

2

Environment

In this unit

2.1 LOCAL ENVIRONMENT

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You don't need a weatherman to know which way the wind blows.
Bob Dylan, 1941–, US singer and songwriter

LISTENING AND VOCABULARY

1a Discuss your environment.

- Where do you live, e.g. urban/rural area?
- What do you like or dislike about where you live?

1b 1.9 Listen to three people taking part in a survey about their local area. Complete the chart.

	Person 1	Person 2	Person 3
Type of building			
Where they live			
What they like			
Problems			

2a Complete the following word combinations. Listen again to check your answers.

atmosphere hour house pollution rate spaces

- open spaces
- noise _____
- cosmopolitan _____
- crime _____
- detached _____
- rush _____

abandoned apartment mindless stunning
traffic transport

- _____ views
- _____ block
- _____ cars
- _____ connections
- _____ vandalism
- _____ congestion

pronunciation

2b 1.10 Word combinations Mark the stress on the word combinations. Then listen and check.

READING

3a What don't you like about your local environment? Discuss the following list of problems people experience. Which are the worst for you? Can you add any others to the list?

- noise from traffic
- graffiti
- people drinking in the street
- abandoned vehicles
- young people / children misbehaving
- dog mess
- litter/rubbish
- vandalism
- noise from neighbours

3b Put the problems above in order of importance for your area. Compare your ideas with a partner.

Noisy neighbours and all the things that drive us mad

By Ross Lydall

1 Noisy neighbours, uncollected litter and graffiti are among the things that really annoy us, according to a new survey.

2 The findings come from a Mori poll of more than 2,000 residents in three UK cities – London, Dundee and Newcastle.

3 The government-commissioned survey revealed that other issues, such as dog mess and abandoned vehicles, also cause so much anxiety that they can affect our quality of life.

4 Designed to measure how people respond to noise, the survey also established the extent to which we are troubled by other anti-social problems.

5 While almost one in three people said noisy neighbours were a problem, they placed it eighth on a



list of what troubled them most.

6 They were more than twice as concerned about litter and rubbish – the main problem to affect their quality of life. They said noise was a problem of similar scale to abandoned cars and drinking in the street.

7 However, the effect of noisy neighbours ranked much more highly among residents already dissatisfied with their home – jumping to second place.

8 It is also the second biggest quality-of-life issue among residents in medium- or high-rise flats.

9 The study – carried out for the Department for Environment, Food and Rural Affairs – found that loud music, shouting and banging attracted far more complaints than noisy parties. As many as two in five people annoyed by noise have complained to their council or the police, while one in four have complained directly to neighbours.

10 The survey finds that people are able to develop 'immunity' to traffic and trains while neighbourhood noise is synonymous with a 'lack of consideration'.

11 The Environment Minister said tackling noise pollution was a government priority.

The Evening Standard

4 Read the article and answer the questions.

- How many people took part in the survey?
- Which groups of people have a particular problem with noisy neighbours?
- According to the survey, how many people have protested:
 - to their local government or the police?
 - to their neighbours?
- According to the article, why is transport noise not a bigger problem?

5a Find words or phrases in the article which mean:

- results (paragraph 2)
- survey (para. 2)
- subjects often discussed / argued about (para. 3)
- size/level (para. 6)
- become unaffected by (para. 10)
- closely connected with (para. 10)
- not thinking about other people's feelings (para. 10)
- something very important (para. 11)

5b Which of the highlighted phrases in the article do the following?

- introduce who asked for the survey (2 phrases)
- gives the purpose of the survey (1 phrase)
- compare two results of the survey (2 phrases)
- introduce facts from the survey (3 phrases)

SPEAKING AND WRITING

6 Discuss these questions about local environmental issues.

- What are the issues in your local area?
- What questions would you like to ask in an opinion poll about the environment?
- What should the government priorities for the environment be?

7a Now discuss the results of two other surveys.

Half the class (A): turn to page 158.

The other half (B): turn to page 161.

7b Now form pairs – one Student A and one Student B – and discuss your information.

