English for European trade unionists

Level Four

Trade Unions and the Environment

Study Guide

The ETUI-REHS is financially supported by the European Commission
Lead-in activity 1

Our Environment (p. 4)

The Brundtland Definition of sustainable development agreed in 1987 by the World Commission on Environment and Development:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Here is an example of a mind map:

Mind-map of mind-map guidelines

Your mind-map may have a completely different shape, like a tree, or inter-connected lists. The important thing is that there is room for everyone to add their ideas, and to try and see any connections between these.

See vocabulary list at the end of this Study Guide for more ideas.
Thinking about your carbon footprint (p. 6)

Some more examples of activities at home and work which release CO₂ into the atmosphere:

<table>
<thead>
<tr>
<th>Home</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying a new car every two years (2)</td>
<td>Driving to work (1)</td>
</tr>
<tr>
<td>Flying to holiday destination (1)</td>
<td>Flying for business meeting (1)</td>
</tr>
<tr>
<td>Gas to heat water (1)</td>
<td>Electric heating/air-conditioning at work (1)</td>
</tr>
<tr>
<td>Using car for shopping (1)</td>
<td>Bottled water available for meetings (2)</td>
</tr>
<tr>
<td>Buying out-of-season fruit from far away (2)</td>
<td>Leaving my computer on stand-by (1)</td>
</tr>
<tr>
<td>Drinking bottled water (2)</td>
<td>Not bothering to re-cycle paper (2)</td>
</tr>
<tr>
<td>Drinking New World wine (Australian, New Zealand, California) (2)</td>
<td></td>
</tr>
<tr>
<td>Not paying attention to where the clothes I buy are made (2)</td>
<td></td>
</tr>
<tr>
<td>Driving to work (1)</td>
<td></td>
</tr>
<tr>
<td>Flying for business meeting (1)</td>
<td></td>
</tr>
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<td>Electric heating/air-conditioning at work (1)</td>
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<tr>
<td>Not bothering to re-cycle paper (2)</td>
<td></td>
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</tbody>
</table>

Here is the breakdown of a typical person’s carbon footprint.

[Image of breakdown chart]

http://www.carbonfootprint.com/carbonfootprint.html
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Working with reading 1

He’s a Carbon Zero Hero! (p. 8)

1. Comprehension

1. He is a student who has just graduated with an MA in Industrial Design Engineering, and the 2007 winner of BSI’s Sustainable Design Awards.

2. Andreas has invented a small device, or gadget, Carbon Hero TM, which accurately calculates the amount of carbon an individual produces based on the type and amount of transport s/he uses.

3. It could be seen as a gimmick, a sort of fashion accessory, so that people know how much carbon they are responsible for, but they won’t necessarily do anything about it. Also, it could be seen as a ploy (‘trick’) of those responsible for carbon offset schemes. It does not work in isolation, but has to be used in conjunction with a PC or mobile phone. We are not told the price, but it could be expensive

4. It is a good idea insofar as it will give people a more accurate idea of the amount of carbon their travel is responsible for, rather than relying on rough calculations or guesses.

5. It’s effective, because it is catchy, memorable and short. But a better name would have been that used in the headline – Carbon Zero Hero – because this rhymes it is even more catchy and memorable, as well as indicating the positive aspects of the calculator in helping to reduce carbon emissions.

2. Vocabulary

1. This stands for the qualification ‘Master of Business Administration’.

2. It stands for Trade Mark, and means that the name and the product are patented, so that the rights belong to those that have developed the device.

3. Once collected, the data is downloaded to software on a PC or mobile phone which shows the quantity of carbon used and the amount of credits required to be bought in order to compensate for the amount used.

4. It is the choice made by an individual of what to buy, from a range of products available.

5. mileage; wattage; package; wreckage.

6. It means that these other methods fail, or are not effective.

7. Fall in with - means that she started to go around with, hang out with, be friends with a group of animal rights’ activists. This phrasal verb is often used with negative connotations, so that here, the implication could be that these people were a bad influence on her.

Fall out with – this means that I stopped being friends with Bob, or had a a disagreement with him.

