

# Unit 4 Innovation



An artist's impression of the Shweeb urban transport system of the future

## FEATURES

### 46 The mother of invention

What drives new discoveries

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The art of origami engineering

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The story of a successful social entrepreneur

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A video about a social enterprise

- 1 Work in pairs. Look at the picture and caption. Then complete the summary of the Schweeb urban transportation system using one word in each space.

above	amusement	fun	Google
pedal	rails	smoothly	

The Schweeb transportation system is a combination of a monorail and a bike. The original idea for putting a bicycle on <sup>1</sup> ..... so that it could run more <sup>2</sup> ..... appeared in the 1800s. The idea was updated by a company called Shweeb for an <sup>3</sup> ..... park. <sup>4</sup> ..... has now invested money to develop it into an urban transportation system. Drivers sit in pods hanging from a monorail, and <sup>5</sup> ..... while almost lying down. They travel <sup>6</sup> ..... the traffic. It is a solution with many advantages: it is green, convenient, cheap, and <sup>7</sup> .....

- 2 Match the halves of the collocations. What do they mean?

1 have	a a need
2 make	b a breakthrough
3 spot	c (an idea) one stage further
4 take	d a bright idea
5 fill	e the wheel
6 reinvent	f a trend

- 3 Work in groups. Each describe an innovation or invention from the last 100 years. Which innovation had the most impact?


# 4a The mother of invention

## Listening


- 1 Work in pairs. Look at the saying below. Discuss what it means. Is it always true?

“Necessity is the mother of invention.”

- 2 Look at the photo and the caption. What adjectives would you use to describe this invention? What other inventions have you seen that fit that description?

- 3  13 Listen to an interview and choose the statement that best summarizes the speaker's view.

- a Most inventions are an answer to an urgent need.
- b Most inventions are things that we didn't imagine we needed until we became used to them.
- c Most inventions come from companies who want to make a commercial profit.

- 4  13 Choose the correct option to complete the sentences.

- 1 People in their teens or twenties probably can't imagine *doing research / following the news* without the Internet.
- 2 Martha Kay is *a business woman / an academic*.
- 3 A British parliamentary committee said the telephone was *too expensive / of little use*.
- 4 The presenter uses the telephone as an example of a case where a need *was filled / didn't exist before*.
- 5 Most innovations make our lives *richer / easier*.
- 6 The presenter suggests that women in the 1960s liked *going out to shop / staying in the house*.
- 7 The cell phone and the computer are examples of innovations that were *very expensive at first / seen as unnecessary*.
- 8 *Literary Digest* predicted that the automobile would *remain a luxury / go out of fashion*.

- 5 What fact or point of view did you find most interesting? Why? Discuss with your partner.



Charles Steinlauf's invention: a four-position bicycle that also contains a built-in sewing machine

## Vocabulary phrasal verb come

- 6 Look at the sentences (1–6), which use phrasal verbs with *come*. Choose the correct meaning (a–c).

- 1 But how do such inventions **come about**?  
a succeed      b happen      c work
- 2 Entrepreneurs often **come up with** ideas that will make our lives a little more convenient...  
a think of      b ignore      c search for
- 3 What it **comes down to** is wants rather than needs.  
a relies on      b emphasizes      c is a question of
- 4 A researcher **came across** the material for Post-it notes while looking for a new kind of glue.  
a thought of      b found by chance      c stole
- 5 Early experiments with flying didn't really **come off**.  
a succeed      b get noticed      c fail
- 6 Perrelet was so respected that when other watchmakers **came up against** a problem, they would consult him.  
a solved      b encountered      c analyzed

- 7 Work in pairs. Write three sentences using the phrasal verbs in Exercise 6. Then read your sentences to your partner omitting the verb and see if they can guess the missing verb.

