags (e.g. *isn't it?*).

Personalisation: listen for phrases like *if you imagine* and *overuse of you/your*.

- cycling more often _____
- how the hat works _____
- testing the hat _____
- the problem and the solution _____
- the smart jacket _____
- paying for the jacket _____

D SPEAK Work in pairs. Discuss the questions.

- Is it acceptable to use techniques like these to persuade or manipulate other people? In what situations is it OK? When is it unfair?
- What techniques do you use when you're trying to persuade someone?



PRONUNCIATION

Sounding persuasive

- 3.2** **A** Listen to the extracts which include the sentences below. How is the woman trying to sound persuasive? Use the information in the box to help you.

- You just look like a very fit and sporty person.
- Yeah, tell me about it!
- Hmm, I know exactly what you mean.
- I think you've got yourself an excellent deal there, sir. I can see you're a very smart negotiator!
- You know what? Maybe I can help you out there.
- But ... hmm ... maybe ... I can offer you ... a special price ... to thank you for your help.

Sounding persuasive

- Speak fairly quietly (as if you're sharing a secret) and slowly, with lots of pauses (as if you're thinking of new ideas while speaking).
- Start fast and then slow right down, placing extra stress on all positive words.
- Use slightly exaggerated rising and falling intonation on key words to express emotions.

- B SPEAK** Work in pairs. Practise saying the sentences in Exercise A as persuasively as possible.

VOCABULARY

Forming verbs from adjectives

- A** Complete the extracts with the correct form of the verbs in the box.

ensure formalise simplify strengthen tighten warm

- I bet you can't wait for the weather _____ up!
- It's quite complicated technology, but I'll try _____ it for you.
- The fibres in your hat respond to the cold temperature by _____ up.
- That _____ there's no heat loss from your head.
- As the hat gets wet, the water _____ the fibres.
- I just need you to sign this form _____ our agreement.

- B** What adjective is each verb from Exercise A formed from?

- C** Use the affixes in the box to create verbs. The same affix is used for all words in each group. Other spelling changes may also be needed. One group doesn't require any change.

-en -ify en- -ise

1 strong long short

2 final visual equal

3 empty smooth narrow

4 pure solid simple

5 danger able large

- D** Complete the advice with the adjectives you formed in Exercise C. Sometimes more than one answer is possible.

How to be

persuasive

- Don't just offer weak opinions. _____ your arguments with evidence and examples.
- Help your potential customers to _____ themselves using your product.
- Don't try to persuade everybody at the same time: _____ your focus to a small group of key people.
- _____ complicated explanations to make them easier to understand.
- _____ the decision-making process for your customers by removing any barriers that make their decisions harder.
- Don't speak too quickly. Try to _____ the pauses between key words.

SPEAKING HUB

- PREPARE** Work in pairs. You are going to try to persuade somebody to buy a product made from smart materials. Choose one of the ideas from Listening Exercise A or use your own idea.
- DISCUSS** Discuss how your product works and why it's useful.
- PLAN** Plan a sales strategy using the persuasion techniques from Listening Exercise C.
- PRESENT** Swap partners. Take turns to try to persuade your new partner to buy your product.
- REFLECT** Share your experiences with the class. Would you buy your partner's product? Why/Why not?

- Make predictions about the future
- Use persuasive language to sell something

3.2 Better ... or worse?

- Discuss progress and society
- Evaluate costs and benefits

P stress-shift words

G negative inversion

V verb-noun collocations

S reading to determine costs and benefits

LISTENING

A SPEAK Work in groups. Do you think life is generally getting better or worse for your generation?

3.3 **B LISTEN FOR MAIN IDEA** Listen to the first part of a radio show. Match the people (1–5) with the opinions (a–e).

- 1 Bob _____
- 2 Mary _____
- 3 James _____
- 4 Callum _____
- 5 Sonia _____

- a I'm more aware of bad things happening than I was.
- b The earlier generation didn't have the same financial worries as we do.
- c Everything was better when I was younger.
- d Young people were more polite in the past.
- e I feel bad when I compare myself with others.

C SPEAK Work in pairs and discuss the questions.

- 1 Do you agree with the interviewees' opinions?
- 2 What are some possible explanations for their opinions?

3.4 **D LISTEN FOR GIST** Listen to the second part of the radio show. Match the opinions (a–e) in Exercise B with the concepts (1–5).

- 1 the inequality paradox _____
- 2 the reminiscence bump _____
- 3 the them-and-us delusion _____
- 4 the invisible struggle phenomenon _____
- 5 the window-on-the-world effect _____

3.4 **E LISTEN FOR DETAIL** Listen to the second part again. Are these sentences true (T) or false (F)? Correct the false sentences.