8 Write a report for a university lecturer of 150–180 words describing the information in the two tables. Use some of the phrases from Exercise 5b in your writing.

READING

1 In groups, look at the headline and answer the questions.

- 1 Why do you think polar bears are in danger of becoming extinct?
- 2 What other animals are in danger of dying out?

Polar bears are facing extinction in the wake of retreating sea ice

2a Look at the headline again and predict which ten of the following words will appear in the article.

banks cubs deserts fast (n) fat (n)
icebergs mammals marine penguins
prey seals species thrive waves

2b Match six of the words in Exercise 2a with these definitions.

- 1 eating no food at all for a period of time
- 2 a group of animals or plants of the same kind
- 3 an animal that is hunted and eaten by another animal
- 4 young bears, lions, tigers, etc.
- 5 animals that feed their young with milk from their body
- 6 relating to the sea and creatures that live there

3 Scan the introduction and the article and check your answers to Exercise 2a.

4 Read the introduction to the article and answer the following questions.

- 1 How long have sea levels been rising? Are they still rising?
- 2 How long has polar ice been shrinking? Is it still shrinking?
- 3 What success have environmentalists had in their fight against global warming?



We all know that sea levels have been rising for the last 20 years, but the rate of rise has increased rapidly in recent years. Polar ice has been shrinking at a rate of nearly 75,000 square kilometres a year over the last 30 years. Unfortunately, environmentalists have not achieved any significant results in their fight against global warming. So what effect has all this had on Arctic wildlife?

- 1 The retreat of sea ice in the Arctic is forcing the world's wild polar bear population into an unnatural fast, which threatens the species with extinction.
- 2 Scientists said yesterday that the earlier annual break-up of sea ice caused by climate change is cutting short the spring hunting season for the bears, which rely on floating banks of ice to reach their prey.
- 3 The disappearance of the sea ice in summer months is forcing hungry polar bear populations to spend longer on land, giving a false impression that numbers are increasing as they encroach on human settlements in search of food.
- 4 Travel agencies in Canada and the US offering Arctic tours have begun boasting of the increased likelihood of spotting the bears.
- 5 But a joint study by the Canadian Wildlife Service (CWS) and Nasa published in the scientific journal *Arctic* this week has found that, far from thriving, the polar bear is at potentially irreversible risk from global warming.
- 6 The research into bears in five Arctic regions found that sea ice has begun retreating progressively earlier each year when satellite images from 1979 to 2004 are compared.
- 7 Female bears rely on the spring hunting season to build the fat reserves needed to see them through the summer months. The retreating ice means they have not had time to build up normal levels of fat – which can reach a thickness of 12cm.
- 8 The study found the spring hunting season was being reduced by nearly three weeks in some places – reducing the fat levels by up to 80kg in each animal.

- 9 As females become thinner, they are more susceptible to disease. Their ability to reproduce and the survival chances of their cubs decline significantly.
- 10 Claire Parkinson, a Nasa scientist and co-author of the report, said: 'Our research strongly suggests that climate warming is having a significant and negative effect on a primary species reliant on the sea ice for survival.'
- 11 The sea ice provides a waterborne hunting ground for polar bears from which they can find their prey – seals and other marine mammals. The polar bear can detect a seal from 20 miles.
- 12 Ms Parkinson said: 'Our concern is that if the length of the sea ice season continues to decrease, polar bears will have shorter periods on the ice to feed.'

5 Read all the article carefully and complete the following sentences in your own words, with between two and five words.

- Polar ice is shrinking because of climate change.
- Polar bears are getting closer to where people live in order to ____.
- Travel companies are saying that there is a better chance of ____ on an Arctic tour.
- Polar bears are at risk from global warming, according to the ____.
- When female bears cannot build up fat reserves, they are ____.
- Polar bears need ____ to catch the animals they hunt for food.

VOCABULARY: word combinations

6a Match the words on the left with the nouns on the right.

