

A large graphic on the left side of the page, consisting of a stylized '4' shape in orange and grey. The text 'UNIT 4' is written in blue on a white curved banner that follows the top curve of the '4'.

UNIT 4

WEATHER AND CLIMATE

A dramatic photograph of a stormy sky at dusk or dawn. The sky is filled with dark, heavy clouds, and several bright, jagged lightning bolts are striking down. The ground is dark, and a road is visible in the foreground with a few people and a car in the distance.

LEARNING OBJECTIVES

Watch and listen

Watch and understand a video about the impact of oceans on climate.

Listening skill

Predict ideas from research.

Critical thinking

Evaluate effects.

Grammar

Use gerunds and infinitives; use future forms.

Speaking skill

Use linking words to explain cause and effect.

Speaking task

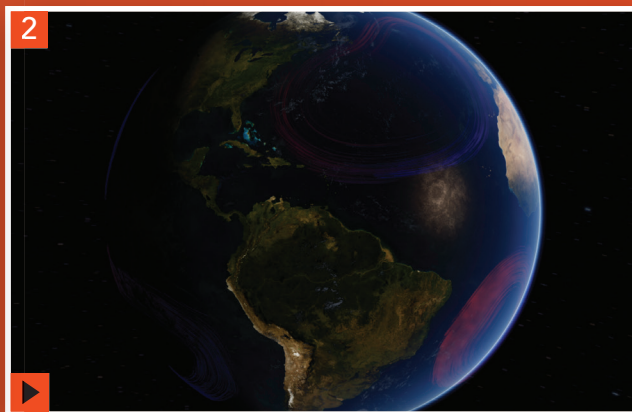
Give a presentation about climate change.

UNLOCK YOUR KNOWLEDGE

Work with a partner. Look at the photo and answer the questions.

- 1 Do you get weather like this in your country? What kind of weather do you get?
- 2 Without technology, how can people predict the weather? Do you know somebody who can do this? How often are they correct?
- 3 When was the last time you experienced bad or dangerous weather conditions? What were they? What did you do differently because of this weather?

WATCH AND LISTEN



ACTIVATING YOUR KNOWLEDGE

PREDICTING CONTENT USING VISUALS

PREPARING TO WATCH

1 Work with a partner and answer the questions.

- 1 How many oceans are there in the world? Can you name them?
- 2 How much of the Earth is covered by water?
- 3 Do you think oceans are important? Why / Why not?

2 Look at the diagram of Earth. Write a, b, c, d or e in the statements below. Then compare your answers with a partner.



- 1 The weather is usually warm and sunny in _____, _____ and _____.
- 2 The weather in _____ and _____ is usually cold in winter.
- 3 Places near _____ are the hottest.
- 4 My country's weather is similar to the weather in _____.

GLOSSARY

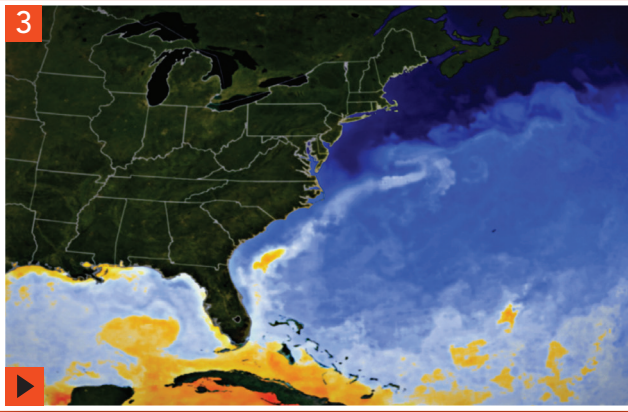
current (n) a movement of water or air

gyre (n) a flow of water in a circle

the equator (n) the imaginary line around the Earth that divides it into equal north and south parts

clockwise (adv) in the same direction as the hands on a clock move

heat (n) hot weather; extreme warmth



WHILE WATCHING

3 ▶ Watch the video. Which parts of the diagram in Exercise 2 show:

- 1 the equator?
- 2 the area north of the equator?
- 3 the area south of the equator?
- 4 the west coast of Chile in South America?

4 ▶ Write *T* (true) or *F* (false) next to the statements below.

Watch the video again and check your answers.