## Language focus past modals

8 Match each sentence (1–4) with the function of the modal verb (a–d).

- 1 It's difficult to imagine what life **must have been** like before the invention of certain things.
  - 2 In 1878, a British parliamentary committee **had to comment** on the usefulness of the telephone.
  - 3 Maybe they **should have been** more open-minded.
  - 4 But in 1878, people **didn't need to have** phones.
- a to talk about obligation  
 b to talk about necessity / lack of necessity  
 c to speculate about the past  
 d to say what was advisable/inadvisable

### PAST MODALS

#### Obligation

*They had to patent the product before trying to sell it.*

#### Necessity

*They needed to have a way to communicate more quickly.*

*They didn't need to / I have to make the instructions so complicated.*

#### Speculation

*He must have realized it was an important discovery.*

*He may/might/could have wanted to keep it a secret.*

*It can't/couldn't have been easy to convince people of the idea.*

#### Advisability

*They should have included more safety features.*


*They ought to have tested it first.*

For more information and practice, see page 160.


9 Look at the language focus box and complete the sentences using past modals. Sometimes more than one answer is possible.

- 1 Before cars were invented, it ..... (not / be) easy to take your family for a weekend outing.
- 2 In the 1940s, people ..... (not / own) a television, because they could get news and shows on their radios.
- 3 Before satellite navigation in cars, people ..... (depend) on a passenger for directions.
- 4 Some people ..... (drive) with the steering wheel in one hand and a map in the other.
- 5 I ..... (buy) this microwave oven. I never use it.
- 6 Before we all had digital cameras, it ..... (be) expensive to keep buying film for your camera.
- 7 The electric spaghetti fork is a useless invention. The inventor really ..... (bother).
- 8 The inventor of "cat's eyes"—reflectors in the road—in the road ..... (be given) a medal, they have saved so many lives.
- 9 When James Watt invented the steam engine, he ..... (realize) that the railway locomotive would follow.
- 10 Who knows what inventions people like Leonardo da Vinci ..... (come) up with using modern technology!

## 10 Pronunciation weak forms

a  14 Underline the weak forms (not stressed) in these phrases using past modals. Then listen and check.

- 1 You should have told me.
- 2 Did you have to wait?
- 3 He must have forgotten.
- 4 You shouldn't have worried.
- 5 She may have left already.
- 6 I didn't need to be there.

b  15 Work in pairs. Listen to the pronunciation and underline the stressed words. How is the meaning different in each one?

- 1 a You might have told me.  
b You might have told me.
- 2 a You shouldn't have waited.  
b Flowers? Oh, you shouldn't have!

11 Work in groups. Use past modals to speculate on the answers to these questions.

How did people:

- wake up on time before there were alarm clocks?
- keep money safe before banks existed?
- amuse themselves in the evenings without electricity?
- deal with aches and pains without medicine?
- contact each other in an emergency without telephones?
- light candles before matches were invented?
- find out if bones were broken before x-rays existed?

## Speaking

12 Work in pairs. Think of two commonly used inventions: one that you couldn't live without and one that you find unnecessary. Discuss the inventions with your partner and the reasons why you chose them.

# 4b Fold everything

## Reading

- 1 Look at the picture of a horse made using origami, the traditional Japanese art of paper folding. Answer the questions.
  - 1 Do you do any kind of hand crafts? What are they?
  - 2 Have you ever tried origami? What did you make?
- 2 Work in pairs. What are the basic principles of origami? Are these sentences true (T) or false (F)? Read the first paragraph of the article and check your answers.
  - 1 You need more than one piece of paper.
  - 2 The paper should be square.
  - 3 You shouldn't use scissors.
  - 4 Sometimes you need to use glue.
- 3 Read the rest of the article and find the following.
  - 1 two things used in space exploration that are folded using origami techniques
  - 2 two origami-inspired devices that help to save lives
  - 3 a use of origami that seems like a fantasy
  - 4 a use of origami that can make machines more powerful

# Fold EVERYTHING

At one time or another in your life you have probably done origami, even if it was just making a paper airplane or something more sophisticated like a paper crane. The chances are that as you did it, you reflected on how ingenious this traditional Japanese art is. Animals, boxes, flowers, boats: it all can be created from a single square or rectangular sheet of paper simply by folding it. No cutting, no pasting.