- 1 Professor Martinelli believes that life is getting better everywhere. T / F
- 2 Declinism proves that things really are getting worse. T / F
- 3 When average levels of well-being improve, it can lead to a rise in declinism. T / F
- 4 People often have nostalgia for their youth. T / F
- 5 We tend to focus on good behaviour in groups that we don't belong to. T / F
- 6 Professor Martinelli's parents never worried about financial problems. T / F
- 7 Professor Martinelli is optimistic that people will try to prevent global tragedies. T / F

F SPEAK Work in pairs. Discuss the questions.

- 1 What are your experiences of the five concepts from the radio show?
- 2 Are you generally optimistic or pessimistic about the near future?

Bob



Mary



James



Callum



Sonia



PRONUNCIATION

Stress-shift words

A Listen to the sentences. Underline the stressed syllables in the words in bold.

3.5

- Despite amazing **progress** in technology and sharp **increases** in living standards, many of us believe our quality of life has actually **decreased**!
- Let's hear a few **extracts** from those interviews.
- You feel like a **reject** from society.
- It's almost as if we **rewrite** the events in our memories.
- You've simply erased their negative **attributes** and bad **conduct** from your memory.
- We tend to **attribute** other people's success to luck.
- That's a major source of inter-generational **conflict**: young adults always **suspect** that earlier generations had it much easier!

B Underline the stressed syllables in the words in bold. Then listen and check.

3.6

- Why are you always such a **rebel**? Why do you always **rebel** against everything I say?
- I didn't think I'd like Thai food, but now I'm a **convert**. Your cooking has **converted** me!
- You need to install an **upgrade** for your computer. When did you last **upgrade** it?
- I deal with **imports** and **exports** in my job: I **import** raw materials and **export** finished products to customers.
- I **frequent** this café during the summer, but I'm not really a **frequent** visitor during the rest of the year.

C Practise saying the sentences with the correct stress.

GRAMMAR

Negative inversion

A Complete the extracts from the radio show with one word.

- No sooner _____ an older person got on the bus than we all stood up.
- Only after they'd all got off the bus _____ I finally sit down.
- No way could I _____ afford a flat.
- None of our neighbours had much money, and neither _____ we.
- Not _____ did I have great friends, but we also did cool things all the time.
- By no means _____ I suggesting that life is wonderful for everybody everywhere.
- _____ in a million years did it occur to me that my parents were worried about money.

B WORK IT OUT Match the sentences (1–7) in Exercise A with the rules (a–d) in the box.

Negative inversion

When we want to emphasise a negative element of a sentence (e.g. *never*), we can move it to the beginning and swap the subject and auxiliary verb. This process is called inversion.

- When there is no auxiliary verb, we add *do/does/did*. _____
- Inversion with *could* is common after phrases like *only after* and *no way*. _____
- Inversion is very common in the structure *not only ... but also*. _____
- After *no sooner*, we need a *than*-clause. _____

We don't use inversion when a negative word/phrase is the subject: *Not one person* offered me a seat. (NOT: *did offer*)

C Go the **Grammar Hub** on page 126.

D Complete the sentences so they are true for you.

- Under no circumstances would I ...
- Only rarely do I ...
- Not only do I think ...

SPEAKING

A PREPARE Work in pairs. Imagine you are on a radio interview about progress. Student A – read the information below. Student B – go to the **Communication Hub** on page 154.

B SPEAK Roleplay your interview.

Student A

You're a radio interviewer. You believe that while people complain about the world today, overall it is actually getting better. Interview Student B about progress. Also give your view on the subject.

Discuss the following areas.

- the impact of technology
- community
- quality of life
- cost of living
- employment
- the environment



READING

A PREDICT Work in pairs. Discuss the questions.

- 1 Look at the pictures and title of the article. What do you think 'voluntourism' might be?
- 2 What do you think attracts people to these kinds of activities?
- 3 Why might some voluntary work do more harm than good?

B SKIM Read *Voluntourism: more harm than good?* quickly and check your ideas in Exercise A.

VOLUNTOURISM

more harm than good?

When Pippa Biddle was a teenager, she went on a school trip to Tanzania, where she and her classmates were tasked with building a library for an orphanage. Lacking even basic construction skills, they did their best and, remarkably, over the course of a week, the building started to take shape. Only later did Pippa learn the truth: every night, a group of professional builders had been carefully undoing and redoing the teenagers' work in order to make the construction structurally sound. The whole project was an illusion: the true purpose wasn't to get help on the building project, but to make the teenagers feel good about themselves.

Welcome to the world of voluntourism, where volunteering meets tourism. Unlike true volunteering, this is paid work – but it's the worker who pays for the privilege. On the surface, voluntourism is a win-win situation. The voluntourist seizes an opportunity to travel to an exotic country and work with real people in authentic locations, while the recipients get free help. But the reality, as Pippa's story brings home to us, is rather more complicated.

