# Optimise Workbook



**B2** 

macmillan education

# The world around us

**READING** Multiple matching

→Student's Book, pages 80–81

- 1 a short paid stay to help out with a project \_\_\_\_
- 2 a project to help the environment where people pay what they want for a service
- 3 an organisation that helps educate people about sustainability issues
- **4** a project that provides clean energy

#### 2 Read the article again. For questions 1–10, choose from people A–D. The people may be chosen more than once.

#### Which person

thinks the project is an example to be followed by other nations? regrets not having more knowledge before participating in a project? was impressed by the quality of something they had? discovered the project by accident while visiting for another reason? had not previously thought their free-time activity affected green issues? thinks other people should give the project a go? believes the project is extremely useful to help with two problems? is interested in returning to the project? thought the project looked incredible? thinks that it is possible for individuals to help improve the environment?

#### Find words in the article which match these definitions.

1	food that is safe or good enough to eat	(paragraph A)
2	an effect or an influence	(paragraph A)
3	a point in time during a process or set of events	(paragraph B)
4	supports or encourages something	(paragraph C)
5	get help or an advantage from something	(paragraph C)
6	a place to protect something/someone from something dangerous	(paragraph D)
7	making you feel interest and physically active	(paragraph D)
8	allowed to leave, freed	(paragraph D)



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# HELPING THE WORLD

Read about these exciting projects to help nature and the environment

#### **Amelie Barton**

You might think that malnourishment – not having enough to eat to lead a healthy and active life – only affects people in the developing world, but the shocking truth is that in the UK over three million people suffer from it every year. Yet, every year 40% of our food – food that could be eaten – ends up in landfills, where it produces harmful greenhouse gases. Not only that, it's a huge waste of all the resources like water and energy that went into producing it. That's why I was so excited to eat at 'Skipchen' in Bristol – the meal was stunning! Everything they cook is donated or found in supermarket skips supermarkets throw out tons of food every day because it is past its sell-by date although it is still edible. The volunteer staff collect it and make

delicious meals with whatever they've found, so the menu varies daily. Customers pay what they want or eat for free if they can't afford to pay. More restaurants like this are opening all over the country. In my view, it's a brilliant way of reducing our impact on the environment and feeding people.



## **Miquel Blanco**

went to Ouarzazate in Morocco because I'm a huge fan of *Game of Thrones* and wanted to visit the film location there. When I came across what will be the largest solar power plant in the world there, I was amazed. The first stage of this exciting development is now working and it's awesome to look at - in fact, it's so big, you can see it from space! It's made of 500,000 curved mirrors that reflect and concentrate the sunlight onto a pipe filled with liquid, heating it to over 370 °C. This hot liquid is combined with water to turn wheels in huge machines called turbines to generate energy. When it's completed, the plant aims to produce 38% of the country's energy and provide 1.1 million people with clean electricity, and it will save Morocco hundreds of

thousands of tons of carbon emissions every year. That's an impressive achievement let's hope more countries do the same.



## **Luke Davis**

love sailing, but I'd never considered how it could affect the environment. For me, taking part in some activities for my Duke of Edinburgh Award\* organised by The Green Blue really opened my eyes. The Green Blue, an environmental programme, promotes the sustainable use of coastal waters, lakes and rivers by boating and water sports participants. They also help boating businesses to be 'green'. On my project we learnt lots of practical ways to be more environmentally friendly, such as improving water quality and preventing

non-native species of marine life accidentally being carried to Britain by boats - they can seriously damage the environment and local species. To my mind, everyone who goes out on the water would benefit from looking at The Green Blue's online resources or participating in one of their educational projects.



\*The Duke of Edinburgh Award is the world's leading youth achievement award, giving millions of 14- to 24-year-o the opportunity to be the very best they can be.

#### D

Too many people believe that protecting the environment isn't something one person can do, but my own view is that anyone can make a difference. That's why I volunteered at the Matang Wildlife Centre in Borneo on a fascinating conservation and protection project. The centre is a refuge for orangutans that have been injured, rescued or lost their parents due to deforestation, mining and forest fires. I learnt a lot about providing the animals with stimulating environments to encourage natural behaviour so the animals can be released back into the wild. I wish I'd known more before going, as I'd have been able to help more. I enjoyed looking after the animals and helping to create an organic farm so the centre can grow enough food to feed the animals. It cost £1,280 to go for two weeks, but it was an incredible experience. I'll try and go again when I can!