- | | |
|---------------|---------------|
| 1 climate | a) images |
| 2 false | b) change |
| 3 scientific | c) journal |
| 4 global | d) effect |
| 5 satellite | e) impression |
| 6 significant | f) warming |

6b Complete the text with word combinations from Exercise 6a.

I read in a respectable ¹ ____ recently that ² ____ is already happening. ³ ____ have shown that ⁴ ____ is even reducing the legendary African snow on the top of Mount Kilimanjaro. Since 2000, observations of the ⁵ ____ of rising temperatures have started to mount up. Even the American business community has stopped trying to give a ⁶ ____ that everything is all right.

GRAMMAR: present perfect simple and continuous

7 Look at these sentences from the article and answer the questions.

- ... sea levels *have been rising* for the last 20 years, ...
- What effect *has all this had* on Arctic wildlife?
 - Which sentence focuses on an activity that is still continuing? Which tense is used?
 - Which sentence focuses on the result (or lack of result) of an activity? What tense is used?
 - Which tense is used for an activity that is completed?

GRAMMAR TIP

With *since* and *for* you can use some verbs in the present perfect simple and continuous with no difference in meaning, e.g. *live, stay, work, study, teach, wait, drive*.

She's lived / She's been living in that house for 20 years.

➔ Language reference and extra practice, pages 136–137

8 Underline the most appropriate form. Sometimes both forms are correct.

- In Iceland, the ice *has disappeared* / *has been disappearing* at an alarming rate.
- Since 1990, the Quelccaya ice cap in South America *has shrunk* / *has been shrinking* at the rate of about 30 metres a year.
- Rising sea levels mean that some reclaimed land in low-lying areas *has already vanished* / *has already been vanishing*.
- We've waited / We've been waiting for weeks to see Al Gore's film *An Inconvenient Truth*.
- To stop the rise of sea levels, the president of the Maldives *has sent* / *has been sending* 200 copies of the book *Global Warning: The Last Chance for Change* to heads of state.
- The environmental lobby *has tried* / *has been trying* to get the government to reduce CO₂ emissions for ages.

SPEAKING

9 Discuss changes in your environment. Use the present perfect simple and continuous.

LISTENING

1 In pairs, guess the answers to this quiz.

What do you know about volcanoes?

Decide if these statements are true or false.

- 1 Volcanoes are a natural way that the Earth and other planets have of cooling off.
- 2 The biggest volcano on Earth is Mauna Loa in Hawaii.
- 3 Most volcanoes are found around the rim of the Atlantic Ocean.
- 4 There are volcanoes around the coastline of Antarctica.
- 5 There are no underwater volcanoes.
- 6 Between 1975 and 1985 more than 35 volcanoes erupted each year.
- 7 The temperature of lava flows can reach 1,250°C.
- 8 People can never go inside volcanoes.
- 9 There is a large volcano under Yellowstone Park in the USA.
- 10 Vesuvius is a famous active volcano in Italy.

2a **1.11** Listen to someone talking about volcanoes and check your answers to the quiz questions above.

2b Listen again. What is the situation? What is the relationship between the speaker and the listeners?

GRAMMAR: indirect questions

3 Look at the questions in the table. Then look at Track 1.11 on pages 176–177, find exactly how they were asked and note them down.

Direct questions	Indirect questions
1 What is the biggest volcano in the world?	<i>Can I ask what the biggest volcano in the world is?</i>
2 Can people go inside volcanoes?	
3 Is Vesuvius an active volcano?	
4 Why do volcanoes stop erupting?	

4 Why does the professor use a direct question (*What is a volcano?*) and the students use indirect questions?

5 Look at the indirect questions in Exercise 3. Are these statements true or false?

- 1 We use the word order of affirmative statements in indirect questions.
- 2 We use *if* or *whether* to introduce indirect yes/no questions.
- 3 We use a question word, e.g. *what*, to introduce indirect *Wh-* questions.
- 4 We use the auxiliary *do / does / did* in present simple indirect questions.
- 5 Indirect questions always end with a question mark.

➔ Language reference and extra practice, pages 136–137

6a Change the direct questions into indirect questions. Use introductory phrases from Exercise 3.