8. This means that these sensors indicate precise usage.
3. **Discussion points:**

   **Yes** ... if people producing the calculator are organized in trade unions and enjoy decent working conditions. Its distribution could send out positive signals about the union’s green credentials – as long as this was underpinned by actual green policies, and was not just empty propaganda!

   **No** ... if it is expensive, and it is just a public relations exercise unconnected to any real campaign. It could be regarded as a gimmick. Some union members might think that the money could be better spent on representing their interests more directly.

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**Working with writing 1**

**The 3Rs: Recycle, Re-use, Reduce (p.11)**

**Some sample sentences:**

1. I should walk up the stairs at work more often.
2. I will always switch off the lights in my office when I leave, even for short periods.
3. I will try to remember to turn down the heating when it is not cold outside.
4. I would re-cycle all my waste paper if we were supplied with a special bin.
5. I should use public transport to get to work instead of my car.
6. I will print on both sides of the paper.

**Discussion points**

- The poster is certainly eye-catching, with a short, simple and effective message. The use of the colour yellow means that it would be hard to ignore, especially if it is positioned by the door and light switch.
- Reduce should precede the other two, followed maybe by re-use, which is more energy efficient than recycling. Of course, re-using isn’t always possible, so re-cycling may often be the only alternative.
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Working with speaking 2

Getting around (p. 13)

4 How can the trade unions help promote the introduction of these measures?

Some suggestions:

- Promote schemes which encourage use of public transport for all employees of the organisation (contributions to season tickets etc.)
- Initiate campaigns aimed at gaining tax breaks for use of public transport
- Carry out surveys in particular areas to map the provision of public transport, and initiate public awareness campaigns.
- Support official schemes for cycle tracks, pedestrian paths, city centre shopping, park and ride schemes, etc.
- Publicise the union’s representation of public transport workers

Working with words 1

Phrasal verbs: travel & work (p.15)

Travel

1. **Complete the sentences below with the correct form and tense of the appropriate verb.**

1. The plane **touched down** at six o’clock on the dot, so it was lucky we were there to meet them.
2. The punctual arrival was a bit surprising as there had been a delay when they **took off** due to air traffic control restrictions.
3. You should always wait for the bus to come to a complete halt before you **get off**.
4. We’ll be there in good time if we **set off** nice and early.
5. He was driving so fast he nearly **ran into** a tree.
6. We were going to meet our friends for lunch, but unfortunately their car **broke down** on the way.
7. Shall I **get out** here? It will save you driving through all that traffic in the centre of town.
8. Sometimes I think it would be nice just to take a boat and **sail away** into the sunset.
9. It would be a good idea to **fill up** in Spain, as the petrol is cheaper there.
10. James always intended to **walk up** the stairs instead of using the lift, but he didn’t always feel like it.
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11. Fred went to **start up** the car while Freda closed the door and locked up.
12. She asked him to **slow down** as they drove past the cinema so she could see what film was on.
13. After they broke the window, the children **ran away** as fast as they could.
14. I must finish this report today as I am **going away** tomorrow.
15. They were walking slowly, but they all started to **speed up** when it looked like it was going to rain.

2. **Put these words in the correct order to make a sentence:**

1. It’s better to fill up before you run out of petrol.
2. I can’t eat any more chocolate because it would fill me up too much!
3. Can we keep to the agreement we made yesterday?
4. Inés told Juan to keep the secret to himself.
5. You can fill me in tomorrow with the details at the meeting.
   OR You can fill me in with the details tomorrow.

Travel

3. **Explain what the phrasal verb means in each of these sentences:**

   1. When I worked in the hospital, we had to register the precise time our arrival and departure by inserting our time card into a machine every time we started and finished work.
   2. Now there is not so much work, it is difficult to employ more workers.
   3. When the managing director retired, Jane was only too keen to take his/her place.
   4. If one of the teachers is away, ask one of the others to stand in/act as substitute.
   5. They decided to close down the business after another bad year.
   6. It is important to relax after a hard day at the office.