**Erin Roberts** 



**GRAMMAR 1** Conditionals (2): second, third and mixed conditionals

→ Student's Book, page 82 → Grammar reference, Student's Book, page 156

#### 1 Choose the correct words.

- 1 What **happened** / **would happen** if one day we suddenly had no fresh water on Earth?
- 2 There would be more elephants now if they hadn't been / weren't hunted for their tusks.
- 3 If I go / went to an area of natural beauty. I wouldn't leave any rubbish behind.
- 4 Had / Has the government considered the future, it would have introduced more laws to combat global warming.

1 We didn't protect the animals and they died out.

- **5** They wouldn't be looking for the tiger, if the zookeeper locked / had locked the cage!
- 6 If we didn't burn / hadn't burnt fossil fuels, the world would be a very different place.
- 7 If Max hadn't become a vet, he would be / have **been** a marine scientist instead.
- 8 We could **film / have filmed** the lions if we had had a video camera with us.

2	<b>Read situations</b>	1-6 and	complete the	conditional	sentences.
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	Had	_ the animals, they	·	
2 You're not in Africa so you don't know what's happening.				
	Ifi	n Africa, you	happening	
3	They destroyed the forest and now the anima	als have nowhere to live.		
	If theysomewhere to live now.	the forest, the animals		
4	We didn't realise solar power was cheaper so	we didn't get solar panels.		
	If wesolar panels.	solar power was cheaper, we		
5	I went on the safari and I saw giraffes in the	wild.		
	Had I giraffes in the wild.	on the safari, I		
6	I'm not at the environment lecture because r	o-one told me about it.		
	Ia	t the environment lecture now if someone _		
	me about it.			

Rewrite the underlined sentences as conditionals.

## THE EXXON VALDEZ OIL SPILL

On March 24, 1989, the oil tanker Exxon Valdez had just left the Valdez Marine Terminal in Alaska full of crude oil. At midnight, (1) the ship hit a reef, which tore a hole in it. Investigators later discovered that (2) the accident happened because the crew were tired. The result was that over 40 million litres of oil entered the water, which is roughly the same amount as 17 Olympic-sized swimming pools. A bad situation was then made worse when (3) a storm hit the area and spread the oil widely. Eventually, (4) the oil covered the coastline and thousands of animals died.

Exxon ended up paying around two billion dollars to clean up the oil spill. (5) Not all of the oil has gone and many Alaskan beaches are still polluted with oil just inches below the surface. Unfortunately, (6) we can't remove it so that the beaches are clean again.

1	If
2	Had
3	If
4	Had
5	If
6	If

VOCABULARY | Topic vocabulary | Phrasal verbs | Word patterns

→ Student's Book, page 83 → Vocabulary reference, Student's Book, page 166

				, 1 3	<b>,</b>
1	The words in bold are in the wrong place. Complet correct line.	e	the	phrases l	by writing the words on the
1	global <b>development</b>	5	carb	on <b>layer</b> _	
2	greenhouse <b>change</b>	6	clim	ate <b>effect</b>	
3	renewable <b>warming</b>	7	ozor	ne <b>footpri</b> i	nt
4	toxic energy	8	sust	ainable <b>w</b> a	aste
2	Match to make sentences. Use the words in italics	to	hel	p you.	
1	Many plant and animal species are in danger of dying	_		a)	away with fossil fuels.
2	Naturally, oil-producing countries don't want us to do	_		b)	for immediate action.
3	I don't think our leaders understand that time is running		_	c)	out for us to save the planet.
4	People are far too lazy to recycle so they just <i>throw</i>			d)	down forests to make way for roads.
5	It's a tragedy for the planet when companies <i>chop</i>			e)	away very useful materials.
6	Because they are huge, there's no way we can <i>clean</i>			f)	<i>up</i> the oceans.
7	If sea levels rise too much, they will eventually wipe			g)	out entire cities.
8	Our seas are being polluted and the situation <i>calls</i>			h)	out and need our protection.
3	Complete the dialogue with the words in the box.				
	by (× 2)   from   of   to (× 2)	В	Ben:	_	e'll explain how global temperatures ted (4) human activities
	Jade: For our presentation on environmental problems, I was thinking we could talk about water and how using				we'll discuss the connection rising temperatures and the melting caps.
	it irresponsibly is a waste (1)	Ja	ade:	Yes, and	how that is an example of habitat
	natural resources, but the rest of the class			loss. To fi	nish, we could discuss ways of

might find it boring. **Ben:** Yes, probably. What if we focus on an animal instead? So many are threatened climate change. We could talk about the polar bear.