- _____ 1 Water covers almost 50% of the Earth.
- _____ 2 The water in the oceans moves around the planet.
- _____ 3 Ocean gyres are small circles of currents in the ocean.
- _____ 4 South of the equator, currents move clockwise.
- _____ 5 These ocean currents keep water and heat in the same place.

5 ▶ Match the sentence halves. Then compare your answers with a partner. Watch the video again and check your answers.

- 1 Water in the oceans moves because _____
 - 2 Ocean gyres are important to the climate because _____
 - 3 There is warmer weather north of the equator because _____
 - 4 South of the equator, ocean gyres are important because _____
- a the Earth is spinning.
 - b warmer water from the equator moves north.
 - c they move water and heat.
 - d they move cooler water north along Chile in South America.

DISCUSSION

6 Work with a partner. Discuss the effects that heat has on:

- a the clothes we wear. b the food we eat. c the homes we live in.

UNDERSTANDING
DETAIL

UNDERSTANDING
MAIN IDEAS

LISTENING

LISTENING 1

PRONUNCIATION FOR LISTENING

SKILLS

Rising and falling intonation to understand mood

Intonation describes how the tone of your voice goes up (rises) and goes down (falls). Intonation can help you understand somebody's mood (happy, interested, excited, bored, sad, upset, etc.). Rising intonation can show interest, happiness or enthusiasm. Falling intonation often shows boredom, sadness or lack of enthusiasm.


really = The speaker is interested.

really = The speaker is bored or not interested.

The meaning of a sentence can change with the intonation. Read the sentences below aloud with a rising intonation and then a falling intonation. How does the meaning change?

I know. *I suppose so.* *Really?*



1  **4.1** Listen to the dialogues. Write *I* (interested) or *N* (not interested) for Speaker B.

1 A: Did you know the number of trees in the world is increasing?

B: Is it? _____

2 A: I got a better job last week.

B: Really? Congratulations! _____

3 A: The weather got really cold, didn't it?

B: I suppose so. _____

4 A: Thanks for inviting me to your party!

B: You're welcome. It'll be nice to see you! _____

5 A: Dinner was great.

B: Good. Glad you liked it. _____

2 Work with a partner. Take turns reading the dialogues in Exercise 1 aloud. Speaker B changes their intonation. Speaker A decides if Speaker B sounds interested or not interested.

3 Discuss the questions below with a partner.

1 Why is it important to notice a speaker's intonation?

2 Why is it important to pay attention to your own intonation?

PREPARING TO LISTEN

- 4 Work with a partner. Read the poster below and discuss the meaning of the words in bold.

The weather and your feelings



Which type of weather do you **prefer**? Some people like hot weather. Some like cold weather. I like **cool** weather, between hot and cold, because it makes me feel relaxed. We all have weather we enjoy.

However, most people don't like some types of weather. There are many reasons why. For example, some people get **angry** in very hot weather. They feel hot and behave in a way that isn't friendly or pleasant. Sometimes the weather is hot and **humid**, and the air feels wet, so people sweat a lot. Also, if the weather is **dry**, people worry that plants will die without rain.

But some people get **upset** when it rains. They're quite unhappy. When it isn't sunny, some people feel tired and don't have **energy** to get things done.

No matter what the weather is, if we understand our feelings, it can help.



GLOSSARY

behave (v) to do or say things in a particular way

sweat (v) to produce liquid through your skin because you are hot or nervous

- 5 Use a dictionary to check your answers to Exercise 4. Which words are new for you?
- 6 You are going to listen to a discussion between two students who have been asked to prepare a survey about the weather and how it changes people's moods. Work with a partner. How do different types of weather affect people's moods? Do you and your partner agree? Why / Why not?

I think cold weather makes people feel tired. I want to be inside when it's cold.