But did you ever stop to think how the same techniques might be applied to engineering? Equipment that could be of real practical use? Origami meets the demand for things that need to be small when transported and large when they arrive, like the everyday umbrella. In fact, origami-inspired creations have already flown in space; in 1995, Japanese engineers launched a satellite with solar panels that folded like a map. And very soon origami engineering may well be seen in a host of other applications.

"It's now mathematically proven that you can pretty much fold anything," says physicist Robert J. Lang, who quit his engineering job eight years ago to fold things full time. Lang, an origami enthusiast since age six, advised a well-known car manufacturer on the best way to fold an airbag into a dashboard. He is currently working on a space telescope lens that, if all goes according to plan, should be able to unfold to the size of a football field.

At the other end of the scale, researchers are also working on tiny folding devices that could lead to breakthroughs in medicine and computing. These include origami stents that are inserted into arteries and open up to keep the blood flowing.



There's no doubt that saving space has become important in our world, as the search for ever smaller electronic components shows. Computers of the future may contain tiny, folded motors or capacitors for faster processing and better memory.

Applications for origami engineering go further than many of us might imagine. "Some day," says MIT's\* Erik Demaine, "we'll build reconfigurable robots that can fold on their own from one thing into another," like Transformers. Too much like science fiction to be true? Maybe—though you certainly wouldn't want to bet against it.

\* MIT = Massachusetts Institute of Technology

**crane** (n) /kreɪn/ a large bird with long legs  
**ingenious** (adj) /ɪn'dʒɪnjəs/ very clever  
**stent** (n) /stent/ a thin tube used in medicine

- 4 Work in pairs. Explain the following terms and expressions from the article.
- 1 How is a paper crane “more sophisticated” than an airplane? (para 1)
  - 2 What “plan” is referred to in the phrase “if all goes according to plan”? (para 3)
  - 3 What scale is referred to in the phrase “At the other end of the scale”? (para 4)
  - 4 What does “it” mean in the phrase “you wouldn’t want to bet against it”? (para 6)

► **WORDBUILDING** past participles as adjectives

We often use past participles as adjectives.  
*a well-known car manufacturer, tiny folded motors*  
 In a few cases, the adjective form is different from the past participle.  
*It has been proved. A proven method.*

## Idioms partitives

- 5 Compare these two expressions. Which expression means “some” or “a piece of” and which means “a small piece”?
- 1 a **sheet** of paper    2 a **scrap** of paper
- 6 Which of the partitive expressions in bold mean “some” and which “a small piece or amount”?
- 1 I’m really thirsty. I haven’t had a **drop** of water all day.
  - 2 It was a **stroke** of luck getting those tickets. They were the last two available.
  - 3 There’s not a **shred** of evidence to suggest that there is life on other planets.
  - 4 The latest figures offer a **glimmer** of hope that the recession is coming to an end.
  - 5 She had a **flash** of inspiration. Why not use the principles of origami to make foldable furniture?
  - 6 There was a **hint** of disappointment in his voice, but he took the news very well.

## Language focus probability

- 7 Work in pairs. How many phrases can you find in the article that say something is:
- 1 possible                      3 more or less
  - 2 probable                      certain

Example:

- 1 ...you have *probably* done origami...  
 (paragraph 1)

Compare your answers.

- 8 Look at the sentences and say whether they use a verb, an adverb, an adjective, or a noun phrase to express probability. Is there any difference in meaning or register between them?

- 1 He probably won’t come with us.
- 2 It’s unlikely that he’ll come with us.
- 3 He may not come with us.
- 4 The chances are that he won’t come with us.