The main criticism of voluntourism is that it perpetuates the myth that people in some countries need help from wise and generous benefactors in richer countries. The reality, of course, is that these countries have plenty of kind-hearted experts of their own. But of course, most voluntourists aren't even experts: they're typically gap-year students looking for a quick adventure, with no valuable skills to offer. At best, their input is often a waste of time. At worst, it could do more harm than good, as with Pippa's building experience.

Even worse are stories of fake projects created merely to keep the volunteers busy, regardless of any inherent local need. For example, there are English-language schools in remote communities where the locals neither want nor need to study English.

It's hard to avoid the conclusion that voluntourism is nothing more than an ego-trip: a chance to pretend you're making the world a better place, so you can wow your friends back home with tales of your generosity, your suffering and your profound experience of 'finding yourself'.

C READ FOR COSTS AND BENEFITS Work in pairs. What are the deep costs and benefits of voluntourism? Use the information in the box to help you.

Reading to determine costs and benefits

When you read a for-and-against article, it's useful to distinguish between **surface-level** costs/benefits (e.g. obvious, short-term or unimportant ones) and **deep** costs/benefits (e.g. hidden, long-term or highly important ones). When deciding if you agree with the writer's opinion, focus mainly on the deep costs and benefits.



But there's another side to volunteerism. While many people do sign up with naïve expectations, they often emerge from their experiences with a far deeper understanding. On their return home, they can spread a more positive and realistic image of the countries they visit, and counter rather than perpetuate stereotypes. Finally, many voluntourists go on to become committed life-long volunteers, with their new-found habit of helping others, whether globally or in their own communities.

It's also an oversimplification to claim that voluntourism is always harmful to local communities. Highly-skilled volunteers like doctors, scientists and engineers can indeed bring real benefits. The key is to do so in a spirit of cooperation and mutual respect with local experts, rather than following the 'watch me and learn' approach. Many voluntourism agencies can have a genuinely positive impact both on the volunteers and the communities they serve.

So if you're considering signing up as a voluntourist, seize the initiative and do some research beforehand. Be honest and realistic about your skills and expectations. Above all, never forget that the main beneficiary of your voluntourism adventure will probably be you. With the right mindset, this could well be the most important experience of your life.

D READ FOR DETAIL Work in pairs. Read the article again and discuss the questions.

- 1 Why did the builders work at night?
- 2 How did Pippa's building experience 'do more harm than good'?
- 3 What does the writer mean by 'the right mindset' in the last paragraph?

E SPEAK Work in groups. Do you think voluntourism does more harm than good? Would you consider doing it yourself?



Glossary

beneficiary (n) someone who gets an advantage from a situation
illusion (n) a false or wrong belief or idea
mindset (n) a way of thinking about things
orphan (n) a child whose parents have died
perpetuate (v) to make something such as a situation or process continue, especially one that is wrong, unfair or dangerous
profound (adj) used about very strong feelings
recipient (n) someone who receives something

VOCABULARY

Verb–noun collocations

A Choose a verb to complete each pair of verb–noun collocations. Then decide on the best collocation to complete each sentence. Use the information in the box to help you.

Verb–noun collocations

Verb–noun collocations are a good way to build vocabulary. Sometimes these include advanced verbs (e.g. *perpetuate*), but mostly they include very common verbs (e.g. *make*, *do*, *take*). Try to underline these as you read in English.

- 1 Unless you have valuable work experience you'll usually _____ *do* _____ *your best / more harm than good*.
- 2 Volunteer organisations should always _____ the *time / shape* to train volunteers before a project.
- 3 A trained English teacher can _____ *benefits / home* to a host community.
- 4 It's vital that voluntourists _____ the *responsibility / the opportunity* to understand their host community before and during their visit.
- 5 Volunteer organisations should not _____ the *myth / problem* that their projects are just extended holidays.

B Go to the **Vocabulary Hub** on page 143.

C SPEAK Work in pairs. Do you agree with sentences 1–5 in Exercise A? Why/Why not?

SPEAKING HUB

A PREPARE Work in pairs. Imagine you are going to volunteer abroad. Choose one of the following voluntary projects or use your own idea.

- working at an animal sanctuary
- planting trees
- teaching children
- cleaning up litter

B PLAN Create a list of surface-level and deep costs and benefits for:

- you and your partner
- who you are helping
- the world in general.

C DISCUSS Discuss whether the benefits outweigh the costs. How could the costs be reduced? How could the benefits be increased?

D PRESENT Present your plans to the class. Whose ideas would have the best chance of making the world a better place?

- Discuss progress and society
- Evaluate costs and benefits

▶ Seaweed farming

A Work in small groups. What is being shown in each picture (a–e)?

B ▶ Watch the video. Check your ideas to Exercise A and number pictures a–e in the order they appear.



C ▶ Watch the video again. Answer the questions.

- 1 What have scientists discovered about seaweed?
- 2 What can seaweed help us do?
- 3 What are the three countries mentioned in the video?
- 4 Is the presenter's tone generally positive, negative or neutral?