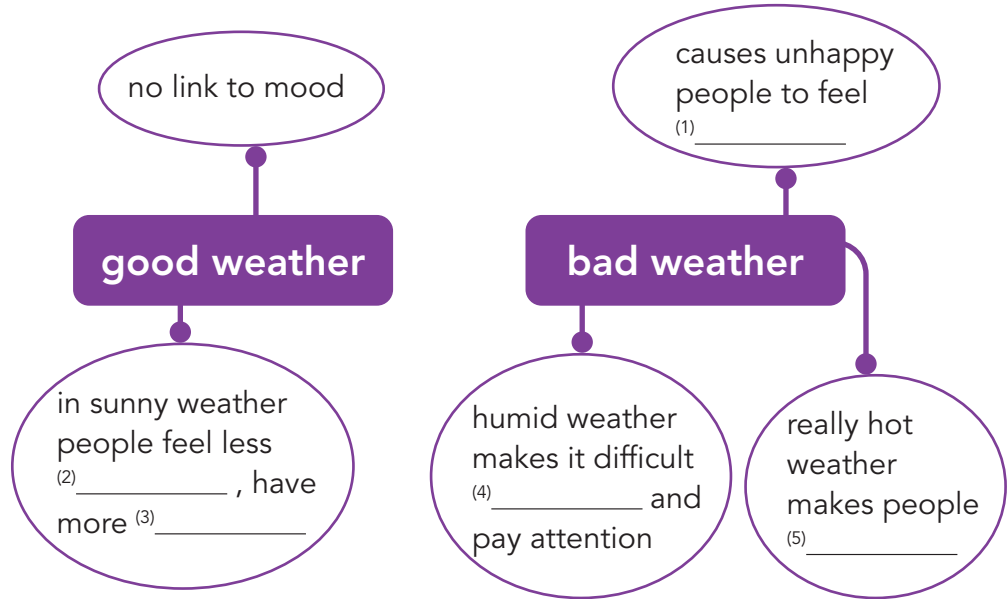
Really? That's interesting. Cold weather gives me energy.

TAKING NOTES
ON MAIN IDEAS



WHILE LISTENING

7 4.2 Listen to the first part of the discussion about weather and its effects on mood. Complete Sergio's notes on the ideas map.



LISTENING FOR
DETAIL



8 4.2 Work with a partner. Circle the correct answer. Then listen again and check.

- 1 What did Sergio and Murat's professor tell them to do?
 - a Make a list of questions.
 - b Decide what to survey.
- 2 Which idea did Murat think might not be true?
 - a Wet, windy weather makes people feel worse.
 - b Really hot weather makes people angry.
- 3 Why did they choose to write about sunny weather?
 - a It is more positive than bad weather.
 - b Sunshine gives you more energy.

9 4.3 Listen to the results of the survey. Complete the spreadsheet. Then compare your answers with a partner.

Number of people (Total = 15)	Weather	Effect
14	sunny	better than wet or ⁽¹⁾ _____
⁽²⁾ _____	sunshine	feel they could get a lot done
12	good	did ⁽³⁾ _____
⁽⁴⁾ _____	cloudy and dark	tired
14	lots of ⁽⁵⁾ _____	most energy

DISCUSSION

10 Work with a partner and ask the questions. Show interest and ask your partner more questions.

- 1 Do people in your country often speak about the weather?
Why / Why not?
- 2 What are some ways that people can feel better if the weather makes them feel bad?

People where I live ...

Really? Why? In my country, it's different.

11 Work with a partner. Complete the poster with your own ideas. Then compare answers with another pair. Do they agree?

Weather and studying

Weather can affect students' study habits. But students need to study, even in bad weather. Here is a bit of advice on how to study in all types of weather.

If the weather is:	sunny rainy quite cold very hot _____	Try doing this:	Take breaks outside for more energy. _____ _____ _____ _____
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LANGUAGE DEVELOPMENT

VERB COLLOCATIONS

1 Work with a partner. Match a word or phrase from Box 1 with a word or phrase from Box 2 to make collocations. In some items, more than one answer is possible. Use a dictionary to help you.

Box 1

cause cut down do prevent save

Box 2

forest fires global warming research trees wildlife

1 cause global warming

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

2 Write a sentence with your own collocation for each verb in brackets. Use the nouns from Exercise 1 or use a dictionary to find others. Make the sentences about you and your life.

- 1 *My brother caused an accident because he was driving badly.* _____ (cause)
- 2 _____ (cut down)
- 3 _____ (do)
- 4 _____ (prevent)
- 5 _____ (save)

3 Work with a partner. Compare your sentences. Ask questions about your partner's sentences.

I want to cut down a tree in my garden.

Oh? Why do you want to do that?

GERUNDS AND INFINITIVES

GRAMMAR

When two verbs come together, the second verb is usually an infinitive (to + verb) or a gerund (verb + -ing). When you learn a new verb, also learn the structures that can follow it, such as gerunds and infinitives.