► **PROBABILITY**

**Modal verbs**

*may/could/might; should*  
*Origami may be the answer.*  
*The telescope should help us to explore the universe.*

**Adverbs**

*perhaps; maybe; probably; almost certainly*  
*Perhaps one day they will invent foldable robots.*

**The adjective (un)likely**

*It’s (un)likely that this technology will be used in computers.*  
*This technology is (un)likely to be used in computers.*

**Noun phrases**

*The likelihood is; The chances are; There is a good chance*  
*The chances are that it will be used in robot design.*

Note: *should* is not used for the probability of something bad happening.

For more information and practice, see page 161.

- 9 Rewrite the paragraphs using the words given.

The grocery bag of the future <sup>1</sup>*will perhaps be made of steel* (could). Invented by Dr. Zhong You from Oxford University, it <sup>2</sup>*will probably inspire other packaging solutions too* (likely to). Flat-pack boxes used by the industry have to be folded at the bottom. But with Dr. You’s origami design <sup>3</sup>*you can make boxes with a fixed base* (possible). <sup>4</sup>*This is likely to save industry a lot of time and money* (should).

Dr. You thinks that if this process works for steel, <sup>5</sup>*it will probably work for a range of other materials* (the chances). Origami engineers hope that <sup>6</sup>*one day perhaps it will be possible to build houses from flat-pack materials* (might). In ten years’ time, <sup>7</sup>*it’s very possible that we will be folding away our kitchen counters or table* (may well). <sup>8</sup>*The likelihood is that we won’t have foldable TVs or cars* (unlikely), but who knows?

## Speaking

- 10 Work in pairs. Think of three more ideas for how origami methods could be used to help save space in the modern home. Then present your ideas to another pair.

# 4c The shoe giver

## Reading

- 1 Read the definition of *social entrepreneurship* and say which of the organizations (a–c) fit the definition and why. How would you describe the others?

Social entrepreneurship is the art of creating a socially responsible business that aims to generate profit while solving social and environmental problems.

- a An organization which collects food near its sell-by date from supermarkets and distributes it free to homeless people.
- b An organization which sells gardening services to companies. The people it employs are all long-term unemployed people who get training, work experience, and a small salary.
- c An organization that collects old clothes that people are throwing out and recycles the material to make new clothes which it sells.
- 2 Read the article on page 51. In what ways does TOMS fit the definition of social entrepreneurship?
- 3 Read the article again. Are the sentences true (T) or false (F)?
- 1 Mycoskie's early career was characterized by establishing and then selling companies.
  - 2 Mycoskie immediately saw the children's shoe problem as another business challenge.
  - 3 The main advantage of the one-for-one scheme is that each child is given one pair of shoes.
  - 4 Podoconiosis is a disease that affects children in developed countries as much as in developing countries.
  - 5 The author suggests that, in business, energy and enthusiasm are as important as knowledge.
  - 6 Any business could profit from making a similar one-for-one offer to its customers.

## Critical thinking finding counter arguments

- 4 The author presents a positive picture of TOMS, but there are suggestions of arguments against the initiative. Find possible criticisms in the text in these areas.
- a the price and quality of the product
  - b buying shoes as a way of giving to charity
  - c the business model

- 5 Work in pairs. Compare your answers from Exercise 4. Then write some questions to challenge Mycoskie on those points.

## Word focus give

- 6 Work in pairs. Find these expressions with *give* in the article and discuss what they mean.

give it a break    give it some thought

- 7 Complete the expressions with *give* using these words. Discuss what each expression means.

best    break    shot    go-ahead    thought    time

- 1 There's no need to tell me your answer now. **Give it some** ..... and then let me know.
  - 2 Don't worry if you don't win, just **give it your** .....
  - 3 I wasn't actually expecting him to like our business proposal, but he **gave us the** .....
  - 4 **Give him a** ..... He's new and can't be expected to know everything.
  - 5 It's hard when you're new, but **give it some** ..... and you'll feel more at home.
  - 6 The only way to find out if you can fix it yourself is to **give it a** .....
- 8 Match these expressions with a similar expression from Exercise 7.

a chance    consideration    the green light  
a try    a while    your all

## Speaking

- 9 Work in pairs. You are going to act out an interview between a reporter for an ecology magazine and Blake Mycoskie. Take turns playing the roles of interviewer (the reporter) and interviewee (Blake Mycoskie). Think about the questions that were raised about the shoe-giving initiative in Exercise 5.