4. **With partner, practise saying these sentences out loud.**

   Stressed words or syllables are shown in bold below:

   1. When I **work**ed in the **hospital**, we had to **clock in** and **clock out** every time we **started** and **finished** work.
   2. Now there is not so much **work**, it is difficult to **take on** more workers.
   3. When the managing **director** retired, Jane was only too keen to **step in**.
   4. If one of the **teachers** is **away**, ask one of the **others** to **fill in**.
   5. They decided to **wind up** the **business** after another bad year.
   6. It is **important** to **wind down** after a **hard** day at the **office**.
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5. With a partner, discuss the meanings of these verbs.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>drink up</td>
<td>To finish drinking something, possibly quickly, with nothing left:</td>
</tr>
<tr>
<td></td>
<td>'Drink up! It's closing time.'</td>
</tr>
<tr>
<td>fill up</td>
<td>To put something in a container to the very top, for example, petrol into a fuel tank in a car:</td>
</tr>
<tr>
<td></td>
<td><em>Fill it up please, it'll only be more expensive tomorrow.</em></td>
</tr>
<tr>
<td>meet up</td>
<td>A more emphatic way of saying 'meet' – usually for social reasons:</td>
</tr>
<tr>
<td></td>
<td><em>We must meet up soon – it's a long time since we had a chat.</em></td>
</tr>
<tr>
<td>shape up</td>
<td>To behave in a proper or expected way in a given situation, to work harder:</td>
</tr>
<tr>
<td></td>
<td><em>Her boss told her to shape up or she'd soon find herself out of a job.</em></td>
</tr>
<tr>
<td>open up</td>
<td>To reveal your innermost thoughts or feelings or a more emphatic way of saying 'open':</td>
</tr>
<tr>
<td></td>
<td><em>I couldn’t discover why he was so depressed, but he might open up to you.</em></td>
</tr>
<tr>
<td></td>
<td><em>Open up! This is the police!</em></td>
</tr>
<tr>
<td>catch up on</td>
<td>To update oneself on news or other developments.</td>
</tr>
<tr>
<td></td>
<td><em>He started reading the newspapers again, because he wanted to catch up on events in Iraq.</em></td>
</tr>
<tr>
<td>catch up with</td>
<td>To make up the distance between something or someone, physically or figuratively:</td>
</tr>
<tr>
<td></td>
<td><em>You go, I’ll just finish this report, then I’ll catch up with you at the station.</em></td>
</tr>
<tr>
<td>stand up for</td>
<td>To actively support:</td>
</tr>
<tr>
<td></td>
<td><em>It’s important to stand up for the things that you believe in.</em></td>
</tr>
<tr>
<td>let out</td>
<td>To make a spontaneous noise, such as a scream, or groan, or to make an article of clothing bigger by altering the seams:</td>
</tr>
<tr>
<td></td>
<td><em>She let out a scream when she saw the blood on the floor.</em></td>
</tr>
<tr>
<td></td>
<td><em>I must let out this dress- I’ve put on so much weight over Christmas!</em></td>
</tr>
<tr>
<td>clock out</td>
<td>To register as you leave work, usually by punching a timecard into a machine:</td>
</tr>
<tr>
<td></td>
<td><em>I was in such a rush, I forgot to clock out, so I had to go back to the factory.</em></td>
</tr>
<tr>
<td>drop out</td>
<td>To stop doing something you find onerous, boring or difficult (such as university):</td>
</tr>
<tr>
<td></td>
<td><em>He dropped out of University after the first year, and went to work in Prague.</em></td>
</tr>
</tbody>
</table>
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find out
• To discover:
  If only I could find out where he was living now!

back out of
• To change your mind about something that you had already agreed to, or that there was a general expectation that you would do:
  They backed out of the trip when they discovered how much it was going to cost.

Working with Listening 1

The Electric Car (p. 18)

Before you listen to this interview, think about the meaning of these words and expressions that you will hear. Work with a partner to check all the meanings, then ask your teacher about any that you are still unsure of:

<table>
<thead>
<tr>
<th>Word or expression used in the interview</th>
<th>Insert explanation, meaning and/or translation (and add any new terms to your vocabulary list on p. 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>electric charging bays / electro-bays / electric vehicle charging posts</td>
<td>Places where electric cars can be charged up, or re-charged, in convenient places in towns and cities</td>
</tr>
<tr>
<td>G-Wiz (make of electric car)</td>
<td>Name which makes it sound as though it goes fast – ‘to whizz’ means a swift movement, and the word is onomatopoeic, in that it sounds like what it describes</td>
</tr>
<tr>
<td>local authorities / councils</td>
<td>Entities responsible for local administration in the UK</td>
</tr>
<tr>
<td>carbon footprint</td>
<td>Measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide</td>
</tr>
<tr>
<td>greenhouse gases</td>
<td>These are components of the atmosphere that contribute to the greenhouse effect. The greenhouse effect is the process in which the emission of infrared radiation by the atmosphere warms a planet’s surface</td>
</tr>
<tr>
<td>fossil fuels</td>
<td>These are mineral fuels or fossil source fuels, i.e., hydrocarbons found within the top layer of the earth’s crust. Because they take millions of years to form, they are non-renewable resources</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>aspirated vehicles</td>
<td>Vehicles powered by the internal combustion engine, which combines air and the combustion of fuel to create gases</td>
</tr>
<tr>
<td>hybrid vehicle</td>
<td>A hybrid vehicle (HV) is a vehicle that uses two or more distinct power sources to propel the vehicle, such as a electricity and petrol</td>
</tr>
<tr>
<td>plug-in hybrid</td>
<td>A hybrid vehicle that uses electricity as one of its energy sources, so that it can be re-charged by plugging in to an electricity supply</td>
</tr>
<tr>
<td>transmission</td>
<td>The transfer of energy from one place to another</td>
</tr>
<tr>
<td>renewable electricity provider</td>
<td>A provider where the electricity is produced by using renewable energy sources, such as solar or wind power.</td>
</tr>
<tr>
<td>grid</td>
<td>When referring to supply of electricity, this means a long-distance high-voltage network for power transmission</td>
</tr>
</tbody>
</table>

BBC Radio 4 - You and Yours 27 September 2007

Transcript

**Part 1**

**Presenter:** Know anyone with an electric car? If the answer is no, it isn’t surprising because there are only about a thousand on the roads in the UK compared with 30 million or so ordinary cars.

Today, in what it says is an effort to kick-start some serious sales, the electricity company EDF is offering 250 electric car re-charging bays to local authorities. Keith Johnson’s company sells G-Wiz electric cars and Peter Thorne is from EDF energy company.

Peter Thorne, you’re offering these free charging bays for electric cars – any takers?

**Peter Thorne:** Yes, good afternoon. So far we’ve had a great deal of interest from a number of councils. Westminster in central London have already installed two in the Covent Garden area and are going to do more. Islington, Camden and Lambeth are also coming on board and other cities like Sheffield are installing electro-bays – electric vehicle charging posts in their cities too. And we’ve got interest from places like Brighton & Hove also. What this is about really is kick starting the market. We really want to get things moving and this is a kind of rally cry to councils to say that 75% of people are asking for help from them to help them drive down their carbon footprint.

**Presenter (interrupting):** We’ve had an email on that subject from Brian Catt, and he says he hopes that I’ll point out that electric cars powered by
electricity generated by fossil fuels in power stations just creates more greenhouse gases than a modern efficient petrol car. He says they simply transfer more pollution from the car to the power station chimney. It’s because the combined inefficiencies of power generation, transmission, battery chargers and then electric motors. Numbers are easy to check or I can provide them for you – here goes: electric cars on the better end of these efficiencies are 20% efficient or less, petrol cars are 25% efficient or less. What is needed is a reduction in the size of petrol engines for personal use to what is necessary for the function involved. What do you say to that?

**Peter Thorne:** In terms of efficiency in carbon terms, electric cars are unquestionably far more efficient than normally aspirated vehicles. Other developments such as the hybrid vehicle that Toyota have developed are also far more efficient than normally aspirated vehicles. Recently in Paris, EDF announced a partnership with Toyota on the development of the new plug-in hybrid version of the Toyota Prius – a very exciting new development.

**Presenter (interrupting):** Yes, I hear what you are saying but you haven’t really answered his questions though, are you, because he’s saying it’s the combined inefficiencies in everything involved – the power generation, the transmission, the battery charges - not whether it’s more efficient per se when you drive it on the road. It’s emitting more CO$_2$s.