We want to learn more about global warming. (to + verb)

I enjoy learning about science. (verb + -ing)

verbs followed by an infinitive (to + verb)		verbs followed by a gerund (verb + -ing)		verbs followed by an infinitive or a gerund		
decide	need	enjoy	keep	begin	love	like
hope	plan	finish	stop	continue	prefer	
learn	want			hate	start	

4 Choose the correct answer. In some items, more than one answer is possible. Then compare your answers with a partner.

- 1 We decided *to go / going* to Spain.
- 2 I enjoy *to learn / learning* new things.
- 3 Some people prefer *to visit / visiting* cities.
- 4 Scientists began *to tell / telling* the public about global warming years ago.
- 5 We need *to think / thinking* of survey questions.
- 6 They want *to watch / watching* a film about the Antarctic.
- 7 After we finish *to listen / listening* to the podcast, let's go for a walk.
- 8 I plan *to study / studying* more about wildlife in Africa.

5 Work with a partner. Write your own sentences with the following verb pairs, using infinitives or gerunds. In some items, more than one answer is possible.

1 **started** (learn) *I started to learn about the Arctic in my class.* _____

2 **wanted** (go) _____

3 **like** (read) _____

4 **decided** (study) _____

6 Compare your sentences with another pair and check that they are correct. Ask questions about other students' sentences.

I started to learn about the Arctic in my class.

That's interesting. What did you learn?

FUTURE FORMS

Decisions and plans

Use *will* to talk about decisions made at the time you are speaking.

Use *will + not (won't)* for the negative form.

From now on, I will try to recycle more. I won't forget.

Use *be going to + infinitive* to talk about decisions made before you speak or a general plan that can change in the future.

Biju's going to present information about the forests next week.

Use the present continuous (*be + verb + -ing*) to talk about arrangements made for the future that are difficult to change. An arrangement is a fixed plan, often with another person and / or at a planned time.

Next week, many people are coming to the meeting on global warming.

Predictions

When the prediction is based on personal opinion, use *will* or *won't* to say you are certain about a future event. Use *will probably* or *probably won't* when you are a bit less certain.

Scientists think summers with very high temperatures will happen more often from now on.

The number of polar bears will probably go down by 30% by 2050.

Because of global warming, we won't have as many maple trees in the future. So we probably won't have much maple syrup.

Use *be going to + infinitive* to talk about a future event when there is evidence that it is likely to happen.

Sea ice is melting because of global warming. Soon there isn't going to be any sea ice in the Arctic in the summer.

You can often use either *will* or *be going to* for predictions with a very similar meaning.

Scientists have found that sea levels will / are going to rise over the next 50 years.

- 7** Work with a partner. Complete the sentences with the correct future form of the verbs in brackets. Use contractions where possible. In some items, more than one answer is possible.

Decisions and plans

- 1 I've just finished packing. I _____ (leave) tonight at six o'clock to catch the train.
- 2 I haven't finished my project on global warming because I don't have enough information. I decided that I _____ (do) some more research online.
- 3 A: I _____ (go) to the garden centre this weekend.
Does anybody want to come?
B: OK, I _____ (come) with you.
- 4 Professor Lang _____ (talk) about global warming in her lecture tomorrow.

Predictions

- 5 You are carrying too many books! You _____ (drop) them.
- 6 I think we _____ (be) very sorry one day about how we treat the planet.

- 8** Work with a partner. Say why you chose each of the future forms in Exercise 7.

- 9** Write sentences about you for each of the statements.

- 1 something I am doing this weekend
I'm going walking with my friends in the mountains. _____
- 2 a prediction I think will come true in the next year

- 3 something I am going to do in my studies or at work in the future

- 4 an event I'm planning to go to this week

- 10** Work with a partner. Take turns telling each other about your plans and predictions in Exercise 9.

I'm going walking with my friends in the mountains this weekend. What are you doing this weekend?

That sounds like fun. I'm having dinner with my friends. We do it every month.

LISTENING 2

PRONUNCIATION FOR LISTENING

Vowel sounds /ɒ/ and /əʊ/

Two easily confused vowel sounds are /ɒ/ and /əʊ/. You can hear the sound /ɒ/ in words like on and job. You can hear the sound /əʊ/ in words like go and cold.

1 Say the words in groups A and B aloud. Which sound can you hear in each group? Write 1 (ɒ) or 2 (əʊ).

A _____ frog stop cost want
 forest carbon dioxide

B _____ global don't know
 won't slowing

2 Work with a partner. Take turns saying the questions below. Check your partner's pronunciation of the bold words. Then answer the questions with your own ideas.