**Tade:** OK, but first we'll need to explain what causes climate change and why it's harmful (**3**) \_\_\_\_\_ animals.

loss. To finish, we could discuss ways of protecting animals (5) habitat loss. **Ben:** Do you mean other animals, in addition to the polar bear? If we did that, we would have to talk about the specific dangers they're exposed **(6)** \_\_\_\_\_\_, and then the presentation would be too long. **Jade:** You're right. Let's just stick to the polar bears.

**GRAMMAR 2** Unreal past and past wishes

→ Student's Book, page 85 → Grammar reference, Student's Book, page 157

#### Choose the correct words.

- 1 It's high time the government invested / had **invested** more money in green technology.
- 2 Suppose there were no more fossil fuels. What would we **do / have done** without them?
- **3** If we can afford it, I'd rather we **had bought** / **bought** an electric car.
- 4 If only everyone shares / shared our concerns for the environment.
- 5 I wish people wouldn't leave / have left their rubbish on the beach.
- 6 I wish we can / could go on an African safari and see elephants and lions.

2	Complete the sentences with the correct
	form of the verbs in brackets.

L	(not waste)
2	If only the ship a reef. (not strike)
3	I'd rather you all the lights on. (not leave)
Ļ	You know, it's high time you an interest in the environment. (take)
•	Do you wish we recycling cans a lot sooner? (start)
	I wish I to the beach clean-up, but I'm studying (go)

**LISTENING** Multiple matching

→ Student's Book, page 84

1	Match the underlined	phrases in the sentences t	their meanings.
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1	I can't believe they knocked down the old library to <u>make way for</u>
	a new car park

- 2 It just goes to show how little the council understands about conservation.
- 3 If you think the environment isn't in danger, you have your head in the sand.
- 4 After the heavy storm, I went to the beach and there was not a soul around.
- **5** Washing empty cartons before putting them in the recycling bin is a pain in the neck.
- a) refuse to think about unpleasant facts
- **b)** no-one present
- c) provide a space for
- **d)** very annoying
- e) proves that something is true

#### 2 Look at Exercise 3 and read the sentences. Match them to sentences 1–8.

- 1 It affects the whole world.
- **2** Every living thing has its value.
- **3** You wouldn't believe how bad it was. \_\_\_\_
- 4 Households throw away too much rubbish.
- 5 It's no use pretending it's not happening.
- **6** Everyone needs to get involved.
- 7 They're always complaining about the rain. \_\_\_\_
- **8** Joining an online campaign doesn't really do

#### 3 (1)11 You will hear five people on a radio programme talking about their concerns for the environment. Choose from the list (A-H) what each speaker says about it. There are three extra letters you do not need.

- **A** It's difficult to comprehend the scale of a disaster.
- **B** A combined effort is needed to save the planet.
- **C** Online petitions tend to have little success.
- **D** Environmental pollution has a truly global impact.
- **E** People worry about the weather more than they should.
- **F** It's clear that certain problems cannot be denied anymore.
- **G** It's important that we maintain the variety of life on earth.
- **H** We are producing more and more waste in our homes.

#### Speaker 1 Speaker 2

- Speaker 3
- Speaker 4 Speaker 5

## **SPEAKING**

→ Student's Book, page 86

#### Match the words and phrases to do with the environment that are connected.

- 1 carbon dioxide \_\_\_\_ 2 endangered species \_\_\_\_\_
  - **b** UV rays
- 4 global warming
- **5** harmful products \_\_\_\_ e renewable energy
- **6** land and water \_\_\_\_
- 7 ozone layer \_\_\_\_ 8 solar power

**3** forests

c die out

a climate change

Discussion

- d toxic waste
- **f** carbon footprint
- g natural resources
- **h** natural environment

#### 2 Complete the sentences with the phrases in the box.

and there's another thing | apart from that as well as | having said that | in addition more importantly | the good thing about this is why

- **1** We should protect forests for a number of reasons. Firstly, they're beautiful places, but much , these natural environments
- produce oxygen and are home to many animals. **2** The destruction of the ozone layer in the atmosphere
- is very dangerous for our health because exposure to UV light can lead to skin cancer.

	too – UV light is harmfu
for our eyes.	_

	too – U v	light is	narmi
		_	
S.			

solar power is that it is a renewable form of energy, so it will never run out. Another advantage is it's clean and doesn't pollute the atmosphere.