Student A: You are the reporter. Focus on the possible problems with the one-for-one shoe-giving business and ask questions that challenge Mycoskie to defend it.

Student B: You are Blake Mycoskie. Defend your business and its philosophy.

Blake Mycoskie is a self-confessed serial entrepreneur. He set up his first business, EZ Laundry, a door-to-door laundry service for students, when he was still in college. Having grown the company to service seven colleges in the southwestern US, he sold his share to his business partner and moved on to a media advertising business in Nashville. This he sold to Clear Channel, one of the industry's leading companies.

Three more businesses later, still only 29 years old, and feeling somewhat burned out, Mycoskie decided to give it a break for a while and head down to Argentina for some rest and relaxation. But resting wasn't really in his nature, and it wasn't long before Mycoskie had hit upon an idea that would come to define him as a social entrepreneur.

On a visit to a village outside Buenos Aires, he was shocked to see that many of the children didn't have any shoes or, if they did, the shoes were worn out and didn't fit. Since shoes, particularly the local farmers' canvas shoe, the alpargata, can be bought relatively cheaply in Argentina, Mycoskie's first instinct was to set up a charity to donate shoes to the children. But after giving it some thought, he realized that this was not a model that would work. One pair of shoes per child would not make that much difference because they wear out. And if he asked people to donate repeatedly, sympathy for the cause might also wear out pretty quickly.

Instead he came up with the idea of TOMS One for One Shoes. He would take the alpargata to America, manufacture it and sell it as a high-end fashion item at around \$50 a pair. (A pair of similar shoes with a well-known brand name costs around \$30.) For each pair he sold, he would donate another to shoeless children, guaranteeing a continual supply. Also, rather than running a charity, something he had no real experience in, he could run the project as a business.

Several years later, the business is thriving, supplying shoes not only to children in Argentina but also other

parts of the world where foot diseases are a problem. In southern Ethiopia, a high concentration of silicone in the soil can cause podoconiosis, a disease which severely swells the feet. The shocking appearance of the disease means sufferers are often ostracized. There are 300,000 affected people in Ethiopia simply because they have no shoes. The same silicone-rich soil exists in parts of France and Hawaii, but people have shoes and are not affected.

Mycoskie had no manufacturing experience and understood that he had to learn fast. For the first eighteen months, by his own admission, he made "a poor job of making shoes," but since then he has brought in help from experienced industry people. The vital element that Mycoskie added was his passion—a passion he wants

others to share. One criticism of initiatives like TOMS is that the money spent by customers might otherwise have gone directly to charities. So Mycoskie encourages his customers to become more involved with TOMS by volunteering to hand-deliver the shoes to children in need. It's an intimate giving experience and he

hopes it might inspire some of the volunteers to develop similar projects.

But can the one-for-one model be repeated with other products? Mycoskie is doubtful. TOMS is a for-profit business, but does not yet make a profit. He says one-for-one is not an offer that you can just add to your existing business model; you have to build it in from the beginning.

Some would also argue that the charity aspect is just a marketing tool, but does it matter? TOMS is making a real difference to poor children all over the world and Mycoskie is enjoying being an entrepreneur more than ever.

## The shoe giver

**ostracize** (v) /'astrə,səɪz/ to refuse to allow someone to take part in a social group  
**self-confessed** (adj) /'self kən'fest/ the person admits this themselves  
**swell** (v) /swel/ to grow larger



Changing a life begins with a single step

# 4d An elevator pitch

## Real life making a short pitch

- 1 Work in pairs. Look at the advice about public speaking. Discuss with your partner what it means.