- 1 Are there more **forest** fires these days?
- 2 Where do **frogs** live?
- 3 When did **global** warming begin?
- 4 Do you think it will or **won't** rain today?
- 5 **Don't** you **want** to save wild animals?
- 6 Did you **know** that trees use **carbon dioxide**?

Are there more forest fires these days?

Sorry, can you repeat that?

Are there more forest fires these days?

Oh. I don't know, but I think so.

PREPARING TO LISTEN

3 Work in small groups. Look at the photos connected to global warming and read the social media posts. Discuss the questions below.

- 1 What problems are mentioned in the posts?
- 2 Where do these problems happen?
- 3 Which of these problems happen where you live?
- 4 How do you think climate change affects people and wildlife?

a

Drought in Los Angeles — the worst in 20 years! Is it the end of farming in this state?
#globalwarming #drought #losangeles



b

Frequent fires destroy Brazilian rainforest — animals and local villages in danger. #forestfires #globalwarming #rainforest #climatechange



c

The purple frog from the Western Ghats rainforests is in danger. Protect the Indian rainforest.
#purplefrog #India #rainforest #WesternGhats #climatechange #globalwarming



d

Thousands of people in Pakistan lose their homes because of heavy floods. Rising water levels destroy local businesses and factories.
#floods #Pakistan #globalwarming #climatechange



4 Work in groups. The listening topic is related to the posts. Discuss what you think the listening will be about.

PREDICTING IDEAS

Predicting ideas from research

Before you listen to lectures, reports or information about a topic, you often have time to prepare. It helps to read some information in advance. This can help you learn about the key topic and issues that people think are important. You can then predict the main ideas that you will hear.

- 5 Work with a partner. Discuss the meaning of the words in bold in the text below. Then use a dictionary to check your answers. Which words are new for you?
- 6 You are going to listen to a news report about global warming that is closely related to the text below. Read the text. Then look at the ideas (1–5) and circle the main ideas of the text. Compare your answers with a partner.

The Western Ghats is a mountain range in western India, and it's home to four tropical and subtropical rainforests. The rainforests have a short dry period each year, but typically they get a lot of rain. However, the type of weather in the rainforests is changing quickly and global warming means that nowadays less rain falls. This is changing the rainforests themselves; the environment is **becoming** damaged and the plants and trees are growing more slowly. The rainforests are home to **unusual** wildlife,¹ which looks nothing like any other wildlife on Earth, and scientists are still **discovering** new species.² However, the damage to the rainforests means that some animals which can't be found anywhere else are **disappearing** because they're being killed by the changes in the climate. Many people **believe** that governments need to save the rainforests so that they'll still be around in the future. They say it's important to look after the forests and the animals so that climate change won't kill them. Researchers will have to look **carefully** for ways to stop global warming. They'll need to really watch what is happening, take time to do research and think about whether the possible solutions will help or not.

¹**wildlife** (n) animals and birds living in the natural environment

²**species** (n) groups of plants or animals with similar characteristics

Posted 10:03 am



- 1 how scientists discover new species of animals in the Western Ghats
- 2 the negative effects of global warming on some animals
- 3 the effects of climate change on people in India
- 4 how rainforests are affected by climate change
- 5 why it is important to protect animals that live in the rainforest


LISTENING FOR
MAIN IDEAS

UNDERSTANDING
DETAIL




LISTENING FOR
DETAIL

WHILE LISTENING

- 7  4.4 Listen to the news report and check the main ideas you chose in Exercise 6. Then decide which social media post from Exercise 3 the report is about.
- 8 Work with a partner. Look at the audio script for Track 4.4 on pages 209–210. Write five multiple-choice questions about key details in the report. Look at the example below.

The Western Ghats rainforests are in ...
A Pakistan B Thailand C India

POST-LISTENING

- 9  4.4 Exchange your questions with another pair of students. Listen again and answer the questions. Check each other's answers.
- 10 Find a photo that illustrates a climate problem. Share the photo with your class and explain the problem. Say:
- what causes this problem.
 - how the problem affects people and wildlife.
 - what we can do to help reduce or solve the problem.