Glossary

allotment (n) a small piece of land in town you can rent and use for growing vegetables

harvest (v) to pick and collect crops or plants

seaweed (n) a green or brown plant that grows in the sea

AUTHENTIC ENGLISH

A Work in pairs. Read the sentence from the video and the information in the box. What three things doesn't seaweed need?

This doesn't need lots of land space to grow it, it doesn't need awful artificial fertilisers, it doesn't need lots of fresh water.

The 'rule of three'

The 'rule of three' is a rhetorical device we use to express concepts more completely, emphasise our points and increase the memorability of our message. In the 'rule of three', we often repeat the same grammatical construction.

B Work in pairs. Complete the sentences using your own ideas and the 'rule of three'.

- 1 To succeed in life, you need to work hard, you need to have passion and you need to have a role model.
- 2 I'm ready to start the day. My face is washed, my _____ and my _____.
- 3 Maria was the ideal employee – she was always on time, she always _____ and she _____.
- 4 The present government has ruined the economy, it _____ and it _____.
- 5 I told the shop assistant I wanted to exchange the item, _____ or _____.
- 6 I _____, You _____, The whole class _____.

C Compare your sentences with another pair.

D Work in small groups. Write sentences with the 'rule of three' to say what you need to do to learn a language successfully.

▶ Fuelling the future



SAM

MALCOLM

AMANDA

HARRY

EMILY

A Work in pairs. Discuss the questions.

- Do you prefer to use public transport or travel by car? Why?
- What do you think about policies that ban or limit cars in city centres?

B Watch the video. Are these statements true (T) or false (F)? Correct the false sentences.

- Malcolm has recently achieved a long-held ambition. T / F
- Amanda understands the appeal of owning a sports car. T / F
- Malcolm believes speed is the main positive of car ownership. T / F
- Amanda says that all new vehicles will be banned from the UK by 2040. T / F
- Amanda thinks that other feasible options besides petrol vehicles currently exist. T / F
- Harry thinks alternative fuels will be the norm in the distant future. T / F
- Malcolm is going to let Amanda test drive his car. T / F

SPEAKING SKILL

A Watch the video again. Complete the sentences (1–6) from the video.

- _____ coming out for a look at my new wheels?
- I mean we don't really need them in the city. _____?
- _____ Harry? You're a cool young guy ... you must like sports cars.
- Just the other day we were discussing alternative fuels, _____?
- That kind of thing, must be a long way off though, _____?
- _____ Malcolm?

B Work in pairs. Look at your answers in Exercise A. What are the speakers doing in each sentence?

- Malcolm is asking Amanda to give her opinion.

Maintaining a conversation

Inviting people to give their opinion or speak

Ask a direct question (*Would you like to say something here, Andy?*) or invite someone to speak using a statement (*You haven't said anything yet, Maria.*)

Noticing changes in attitude

Respond to body language and facial expressions by asking questions or making statements. (*I can tell you don't agree with me.*)

Question tags

Add these to a statement to make it a question or to request agreement. (*I think we all pretty much agree on this, don't we?*)

Asking questions to get agreement

Ask people directly to agree with you in order to move conversations along. (*Am I right in thinking that's true?*)

C Work in pairs. Choose one of the topics below and try to maintain a conversation for four minutes without any long pauses.

- the environment
- a documentary you watched recently
- public transport in your country

SPEAKING HUB

A PREPARE Work in a small group. Think about the pros and cons of the sources of energy below.

- wind power
- nuclear power
- tidal power
- solar power
- fossil fuels

B PLAN You are going to discuss which of the energies would be the best for achieving a sustainable future with another group. Plan how you are going to achieve agreement within your group and get all the members of the group to give their opinion.

A: What's your opinion?

B: Tidal power is too expensive compared to other renewable sources.

C DISCUSS Join with another group to discuss the pros and cons of the sources of energy.

D REFLECT As a class decide which arguments were the most convincing and which of the energy sources are necessary for a sustainable future.

○ Discuss renewable energy

- Turn to page 158 to learn how to write a persuasive email about sustainability.

VOCABULARY

A Complete the leaflet with the words in the box. There are two extra words that you do not need to use.

accumulate biodegradable consume depletion
emissions exploitation neutral offset renewable

Want to live a more sustainable life?

Here's how.

1 Stop buying products wrapped in plastics, which _____ in the oceans. Choose products that use _____ packaging instead.

2 Cut down on the energy you _____, and use solar power, wind power or other _____ energy sources if possible.

3 Reduce your _____ of greenhouse gases by walking or cycling instead of driving.

4 Become carbon-_____ by planting trees to _____ the carbon you generate.



B Complete the sentences with the correct form of the word in brackets.