Be sincere, be brief, be seated.


Franklin D. Roosevelt, former US president

- 2 Do you know what an “elevator pitch” is? Read the text quickly. Then cover the page and summarize the key points.

An elevator pitch is like a TV commercial. You’re trying to sell an idea to someone whose attention you have for a very short time: 30 seconds to a minute before they get out of the elevator. Just as with a TV commercial, the idea is to get the person in front of you interested in coming back and taking another look. So the key things to convey are:

- the problem that your idea solves
- the uniqueness or freshness of your idea

That’s it. You’re not selling yourself, talking about your own achievements and experience, and you’re not criticizing the competition.

- 3 You are going to listen to a business proposal based on the idea of doing volunteer work in the local community. Before you do, discuss these questions with your partner.
  - 1 What motivates people to do volunteer work?
  - 2 What kind of things might people volunteer to do?
- 4  16 Listen to the proposal and answer the questions.
  - 1 What is the unique idea that the speaker describes?
  - 2 What problem(s) does it solve?
  - 3 What phrases does the speaker repeat often?




## 5 Speaking skill using rhetorical questions

-  16 The speaker used rhetorical questions. Listen again and check (✓) the phrases you hear.

### ▶ USING RHETORICAL QUESTIONS

What is it?	“So what?” I hear you say.
How does it work?	Isn't it going to be expensive?
Why is it necessary?	So, how do we achieve this?
What does it do exactly?	What's our ambition for...?

## 6 Pronunciation long and short vowels

- a  17 Work in pairs. Listen to the questions in the box and say if the stressed syllables in these words contain a long or short vowel sound. Then practice saying them.

is work necessary do what expensive  
achieve ambition

- b Underline the word in each pair that contains a long vowel sound. Then practice saying the words.

1 look      loop                      3 training    treasure  
2 scheme    skim                              4 bottle      both

- 7 Work in groups of three. You are each going to present your own elevator pitch for a new social enterprise.

Student A: Turn to page 153 and read the notes.

Student B: Turn to page 154 and read the notes.

Student C: Turn to page 155 and read the notes.

- Prepare your pitch carefully. Use the guidelines in Exercise 2 and the language in the box to help with the structure.
- Speak for no more than a minute.
- Write down the main message of each pitch and at the end compare your answers.
- Vote on who you think gave the most persuasive pitch.



# 4e Volunteer planner

## Writing describing how things work

- 1 Work in pairs. Read the description of the “Volunteer Planner” phone app, then answer the questions.
  - 1 Who is this description written for?
  - 2 Which adjective best describes this piece of writing?  
a friendly b factual c technical d analytical

## Volunteer Planner

### Overview

Volunteer Planner is an easy-to-use tool that makes volunteering simpler. The application can be downloaded from [www.volunteero.com](http://www.volunteero.com) and set up in five minutes or less. It consists of two main components: a database of volunteers and organizations and the planner itself.

### The database

For each geographical area, there is a registry or database of both volunteers and organizations.

For each volunteer, the database provides information on:

- their general availability (like afternoons per week)
- their contact number
- a brief description of their qualifications (such as driver’s license) and skills

For each organization, the database lists:

- the type of activity and skills needed
- any special conditions relating to the work
- its precise location

### The planner

The planner allows volunteers and organizations to fill slots in a real-time calendar using their smartphones. When a volunteer enters their name in a slot, the organization is alerted by text message, inviting them to confirm the offer. By selecting “accept” on the calendar, the organization sends the volunteer confirmation. To cancel at a later date, the volunteer selects “cancel” on the calendar. A message is then sent automatically to the organization; it is also sent to other eligible volunteers, inviting them to fill the slot.