Student: *This is a photo of a dry lake. Look – you can see the dead fish. This happens because of drought. Since the lake dries, the fish die. Then there aren't any fish to catch. We can help by not using too much water.*



SPEAKING

CRITICAL THINKING

At the end of this unit, you are going to do the speaking task below.

Give a presentation about climate change.

- 1 Work with a partner. You are going to study climate change in the Arctic and its effects on the weather there. Cover the text in the picture in Exercise 2. Make a list of how problems with the weather in the Arctic could affect people, animals and the environment.

One problem is that animals and plants may die.

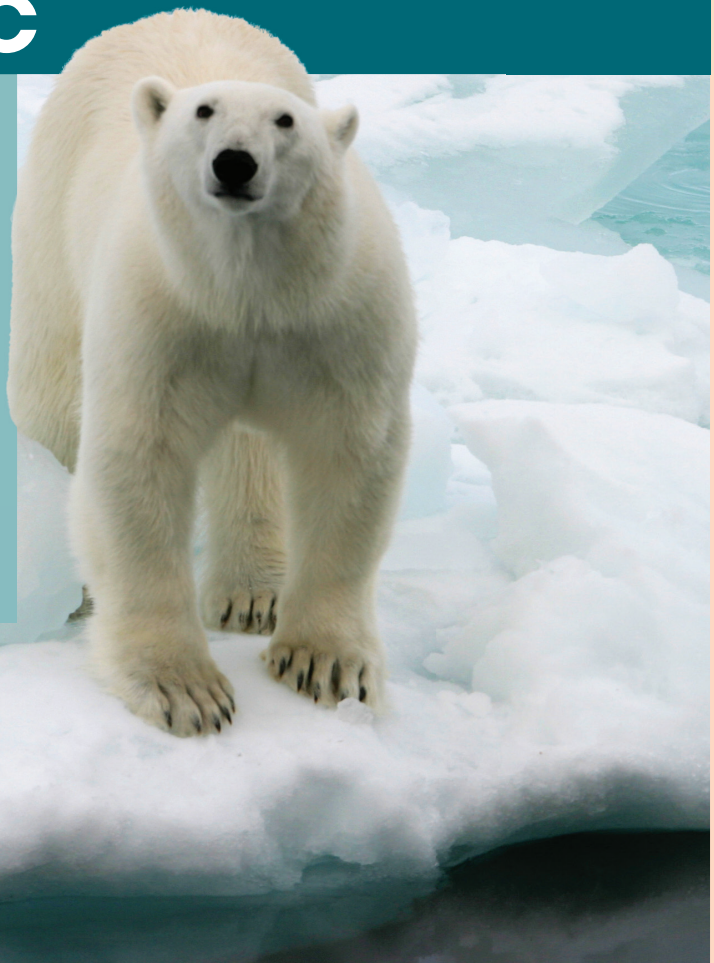
- 2 Work with a partner. Read the problems connected to climate change in the Arctic. Did you and your partner have the same ideas?

UNDERSTAND



THE ARCTIC

- Temperatures rise.
- Polar ice melts.
- Sea levels rise.
- Polar bears and other animals lose sea ice to hunt from.
- Arctic animals begin to disappear.
- People in the Arctic lose traditional food sources.