- They want to _____ (*large*) our university by adding a new building.
- The dirty water is _____ (*pure*) before being released into the sea.
- If your dinner's cold, you can _____ (*warm*) it up in the microwave.
- They're _____ (*strong*) the old bridge before it falls down.
- We didn't bother to _____ (*formal*) our agreement – we trust each other.
- Some screws are loose on this table. Can you _____ (*tight*) them up?
- We were winning six-five, but the other team _____ (*equal*) in the last minute.

C Complete the conversation with one verb in each space.

- A:** I want to ¹ _____ the world a better place, but I don't know how. Could you ² _____ me in the right direction?
- B:** The only thing that ³ _____ to mind is voluntourism.
- A:** Good idea! I'll go for it.
- B:** Well, please don't ⁴ _____ this personally, but you don't really have any skills to offer. They have strict rules about who they accept.
- A:** Really? Maybe they'll ⁵ _____ an exception for me.
- B:** No, I think you need to ⁶ _____ the time to research it carefully so you don't end up ⁷ _____ more harm than good.
- A:** OK, thanks for the advice. I'll try to ⁸ _____ it on board.

GRAMMAR

A Find and correct the mistakes in four of the sentences.

- Fifty years from now, the world will have been changing completely.
- My life's about getting a lot more complicated.
- We'll be seeing a lot more of each other when we're neighbours.
- Call me again at ten – I might have finished by then.
- I'm on the verge of resigning from my job.
- Your eyes will hurt after you'll have been studying all night.
- Prices setting to fall by 10% over the next year.

B Reorder the words to make sentences. The first word is given in bold.

- By** / you / do / I / should / means / believe / no / resign

- Under** / be / opened / may / circumstances / no / this box

- Not** / did / thanked / all the work / you / have / me / once / for / I

- Only** / the waiter / our food / three times / we / bring / complained / had / after / did

- No** / the washing / started / had / than / put out / sooner / it / I / to rain

- No** / to college / ever / going back / I / way / consider / would

- Not** / this hard / since / worked / students / we / have / I / were

3.1 Future structures

- We can use a variety of grammatical forms to express the future, such as future forms with *will*, the present simple, the present continuous and *be going to*.

They'll plant some more trees over the next few weeks.

When does the presentation begin?

I'm going to install solar panels on my roof.

- We use the future continuous (*will be + -ing*) to describe a situation that will be in progress at a particular point in the future.

Scientists will be making an important announcement at 3 pm.

- We use the future perfect simple (*will have + past participle*) to describe changes that will be completed before a particular point in the future.

He will have fixed the air-conditioning by the end of the day.

- We can use the future perfect simple with adverbs in the middle position after *will*.

Pollution in our city will surely have impacted quality of life by the end of the next decade.

- We use the future perfect continuous (*will have been + -ing*) to focus on the future results of an earlier future process, and/or to measure the length of time of that process.

The crew will have been tearing down the old factory for twelve weeks by the end of June.

Be careful!

- We usually don't use *will* after words which signal conditional sentences such as *if*, *unless*, *when*, *while*. So we use present continuous instead of future perfect continuous, and present perfect instead of future perfect.

She'll be hanging up flyers while I'm meeting with the council. NOT She'll be hanging up flyers while I'll be meeting with the council.

- We can use a modal verb such as *may*, *might* or *could* instead of *will* in these future structures to express possibility.

They'll be switching to renewable energy soon.

(= definitely)

They could be switching to renewable energy soon.

(= it's possible)

- We also use phrases such as *be on the verge of + -ing*, *be on the brink of + -ing*, *be due to + infinitive*, *be set to + infinitive*, and *be about to + infinitive* to refer to the future.

Danielle was on the verge of achieving her goal.

3.2 Negative inversion

- We use negative inversion when we want to emphasise a negative element of a sentence. We place the negative element at the beginning and we invert (= swap over) the subject and auxiliary verb.

I have never seen such waste in my life. = Never have I seen such waste in my life.

I'm not saying we need to leave now. = By no means am I saying we need to leave now.

No way could I ever drive a petrol-powered car again.

- We add *do*, *does* or *did* in inverted clauses when there is no auxiliary verb.

She never received an apology. = Never did she receive an apology.

- We use *than* after the phrase *no sooner*.

No sooner had she written the document than her computer crashed.

- Inversion is often used with the structure *not only ... but also*.

Not only did I meet the chancellor, but I also met the environment minister.

- Some words and phrases change in inversions, and negative verbs become positive.

Nobody told me about that once. → Not once did anybody tell me about that.

You mustn't say that under any circumstances. → Under no circumstances must you say that.

That's not the only solution by any means. → By no means is that the only solution.

- There are also some inversions which do not contain negative words and phrases. These include sentences which start with *only* for time expressions, such as *Only after*, *Only when*, *Only once*, *Only if*, *Only by*, *Only rarely*, and *Rarely*, *Hardly* and *Barely*.

Only by reading the instructions three times did I understand what to do.