- 1 How high is Mauna Loa?
I'd like to know how high Mauna Loa is.
- 2 How many volcanoes erupt each year?
- 3 How many eruptions were reported between 1975 and 1985?
- 4 Can you go inside an erupting volcano?
- 5 What causes a volcano to erupt?
- 6 What is the biggest volcano in the USA?
- 7 Which volcano has been showing a lot of activity recently?
- 8 When did Vesuvius destroy Pompeii?
- 9 When did Vesuvius last erupt?
- 10 Do a lot of people live near Vesuvius?

6b In pairs, ask and answer the indirect questions, using information from Track 1.11 on pages 176–177.

READING

7 Read the extracts from Bill Bryson's *A Short History of Nearly Everything* and answer the questions in your own words.

- 1 What does the title '*dangerous beauty*' mean?
- 2 What are the approximate dimensions of Yellowstone Park?
- 3 Why, if Yellowstone blew, is 'the cataclysm pretty well beyond imagining'?
- 4 Does Doss know how much warning would be given if Yellowstone was 'going to go'?
- 5 Why does Doss say that warning signs of an eruption would not be easy to predict at Yellowstone?
- 6 Why would evacuating Yellowstone 'never be easy'?

VOCABULARY: adverbs

8 Look at the **highlighted** adverbs in the extracts and match them with the adverbs in the box.

deliberately relatively normally perhaps
mainly slowly and pensively

SPEAKING AND WRITING

9a In pairs, discuss the five or six most important facts about volcanoes that would be interesting for schoolchildren.

9b In pairs, write a short fact sheet on volcanoes for a local school magazine.

Yellowstone – dangerous beauty

Yellowstone, it turns out, is a supervolcano. It sits on top of an enormous hot spot, a reservoir of molten rock that begins at least 2,000 kilometres down in the Earth and rises to near the surface, forming what is known as a superplume. The heat from the hot spot is what powers all of Yellowstone's vents, geysers, hot springs and popping mud pots. Beneath the surface is a magma chamber that is about 72 kilometres across – roughly the same dimensions as the park – and about 13 kilometres thick at its thickest point. The pressure that such a pool of magma exerts on the crust above has lifted Yellowstone and its surrounding territory about half a kilometre higher than they would otherwise be. If it blew, the cataclysm is pretty well beyond imagining.

15 ...

'It may not feel like it, but you're standing on the largest active volcano in the world,' Paul Doss, Yellowstone National Park geologist, told me soon after climbing off an enormous Harley-Davidson motorcycle and shaking hands when we met at the park headquarters at Mammoth Hot Springs early on a lovely morning in June.

...

I asked him what caused Yellowstone to blow when it did. 'Don't know. Nobody knows. Volcanoes are strange things. We really don't understand them at all. Vesuvius, in Italy, was active for three hundred years until an eruption in 1944 and then it just stopped. It's been silent ever since.

Some volcanologists think that it is recharging in a big way, which is a little worrying because two million people live on or around it. But nobody knows.'

'And how much warning would you get if Yellowstone was going to go?'

He shrugged. 'Nobody was around last time it blew, so nobody knows what the warning signs are. Probably you would have swarms of earthquakes and some surface uplift and possibly some changes in the patterns of behaviour of the geysers and steam vents, but nobody really knows.'

'So it could just blow without warning?'

He nodded thoughtfully. The trouble, he explained, is that nearly all the things that would constitute warning signs already exist in some measure at Yellowstone. 'Earthquakes are generally a precursor of volcanic eruptions, but the park already has lots of earthquakes – twelve hundred and sixty of them last year. Most of them are too small to be felt, but they are earthquakes nonetheless.'

...

Evacuating Yellowstone would never be easy. The park gets some three million visitors a year, mostly in the three peak summer months. The park's roads are comparatively few and they are kept intentionally narrow, partly to slow traffic, partly to preserve an air of picturesqueness, and partly because of topographical constraints. At the height of summer, it can easily take half a day to cross the park and hours to get anywhere within it.