Evaluating effects

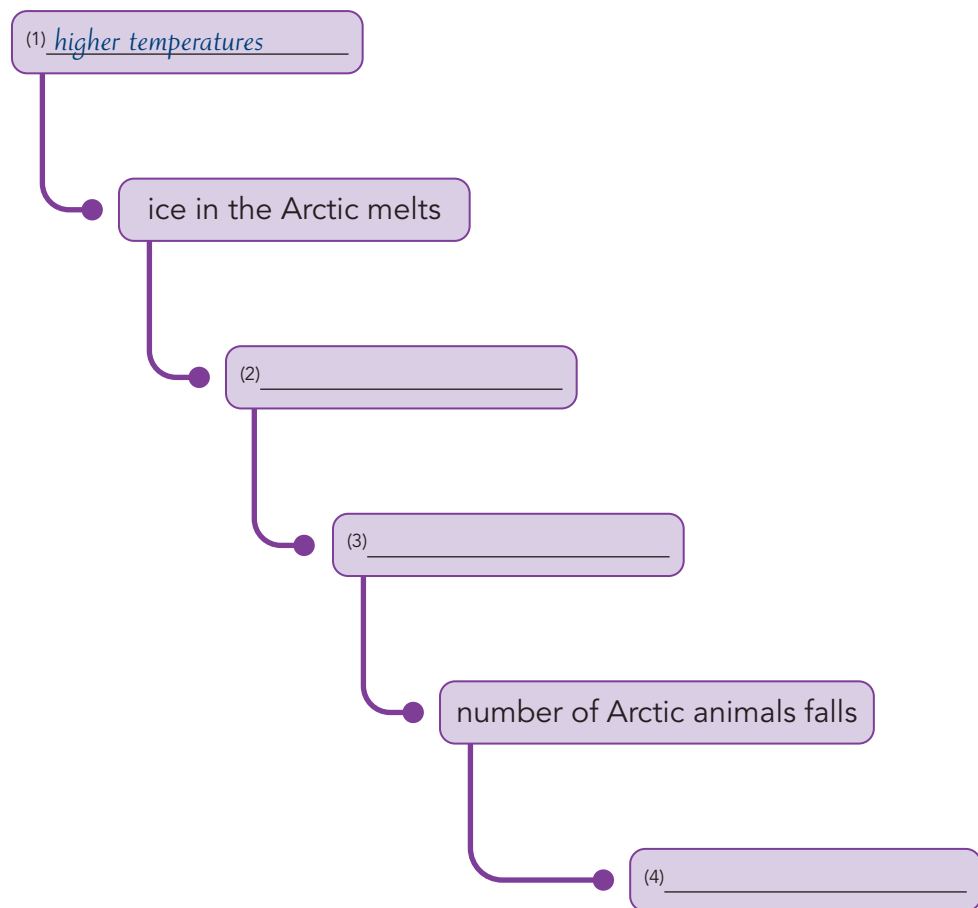
Using a cause-effect chain can help you to organize your thoughts before a speaking task. Use your cause-effect chain to evaluate the possible effects of events or decisions. For example, the chain below shows that rising temperatures cause polar ice to melt. Cause and effect is not the same thing as one thing happening after another. For example, if you wash your car and then it rains, washing the car did not cause it to rain.



EVALUATE

- 3 Decide which of the phrases from the box have a direct cause-and-effect relationship. Then use the phrases to complete the cause-effect chain.

Arctic animals cannot hunt ~~higher temperatures~~
 people in the Arctic have less food
 world sea levels rise



- 4 Work with a partner. How is the cause-effect chain useful? How would it help you if you were giving a presentation?
- 5 Work with a partner. Create a cause-effect chain for Africa, California or low-level lands. Use the information below and your own ideas.

CREATE



AFRICA

Some land areas will be under the sea.
Drought will stop farmers from growing food.
Shortage of clean water will help diseases spread.
By 2050, up to 600 million people won't be able to get drinking water.
Some areas may lose up to 60% of animal species.
Temperatures rise.

CALIFORNIA

People lose homes and jobs.
Heatwaves occur.
Trees die.
Drought occurs.
Less water is on the land.
Wildfires occur.
Temperatures rise.

LOW-LEVEL LANDS (MALDIVES, THE FLORIDA COAST)

Some people lose their home or country.
People have to find new homes or countries to live in.
Low-level land around the world floods.
Temperatures rise.
Land areas go under the water.
Ice on land melts around the world.
Sea levels rise.

GLOSSARY

heatwave (n) a period of days during which the weather is much hotter than usual

shortage (n) a situation when there is not enough of something

wildfire (n) a fire that is burning strongly and out of control in the countryside

PREPARATION FOR SPEAKING

LINKING WORDS TO EXPLAIN CAUSE AND EFFECT

SKILLS

You can use words to show that you are explaining the cause of something. Examples of linking words for causes are *because*, *because of* and *due to*.

More trees disappear because changes in temperature stop the normal growth of the forest.

You can also use linking words to show that what comes next is the effect of something. Examples of effect linking words are *so*, *therefore*, *consequently* and *as a result*.

Another experiment showed that really humid weather changes how we work.

As a result, it is more difficult to work and it's hard to pay attention.

Word order is important to help the listener know if a cause or an effect will follow. The linking word should come right before the cause or effect.



1 4.5 Listen and complete the sentences with the words and phrases you hear.

- 1 It is more difficult to work in high humidity, _____ our concentration drops.
- 2 People have more energy in sunny weather. _____, they can get a lot done if the sun is shining.
- 3 Some countries are really hot and don't get much rain. _____, there isn't enough water for people to drink.