Be careful!

- With some inversions, such as *No sooner ... than*, *Not only*, *Hardly*, etc, it's the first verb and the subject which inverts.

Not only was he late, he was also unprepared.

Hardly had we sat down when the fire alarm went off.

- With other inversions, such as *Only after*, *Not until*, etc, it's the verb in the main clause which inverts.

Only after I'd arrived did I realise I'd got the day wrong.

Not until he'd spent hours online did he find a suitable photo.

- We don't use inversion when the negative word or phrase is the subject.

None of my colleagues take public transport.

NOT None of my colleagues do take public transport.

- The verb and subject invert after *neither* and *nor*.

None of their staff knew the answer, and neither did we.

I haven't told anyone, and nor has Jake.

3.1 Future structures

A Match the statements (1–7) with their purposes (a–g).

- | | | |
|--|-----|---|
| 1 We're going to build a zero-emissions home. | ___ | a making a prediction from strong evidence |
| 2 I'll call the manager, if you like. | ___ | b explaining plans |
| 3 I think you'll be famous someday! | ___ | c talking about a fixed scheduled event |
| 4 When are they going to close down that factory? | ___ | d making a prediction based on opinion more than evidence |
| 5 The talk begins at 10 am. | ___ | e making an offer |
| 6 I think I'll just take the bus instead. | ___ | f asking about plans |
| 7 With all these clouds, it's going to rain very soon! | ___ | g making a decision while speaking |

B Choose the correct options to complete the sentences.

- We'll **be testing / have tested** the new equipment for a few hours tomorrow.
- They'll have **been laying / laid** the foundation by the end of next week.
- I'll **be meeting / have met** Jim later today, if you'd like to join us.
- Will you have **be working / been working** with the company for very long when you retire?
- The company will have **built / been** building two new hotels by the end of the year.
- They won't **have taken / be taking** questions from the audience after the talk.
- By the time she finishes the marathon, Kayla will **have jogged / been jogging** for six hours.
- He'll probably still be working unless he **decides / will decide** to leave it for next week.

C Complete the second sentence so that it has a similar meaning as the first sentence. Use between two and five words, including the word in bold.

- Thirty minutes from now, the meeting will conclude. **DUE**
The meeting _____ conclude in half an hour.
- The scientists will make the discovery any day now. **VERGE**
The scientists are _____ the discovery.
- In less than a minute, the rocket will launch. **ABOUT**
The rocket _____ launched.
- The two companies are close to sealing the deal. **BRINK**
The two companies _____ sealing the deal.
- By the end of the year, the agreement will have expired. **SET**
The agreement is _____ by year's end.
- I'll be collecting samples and she'll be recording them. **WHILE**
She'll be recording samples _____ them.

► Go back to page 26.

3.2 Negative inversion

A Rewrite the sentences (1–6) using inversion and the words given.

- Nobody asked me if I passed my driving test.
Not once _____.
- I'd just arrived home when they called me back to the office.
No sooner _____.
- We seldom see players with such natural ability.
Rarely _____.
- He is really clever and incredibly funny.
Not only _____.
- Tina realised her purse had been stolen when she went to pay her bill.
Only when _____.
- You must not open that door.
Under no circumstances _____.

B Write one word in each gap.

Anna was in charge of organising her company's annual conference. She had met the manager a week before to settle the plans, and no ¹ _____ had they sat down to talk than the manager was called away. She waited forty-five minutes, and ² _____ until she got up to leave did the manager re-appear. On the day of the conference, ³ _____ no means did everything go according to plan. Not ⁴ _____ was the turnout low, but she ⁵ _____ had trouble with the conference venue. ⁶ _____ in a million years would she have thought things could go so wrong.

► Go back to page 31.





3.1 Sustainability

Complete the text with the words in the box.

biodegradable consume emission exploitation neutral offsetting renewable

Home
Articles
About
Contact

How to be green

1 _____ energy from sun, wind, rain and waves is one possible solution to the environmental problems we face today. It helps us to address the over-2 _____ of natural resources that are finite like minerals, oil, natural gas and coal. Some businesses and organisations aim to be carbon-3 _____ by 4 _____ the amount of carbon they release. There are even some zero-5 _____ buildings which actually create as much energy as they 6 _____. Also using 7 _____ materials, for example, in food packaging, is another important step because these materials break down naturally and cause less waste.

► Go back to page 26.

3.2 Verb–noun collocations

Cross out the incorrect word or phrase in each group.

- 1 We managed to *achieve* / *attain* / *deliver* / *perform* / *meet* our goals.
- 2 We have made *a concerted effort* / *limited progress* / *reasonable headway* / *advances in the right direction* / *room for improvement*.
- 3 They performed *impressively* / *particularly* / *reasonably* / *relatively* / *surprisingly* poorly.
- 4 The statistics *demonstrated* / *hindered* / *displayed* / *showed* a marked imbalance.
- 5 We should set *significant progress* / *realistic goals* / *clear objectives* / *measurable targets*.
- 6 We have seen *little movement* / *a deadline* / *a new record* / *regression* / *incremental progress*.