- **4** People are very aware of environmental problems such as carbon dioxide in the atmosphere. , however, most people haven't done anything to reduce their own carbon footprint.
- **5** There are too many endangered species. I recently found out that tigers elephants could die out completely in our lifetime unless we do something to save them.
- **6** Climate change is a huge threat to our planet. governments around the world must work together to fight climate change and its terrible consequences.
- 7 Toxic waste is polluting the oceans and killing sea life. , this harmful product is poisoning the land that we need to grow food on.
- **8** Water is a valuable natural resource, so I try not to waste it when, for example, I'm doing the though, I don't know how else to be environmentally friendly at home.

#### **USE OF ENGLISH** Word formation | Open cloze

→ Student's Book, page 87

#### 1 Look at the gaps in the sentences and decide if they need a verb (V), an adjective (ADJ), an adverb (ADV) or a noun (N).

	Nothing looked the same. In fact, the place was
2	While gold could be found, the area was
	active. But then the mines closed down and people

1 I returned to the island after the earthquake

- left the town. **3** Luckily for the elephant, an gamekeeper spotted the poachers and contacted
- 4 The architect came up with a wonderful \_ design for the new animal enclosure at the zoo.

the police who caught them. \_\_\_\_

- **5** Surely something as important as the of the wetlands should be supported by all the political parties.
- **6** As the wild animal struggled to free itself, the hunter's net \_\_\_\_\_\_ even more around it.
- 7 The catastrophic oil spill near the coast of Florida received extensive on TV and in the newspapers. \_\_\_\_
- 8 We would like to install solar panels on our roof, but the problem is \_\_\_\_\_ - they're just too expensive. \_\_\_\_

## 2 Complete the sentences in Exercise 1 with the words in the box in the correct form.

afford | conserve | cover | future | industry | observe | recognise | tight

## Write a form of the word in capitals in each gap to complete the text.



	**
The variety of life on Earth is known as biodiversity. All species of plants, animals and micro-organisms, their (1) make-up and different ecosystems, such as deserts, rainforests and coral reefs, are all part of our (2)diverse Earth.	GENE BIOLOGY
Biodiversity is vital for many reasons. A larger number of plant species means a bigger variety of crops so that hunger does not (3) us.	r <b>THREAT</b>
In addition, greater diversity creates natural (4) for all forms of life.	SUSTAIN
Diverse ecosystems can make a quicker recovery from (5) events such as floods or fires.	PREDICT
They are also responsible for protecting our water resources and the <b>(6)</b> nutrients in the soil.	of <b>STORE</b>
So, although we are the (7) species on the planet, we still need to be concerned about the (8) of diversity.	DOMINATE PRESERVE

→ Student's Book, pages 88–89 → Writing reference, Student's Book, page 169

#### 1 Read the exam advice and choose the correct words.

- 1 When you write an article, you **should** / **shouldn't** try to make a connection with the reader.
- 2 Give possible / specific reasons and examples to make your article more interesting for the reader.
- 3 It is / isn't a good idea to refer to your own experience to draw the reader in.

#### **2** Read the article. Are the statements T (True) or F (False)?

- 1 The writer does not try to make a personal connection with the reader.  $\mathbf{T}$  /  $\mathbf{F}$
- **2** The first main point is that school gardens can help teach life skills. T / F
- 3 The second main point is that school gardens are good for the environment.  $\mathbf{T} / \mathbf{F}$

#### **3** Rewrite the sentences using the words given. Make any necessary changes.

1 Many students don't get enough exercise. Driving to school is not a good idea.

SO

**2** Students could use other forms of transport to get exercise. Cycling, walking or using a scooter are **SUCH AS** other forms of transport.

### Learning from school gardens

If you're anything like me, you believe that growing your own food is an important way to reduce your carbon footprint. Perhaps you also think that it is something everyone should learn at school. In my experience, school gardens have many benefits.

The first thing we should consider is that a school garden supports the development of life skills as students have to work together to make and maintain it. These include problem-solving, taking responsibility, working well in groups, good communication and respecting other people's needs.