2 Work with a partner. Look at the sentences in Exercise 1. Find the cause and effect in each sentence.

3 Work with a partner. Try to think of a different effect for each cause.

'It is more difficult to work in high humidity' is the cause.

Yes. The effect is 'our concentration drops'. A different effect is 'people take more breaks'.

4 Work in small groups. Choose one of the sentences below. Each student says another sentence about what happens next. Use both cause and effect linking words. Continue until you have no more ideas.

Cause linking words: **because of**, **because** or **due to**

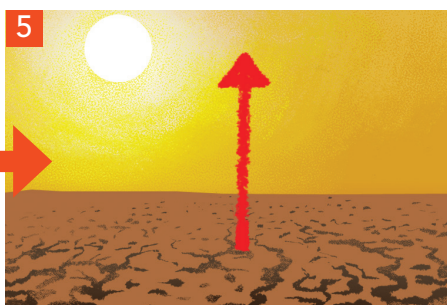
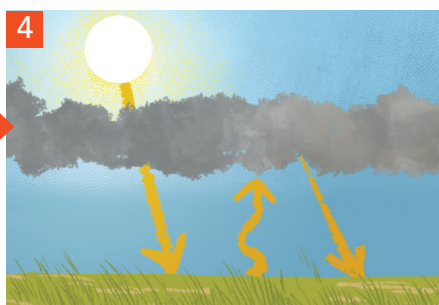
Effect linking words: **so**, **therefore**, **consequently** or **as a result**

- 1 The rainfall was too heavy.
- 2 The forest fire burned many trees.
- 3 Many people stopped using plastic bags.

5 Climate change is one effect of burning fossil fuels. Look at the pictures in the cause-effect chain to understand the process.



homes burn fossil fuels



6 Work with a partner. Use the words from the box below to write phrases for the pictures in Exercise 5. Look again at the cause-effect chain on page 96 and use a dictionary to help you.

burn factory gas(es) heat ice melt smoke trap

7 Work with a partner. Take turns describing the chain. Use linking words from Exercise 4 to explain causes and effects.

First, homes, factories, cars and planes all burn fossil fuels. As a result, gases and smoke rise into the sky ...

SPEAKING TASK

Give a presentation about climate change.

PREPARE

- 1 Work with your partner from Exercise 5 on page 97 in the Critical thinking section. Look back at your cause-effect chain and add any new information you would like to include.
- 2 Write phrases to describe causes and effects associated with climate change. You can use language such as:
because because of due to as a result so therefore
- 3 Refer to the Task checklist below as you prepare your presentation.

TASK CHECKLIST	✓
Use collocations about climate change correctly.	
Pronounce sounds /ɒ/ and /əʊ/ correctly.	
Use linking words like <i>because, because of</i> and <i>due to</i> to show cause and <i>so, therefore, consequently</i> and <i>as a result</i> to show effect.	

PRACTISE

- 4 Decide how you will present. Make sure you both say something. Practise your presentation with your partner.

PRESENT

- 5 Give your presentation about climate change to the rest of the class.
- 6 While listening to other pairs, take notes on questions that you have. Then ask questions at the end of each presentation. Together, talk about how to solve the problems.

Notes: Arctic ice melts → ocean colder or warmer?

Student A: I have a question. After Arctic ice melts, does the ocean get colder or warmer?

Student B: What can people do about climate change?

Student C: People can travel less. Aeroplanes make a lot of carbon dioxide.

OBJECTIVES REVIEW

1 Check your learning objectives for this unit. Write 3, 2 or 1 for each objective.

3 = very well 2 = well 1 = not so well

I can ...

watch and understand a video about the impact of oceans on climate. _____

predict ideas from research. _____

evaluate effects. _____

use gerunds and infinitives. _____

use future forms. _____

use linking words to explain cause and effect. _____

give a presentation about climate change. _____

2 Use the *Unlock* Digital Workbook for more practice with this unit's learning objectives.



WORDLIST

angry (adj)	disappear (v)	prefer (v)
become (v)	discover (v)	prevent (v)
believe (v)	dry (adj)	save (v)
carefully (adv)	energy (n)	unusual (adj)
cause (v)	forest fire (n)	upset (adj)
cool (adj)	global warming (n)	wildlife (n)
cut down (phr v)	humid (adj)	

= high-frequency words in the Cambridge Academic Corpus