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4.2 Science and research

Choose the correct word to complete the sentences.

- 1 What are some examples of social *findings* / *norms* in your social group?
- 2 Can you *conduct* / *speculate* how most people would react if they were publicly told they had a low score on a test?
- 3 Do you think the study above proved the theory that the researchers *demonstrated* / *hypothesised*?
- 4 What did this study *conduct* / *demonstrate*?
- 5 Can you think of another idea for *an experiment* / *some findings* to prove the hypothesis?
- 6 Is it important to read the *findings* / *participants* of a study to understand the conclusions?
- 7 Have you ever *conducted* / *speculated* an experiment at school or university?
- 8 What have you *concluded* / *conducted* about embarrassment by reading the texts?

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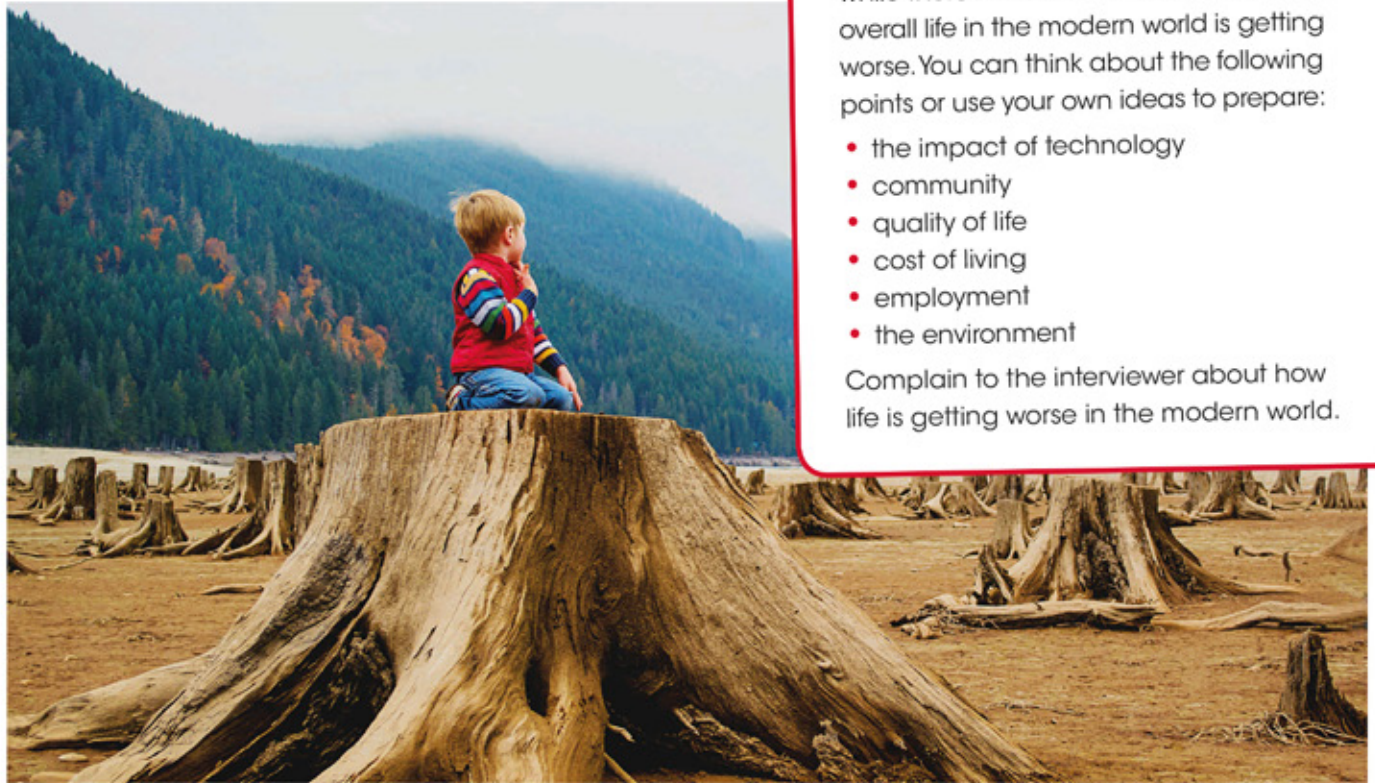
4.3 Students

Both pictures are brightness illusions known as Munker's illusion. Although the shapes appear to vary in brightness, they are actually the same. It is the colours next to them that make them appear different.

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3.2 Student B

Read the situation and prepare what you will say.