Another great way to use school gardens is to help students learn about the world they live in. For example, students can learn about sustainable living and how they can help look after the environment. In addition, growing and eating their own food is a good opportunity to make students aware of the importance of food choices, personal health and well-being.

So, I would encourage all secondary schools to start or continue using school gardens. To summarise, students learn a tremendous amount from working in them and they are good for the environment.

3 Car shares are a good idea. They reduce the number of cars on the road.

DUE TO THE FACT THAT

**4** Car shares also reduce pollution. They are good for the environment.

**BECAUSE** 

Read the information in the box and make notes. Use the ideas in Exercise 3 or your own ideas and include useful phrases. Then write your article.

You see this advert in an English-speaking magazine for young people.

#### **Articles wanted**

Too many students travel to school by car - and too many cars on the road isn't good for the environment. We want to change that! Send us your articles explaining two ways students could travel to school instead and what the benefits are. We will publish the best articles!

Part	Purpose	My ideas (including useful phrases)
Paragraph 1	make a connection with the reader	
Paragraph 2	make your first point – give reasons and examples	
Paragraph 3	make your second point – give reasons and examples	
Paragraph 4	summarise your article to encourage action from your reader	

PROGRESS CHECK

words and phrases you do not need.

The world around us 8

Complete the texts with the words and phrases in the boxes. For each text there are some extr
Complete the toyte with the words and phraces in the howes. For each toyt there are some owt
i Complete the texts with the words and phrases in the boxes, for each text there are some extr

1	call for   climate change   die out   do away with   exposed to   global warming greenhouse effect   ozone layer   protected from   threatened by   wipe out
	Aerosol sprays have created a hole in the (1) above our atmosphere. When it is intact, we are (2) dangerous solar rays. But when we are (3) them, they can cause skin cancer. Governments passed laws to (4) the dangerous chemicals in the sprays. Many people thought that would be the end of the problem, but it wasn't. Industrial processes are largely responsible for the (5) phenomenon that has caused temperatures to rise. (6) is a very serious problem because ecosystems
	often can't respond to extreme weather patterns quickly enough. When they don't, species can
	(7) Once that happens, they can never be replaced.
2	affected by   carbon footprint   chopped down   cleaned up   harmful to   renewable energy run out   sustainable development   throw away   toxic waste   waste of
	Everyone has a responsibility to reduce their individual (8) You can choose to have (9) for your needs at home, for example, solar panels that convert the sun's rays into
	electricity. This is clean energy so it isn't (10) the atmosphere. Secondly, it will never
	(11) because the sun provides an endless supply of light. You can also be careful
	with water. Don't take long showers as they're a(n) (12) this natural resource. Don't
	(13) paper products – they can be recycled. This is good because it means fewer trees are (14) to produce paper. These are just a few ideas and you can find out
	more online.
2	Complete the sentences with the correct form of the verbs in brackets.
1	If you the newspapers, we could have sent them for recycling. (not throw away)
2	I wish you the car when the shops are only a five-minute walk away. ( <b>not take</b> )
3	Don't you think it's time you recycling glass, paper and aluminium? (start)
4	What if electric cars were affordable enough for every family to own one? (happen)
5	If he more carefully before lighting the fire, he wouldn't be in trouble now. (think)
6	I'd rather we more trees instead of building a swimming pool. (plant)
7	You would learn a lot about sustainability if you that video I sent you. (watch)
8	If only people more willing to change their lifestyle to help the environment. (be)
9	I wish I at that beach, but the sea there is too dirty and it's not safe. (swim)
10	If only we alternative energy sources decades ago. (develop)
	▼
Cu	mulative progress 1 2 3 4 5 6 7 8 9 10 11 12

Write one word in each gap to complete the text.

# EARTH WITHOUT HUMANS

and the second second second second	If <b>(1)</b> was a sudd	len, worldwide catastrophe	e and humans were wiped	
	(2), what would happen to our planet? According to the TV series			
	Life After People, some very terrifying things. In just a few hours there wouldn't			
	be any lights on because pow	er plants would ( <b>3</b> )	out of fuel. A few	
一生是一	days later underground train systems would flood because the pumps keeping			
	water out of the tunnels woul	d stop (4) Al	oout a month later, things	
would get much (5)	That's when ( <b>6</b> )	waste from nuclear po	wer stations would be	
released into the atmosphere and the soil. It would be (7) poisonous that any remaining animals				
would die. Eventually, plants would cover the world and it would be like humans and animals had never				
(8) at all.				