- 2 How is the description organized to make it easier for the reader to follow? Did you find these features helpful?

### 3 Writing skill punctuation

- a Find examples of these punctuation marks in the description:

- a colon :
- b semi-colon ;
- c dash —
- d bullet ●

- b Match the punctuation marks in Exercise 3a with their uses (1–5).

- 1 to separate items in lists where commas would be confusing
- 2 to explain the idea in a preceding clause or sentence
- 3 in place of parentheses ( ) to give extra information
- 4 to introduce a list
- 5 to separate two very strongly connected ideas

- c Punctuate this passage with a colon, two semi-colons, and two dashes.

The three good reasons to use the Volunteer Planner are to help you plan your volunteering to help the organization and this is our sincere hope to increase the number of volunteers.

- 4 Write a description of how something works for a potential investor. Use the idea that you presented in Exercise 7 on page 52 or another idea. Remember to organize your description using subheadings and bullet points.

- 5 Exchange descriptions with your partner. Check that you each have:

- written a clear, factual description.
- organized the text under subheadings and bullet points.
- used punctuation correctly.

# 4f Ethical Ocean

Video

Ethical Ocean, a social enterprise

OWN  
WHAT'S

*good*



## Before you watch

- 1 Work in pairs. What does a *social entrepreneur* do? Discuss with your partner.
- 2 David Damberger is a social entrepreneur and winner of a scholarship from the Skoll Center for Social Entrepreneurship. Look at the photo. What kind of activities do you think *Ethical Ocean* is involved with? Discuss with your partner.

## While you watch

- 3 Read these sentences about David Damberger's background. Then watch the first part of the video (to 01:23) and choose the correct option to complete the sentences.
  - 1 David Damberger is from *Canada / Colorado*.
  - 2 He helped start an enterprise called *Engineers Without Borders / With Ideas*.
  - 3 Their idea was to help people in poor countries to improve *walls / wells* or bridges.
  - 4 They realized that the problem was not a lack of technology or *engineers / politics*.
  - 5 The problem was *too much bureaucracy / a lack of business ability*.
- 4 Watch the second part of the video (01:24 to 02:06). Complete the table about Ethical Ocean.

1	Type of business:	An e-..... for ethical goods
2	Description:	A one-..... shop for everything ethical
3	Categories of goods:	....., fair trade, ..... friendly, sweatshop-labor .....
4	Product range:	clothing, ....., home ..... products

- 5 Watch the third part of the video (02:07 to 03:12). Look at these words and listen to how Ethical Ocean ensures the companies on the site are ethical. Then summarize this to your partner.
  - 1 certification    2 story    3 vote
- 6 Watch the fourth part of the video (03:13 to end) and answer the questions.
  - 1 What category do the majority of products on the website fall into?  
.....
  - 2 What particularly successful product does David Damberger mention?  
.....
  - 3 What are the advantages of this product?  
.....

## After you watch

- 7 Work in groups. Discuss what you think of David Damberger's social enterprise idea, Ethical Ocean.
- 8 Work in pairs. Look at these products and the list of ethical criteria (a–g). Which criteria are relevant to each product? Which do you actually consider when buying these products?

car    electronic equipment    furniture    stationery  
toys    fruit and vegetables    cosmetics    clothes

- a Are the materials used from sustainable sources?
- b Was a lot of energy consumed to make this product?
- c Where has it been transported from?
- d Did the maker have good working conditions?
- e Did the maker receive a fair proportion of the selling price?
- f If it is a food product, is it organic (grown without the use of chemicals)?
- g Will the product biodegrade or be recycled when it is no longer used?

## 9 Roleplay a product pitch

Work in pairs.

Student A: Imagine you are a representative from a company who is going to pitch a product for Ethical Ocean to sell through their website. Look at these points and prepare your pitch.

- think what your product is
- think about what its ethical credentials are
- prepare to sell its benefits

Student B: Imagine you are a representative from Ethical Ocean. Prepare questions about price, ethical criteria, product benefits, etc.