SITUATION

A British power company has identified a commercially viable site for a wind farm in the north of England. The proposal is for a wind farm of 80 turbines over a large area. Each tower will be 60 metres tall and have a turbine of 35 metres diameter. The wind farm will cover an area of several kilometres and take five years to complete.

As fossil fuels such as coal, gas and oil are being used up, governments are keen to find alternative sources of energy, especially those that do not emit carbon dioxide. Nuclear power is one possible source, but many people have doubts about its safety. Renewable energy sources include solar, wave and wind power. The UK Government is keen to use these sources of power, and hopes to generate 10% of its energy needs from renewable sources by 2010 and 20% by 2020. However, many people feel that onshore wind farms spoil the landscape, particularly in countryside areas where they are usually sited. It is argued that they are eyesores which damage people's enjoyment of areas of outstanding natural beauty. Other people argue that wind power is simply not reliable as an energy source as wind power output is variable and unpredictable.

1 Read the situation and the leaflet and answer the questions.

- 1 Which facts and figures indicate that the wind farm will be large?
- 2 Which phrase indicates that the wind farm will be profitable?
- 3 What sources of energy are mentioned? What advantages and disadvantages are given for the energy sources?

2 **1.12** Listen to a government official talking to a power company representative. They are discussing the proposed wind farm.

- 1 What is the attitude of each speaker to a public meeting?
- 2 What is John Reynolds worried about?
- 3 What do they decide in the end?



KEY LANGUAGE: agreeing and disagreeing politely, polite questions

3a Write these expressions from the conversation in the correct order. Use contractions where necessary.

- 1 looking one it way is but at that of
- 2 are because right you absolutely
- 3 like I know to would
- 4 point you have but a think do not you
- 5 interested I knowing am in
- 6 very is true that because
- 7 go there I because you along would with

3b Now listen again and check your answers.

4 Practise saying the expressions. Pay careful attention to pronunciation and use contractions.

TASK: attending a public meeting

PUBLIC MEETING

To discuss the
Sparrow Hill wind farm
proposals

Date: 15th July • **Time:** 7.00p.m.

Venue: Merlin Sports Centre

All Welcome

5 Work in groups of five. You are going to attend the Public Meeting. Read your role cards and prepare for the meeting. You can add any other ideas of your own.
Student A: turn to page 158. Student B: turn to page 161.
Student C: turn to page 167. Student D: turn to page 169.
Student E: turn to page 170.

6 Now hold the meeting. Ask your questions and give your opinions. Try to persuade the other people at the meeting to accept your ideas.

7 Meet as a class. Report back on the result of your meeting.

8 What do you think would happen in your country with a similar proposal?

OTHER USEFUL PHRASES

Asking polite questions

Could you tell me (if/what) ...

I was wondering (if/what) ...

Putting your point of view forcefully

I'm absolutely certain that ...

I really believe that ...

There's no doubt in my mind that ...

I'm totally convinced that ...

Being diplomatic

I see where you're coming from, but ...

Yes, I see what you mean, but ...

STUDY SKILLS: designing a questionnaire

1 Questionnaires are used to gather data for surveys and reports. They usually provide up-to-date information or find out people's attitudes and behaviour.

- 1 If you have answered a questionnaire recently, what was it about?
- 2 Which organisations frequently use questionnaires to gather information?

2a **1.13** Listen to a lecturer giving advice to a student about questionnaires. Answer the questions.

- 1 What two key points does she mention about designing questionnaires?
- 2 What two types of question are mentioned?
- 3 What is the lecturer's final piece of advice?

2b Listen again and answer the questions.

- 1 Why should questions be fairly short, if possible?
- 2 What is the difference between open and closed questions?
- 3 What warning does the lecturer give about open questions?
- 4 According to the lecturer, questions should be 'clear and well structured'. What does she mean?
- 5 What kind of questions are good at the beginning of a questionnaire?

2c What are the advantages and disadvantages of asking open questions and closed questions?

3a Question types Look at the following extracts from a questionnaire and match A–G with the descriptions of the types of question below.