You're being interviewed for a radio programme about progress. You feel that while there have been a lot of advances, overall life in the modern world is getting worse. You can think about the following points or use your own ideas to prepare:

- the impact of technology
- community
- quality of life
- cost of living
- employment
- the environment

Complain to the interviewer about how life is getting worse in the modern world.

► Go back to page 31.

6.3 Students

Underline examples of summarising, repetition and dynamic words in the transcript.

Hydrogen atoms, carbon atoms, oxygen and sulphur atoms – these basic building blocks react and combine to make everything.

A woodland is a complex place – there are oak trees and grass and mosses and ferns, and countless animals and plants all living together in a tangled ecosystem. But there's a simpler level of description – everything is made of atoms. So an oak tree is really just carbon, nitrogen, oxygen and hydrogen and a few other bits mixed together. So, when you look at it like that, it's really not that complicated at all.

The atoms that make up this woodland have been on an extraordinary journey to get here. Think of a carbon atom in this acorn. It was assembled in the heart of a star billions of years ago out of protons that were built just after the Big Bang. It got thrown out into the universe in a supernova explosion, collapsed as part of a dust cloud to form the sun and then the earth four and a half billion years ago.

It will have spent a lot of time in rocks. It was probably part of some of the first living things on Earth. It would have got breathed out as carbon dioxide by someone that walked through this wood 400 years ago. It will have got into some ancient oak tree through the action of photosynthesis constructed into this acorn and fallen down to the ground. And there it is. It's got a history that goes back billions of years. In fact, a history in terms of the building blocks of carbon, the protons that goes back right to the origin of the universe. And in billions of years time when the sun dies and the Earth is vaporised they'll be thrown back out into space and probably condensed into a new world billions of years in the future.

So life is just a temporary home for the immortal elements that build up the universe.

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W persuasive techniques

A SPEAK Read the email. Who is the writer? Who is he writing to? Why?

To: Lakeside residential estate (group)
From: Daniel Hernandez
Subject: Road resurfacing

Dear all

a As you know, the internal roads in our estate are in a dreadful condition. Not only does this look ugly, but it also damages our cars. Furthermore, one of our loved ones may be injured by tripping on the uneven surface.

b With that in mind, the housing association has set aside funds to resurface the roads. As I'm sure you remember, the roads were last resurfaced five years ago. One option is simply to use the same cheap materials again (and in five years, the surface will have deteriorated again).

c I would like to propose an alternative: self-repairing concrete. Thanks to cutting-edge technology, self-repairing concrete is infused with billions of tiny limestone-producing bacteria, *Bacillus pseudofirmus*. While sealed in concrete, these bacteria remain inert, but when exposed to air they multiply rapidly. No sooner does a crack appear in the concrete than millions of these bacteria will wake up and plug the crack.

d As you can imagine, although self-repairing concrete is rather expensive, it will save us money in the long run (see attached calculations). More importantly, if one serious accident can be prevented over the next five years, I'm sure you'll agree it will have been worth the extra cost.

e I know you are all smart people, so let's make the smart decision. Please support my proposal at our next housing association meeting.

Best regards
 Daniel

B Read the email again. Match the questions (1–5) with the paragraphs (a–e). Then discuss the questions in pairs.

- 1 What is a potential objection and how can it be overcome? _____
- 2 What is the most likely solution and what's wrong with it? _____
- 3 What action does the reader need to take? _____
- 4 What is the problem and why should the reader care? _____
- 5 What's an alternative solution and why is it better? _____

C Underline examples of each technique in Daniel's email. Use the information in the box to help you.

Persuasive techniques

- 1 Use words like *we*, *our* and *let's* to build a connection with the readers.
- 2 Flatter your readers by claiming they're intelligent and knowledgeable.
- 3 Provide facts and figures to support your claims, in an attachment if appropriate.
- 4 Use emotive language and imagery to appeal to your readers' fear of loss, damage or injury.
- 5 Explain technical issues in simple language, but include some impressive technical terms.
- 6 Use *although* or *while* to link weaknesses with strengths.

D Work in pairs. Use the techniques in Exercise C to make these email extracts more persuasive.

- 1 Your biggest problem is that you spend too much money on electricity.
- 2 Please support me so I can solve this problem for you.
- 3 The road surface is so bad that delivery drivers may refuse to drive into our estate.
- 4 I admit this solution will be extremely disruptive during the building work.

WRITING

A PREPARE Work in groups. You are going to write a persuasive email about sustainability, smart materials or voluntourism. Generate a list of ideas. Use the following questions to help you:

- 1 What problem are you trying to solve?
- 2 Who do you need to persuade?
- 3 What do you want your reader to do?

B PLAN Plan a five-paragraph email. You can use the five questions from Exercise B to help you.

C WRITE Write your email, using techniques from this lesson.

D REVIEW Exchange your email with a partner. Do you use similar techniques? Comment on how the email could be made more persuasive and underline any mistakes.

E EDIT Read your partner's comments. Rewrite any parts you think should change.