Act out the conversation. Then change roles and act out the conversation again with a different product.

**accessory** (n) /æk'sesəri/ an extra, supplementary item  
**bunch** (n) /bʌntʃ/ a group  
**credentials** (n) /kri'denʃəlz/ qualifications, proof of a thing's suitability  
**detergent** (n) /dɪ'tɜ:dʒənt/ powder or liquid used to clean clothes or dishes  
**naively** (adv) /naɪ'ivli/ making a judgment that's too simple because you lack experience  
**sweatshop** (n) /'swetʃʌp/ a workplace where people work for very low wages under poor conditions

# UNIT 4 REVIEW

## Grammar

1 Read the article and complete it with these words.

chances could likelihood likely might  
must need probably should unlikely



What is the <sup>1</sup>..... that in fifteen years' time we will still be burning fossil fuels and driving gas-powered cars? Looking at the progress that has been made with alternative forms of energy, the <sup>2</sup>..... are pretty high. The problem with green innovation is that each time you think you <sup>3</sup>..... have found the answer, you also find a catch. Wind turbines only work when the wind blows. The inventors <sup>4</sup>..... have realized that, surely? Hydrogen is a clean alternative to gasoline, but it is highly explosive and when the first accident happens, there is <sup>5</sup>..... to be a strong public reaction against it. The real innovation in energy <sup>6</sup>..... will not come from a new means of power generation, but in how the energy grid is organized. Advances in IT mean that, in the future, homes, factories, and public buildings <sup>7</sup>..... be able to generate small amounts of energy, which they <sup>8</sup>..... either use themselves or put back into the grid for others to use. The question is: can we make that change? Some say that because it is not in the interest of big business, it is <sup>9</sup>..... to happen any time soon. But look what happened to the music business. We didn't <sup>10</sup>..... to change from a system of buying CDs to sharing music online. But that is what happened.

2 Answer the questions according to the author.

- 1 What is the problem with most innovations?
- 2 What is the answer to our future energy needs?
- 3 Is the writer optimistic or pessimistic about finding alternative ways of generating power?

3 Work in pairs. Are you optimistic about finding a different way to manage our energy needs? Why?

### I CAN

express obligation and necessity, speculate and give advice in the past (past modals)

talk about the probability of things happening

## Vocabulary

4 Complete the idiomatic expressions. The first letter has been given for you.

- 1 Just play with the idea and see what you come u..... with.
- 2 There's not a s..... of evidence to suggest that this is going to work, but you can give it a t..... anyway.
- 3 I came a..... some old plans for an extension to the house. It was a real s..... of luck, because I was about to hire an architect to do some drawings.
- 4 For a long time they were making no progress. Then Natalia had a f..... of inspiration and suggested using hydrogen. It was then that they made a b..... in the engine's design.
- 5 I don't really understand how the invention of the television came a..... .

5 Work in pairs. Have you ever experienced any of the following? Discuss with your partner.

- an idea which needed some thought
- a flash of inspiration
- a stroke of luck
- an invention that didn't fill a particular need

### I CAN

use idioms

talk about inventions and innovations

## Real life

6 Look at the statements from a short product pitch. Write a rhetorical question before each one.

- 1 .....? It's a vacuum cleaner that can clean any type of floor surface.
- 2 .....? Because there's no other machine that can perform all these functions.
- 3 .....? At the base, there's a rotary brush which cleans as it sucks up the dirt.
- 4 .....? Despite its sophistication, we're hoping to keep the cost down.
- 5 .....? By making it in China, where manufacturing costs are much lower.

7 Work in pairs. Think of a product that you use frequently. Present it to your partner as if it was a new product. Use at least three rhetorical questions.

### I CAN

give a short presentation for a new product

use rhetorical questions in a presentation

## Speaking

8 Work in pairs. Discuss what device or technological gadget would most improve your life.