Descriptions of question types

- 1 Closed questions requiring the answer 'yes' or 'no'.
- 2 Questions which require a respondent to indicate how frequently they do something.
- 3 Questions requiring respondents to tick items in lists or boxes.
- 4 Questions requiring a choice between alternatives.
- 5 Straightforward questions which require a figure or limited number of words.
- 6 Open questions beginning with *what*, *who*, *why*, etc.
- 7 Questions which require the respondent to choose a number on a scale.

- A** What department are you in?
How many students are in your class?

- B** Tick the box in each group which applies to you.
- | | |
|-----------------|--------------------------|
| 1 undergraduate | ☐ |
| post-graduate | ☐ |
| other | ☐ |
| 2 course | ☐ |
| research | ☐ |

- C** Do you feel stressed during your studies?
Tick the appropriate box.
- | | | | |
|-----|--------------------------|----|--------------------------|
| Yes | ☐ | No | ☐ |
|-----|--------------------------|----|--------------------------|

- D** Put a cross (**X**) on the scale to indicate your level of stress.
 (1 = no stress, 5 = average stress, 10 = very stressed)
- | | | | | |
|---|--|---|--|----|
| 1 | | 5 | | 10 |
|---|--|---|--|----|

- E** What do you think are the main causes of stress for students?

- F Which would you prefer? Circle the letter to show your preference.
- a) fewer course assignments and more tests and examinations?
 - b) fewer tests and examinations, and more course assignments?

- G** How often do you feel stressed? Circle the appropriate letter.
a) never b) rarely c) sometimes d) often
e) always



3b Look at the following questions from a questionnaire. Tick the good questions. Put a cross against the poor questions.

3c Discuss how to improve the 'poor' questions. Suggest alternatives.

- 1 How old are you? Tick the appropriate box.
15–20 ☐ 20–30 ☐ 30+ ☐
- 2 Do you believe it is necessary to save energy in the home? Tick the appropriate box.
Yes ☐ No ☐
- 3 Do you have a gas boiler and is it new and fuel-efficient?
- 4 Do you replace light bulbs in your house/flat?
- 5 Which of the following energy-saving activities are you doing? Tick the appropriate boxes.
Wearing jumpers and cardigans in the house to keep heating at a low temperature. ☐
Having fewer baths and more showers. ☐
Driving an energy-saving car, e.g. a hybrid car. ☐
Using as few lights as possible and turning them off as soon as you don't need them. ☐
Installing solar panels to light and heat your house. ☐

WRITING SKILLS: writing a questionnaire

4 Read about the organisation Save Our Earth. What issues do you think SOE will list in the questionnaire they are going to prepare? Note down a few key environmental issues.

Save Our Earth (SOE) is an environmental organisation founded two years ago. It aims to raise awareness among young people of environmental issues and to encourage them to take action to protect the environment.

Members of SOE are meeting to prepare a questionnaire which will be sent to young people aged 15–30. The questionnaire will gather information about young people's attitudes to a number of environmental matters.

5a **1.14** Listen to the first part of an SOE meeting. Fill in the missing words in the following:

Basic information about respondents will include their:

Age	Marital _____
Sex	_____ qualifications
Nationality	Work or _____ status

5b Listen again. Note down the issues they plan to include in their questionnaire. Are they the same as the ones you chose in Exercise 4?

6 **1.15** Listen to the next part of the meeting and tick the questions which will be included in the questionnaire.

- 1 How important each issue is for them.
- 2 Why they chose the most important issue.
- 3 What they do to protect the environment.
- 4 How aware and worried respondents are about each issue.
- 5 If respondents are able to give money to SOE.
- 6 If respondents are willing to join SOE's campaigns.

7a You work for SOE. In groups of four, each student chooses one issue from Exercise 5b. Write six questions to find out respondents' attitude to your issue.

7b Show your questions to the other members of your group and correct them if there are language errors.

8a Make suggestions for adding two more questions to each issue.

8b Prepare the questionnaire, adding in the basic questions about the respondents from Exercise 5a.