**Peter Thorne:** In terms of overall emissions, electric cars are something like 50% more efficient when you take everything into account, and that includes using normal generation.

**Presenter:** OK, well I think that’s one you’ll have to take up with him privately.

**Part 2**

**Presenter:** Keith Johnson, these 250 new re-charging bays, will they make much difference to sales do you think?

**Keith Johnson:** Um, yes, I think they will, I think they’re a big step in the right direction. What I’d like to do is just add on that last point – we have our electric cars and that’s 63 grams of CO$_2$ per kilometre emissions. Now that compares to the average of 175 and 110 for the cleanest hybrid.

**Presenter:** But does it take all these elements that Brian Catt mentions into the calculation?

**Keith Johnson:** Yes, it does, that includes - there are no emissions from the vehicles themselves – that includes all the emissions generated at the power station and actually we have 900 customers in London, almost all of these customers have switched to an electricity provider that’s a renewable electricity provider, so their emissions are virtually zero.

**Presenter:** Well, we’ve had this discussion on You and Yours before, you can’t really say that you get your electricity from a particular source can you? You pay your money and if you want to think that you’ve bought green, you can pay a little bit extra.

**Keith Johnson:** Well, the way it works is if you take a kilowatt hour out of the grid from a green electricity supplier they will put a kilowatt hour generated by (green) electricity back into the grid, so yes, it does work.
Presenter: Peter Thorne, isn’t the reason that these cars haven’t really
captured on is that they really don’t go very fast – they’re only suitable for
city driving rather than any shortage of places to recharge them, ‘cos you
can recharge them at home if you want to?

Peter Thorne: You can recharge them at home, yes, but I think that the
announcement that we’ve made is more to do with – as people drive round
the city they need places to top up the power. What we’d like to see are
people, when they go shopping, they can plug in their G-Wiz, their electric
vehicle into an electric charging point and then have power that they can
then go on other journeys or return home. The plug-in hybrid will move
this onto another level, because then you’ll have a car that you can drive
on long journeys, but also drive far more efficiently, and at less cost in
cities.

Presenter: Peter Thorne, what do you think it would take to get more of
us to drive electric cars?

Peter Thorne: Um, I think a greater understanding. I think a lot of people
don’t know very much about them at all. I think certainly an infrastructure
to help with the charging elements would be of great value….um Keith has
done a fantastic job in terms of a vehicle that is acceptable to people in
cities and in central London you see many G-Wizzes now. Really I think for
me it’s kind of where the mobile phone market was in the 1980s and 90s -
it is kind of at the start and the infrastructure isn’t there really to kind ofeally get things moving, and what we want to do is do exactly that - get
things moving and 250 bays will make a huge difference because then
people will start to think about the fact that now they have somewhere
that they can charge their car as they go about their daily business or use
their car around the city.

Presenter: You’re calling them ‘free’ bays, will the electricity on supply be
free as well?

Peter Thorne: It will vary from council to council. Westminster for
example has a system whereby drivers join a club and that includes the
cost of any of the charging they undertake. I think that councils will
probably want to have different systems depending on their own
circumstances.

Presenter (interrupting): But not free from you anyway?

Peter Thorne: Electricity free from us?

Presenter: Yes, it won’t be free from you. When you say they’re ‘free’
bays, you’re not giving free electricity with them? No.

Peter Thorne: Well I think like any type of fuel, obviously if you have a
car, you have to pay for petrol. If you have an electric car, then there is a
cost to be paid for the electricity.

Presenter: We must leave it there.

2 Now listen to the first part of the interview with Peter Thorne from the
energy company EDF and answer these questions:

1. It will ‘kick-start’ the market, or give it a boost.
2. He says that 75% of people are asking councils for help.
3. He says that electric cars create more greenhouse gases, because they run on electricity produced by power stations which depend on fossil fuels.

4. They have developed a new plug-in version of the Toyota Prius.

5. Not totally, because she says he hasn’t really answered the questions posed by Brain Catt in his email.

3 Now listen to the second part of the interview with Keith Johnson who represents the company that sells the electric car G-Wiz, and answer these questions:

1. He says this is the case because customers have switched to a renewable energy provider.

2. Because they don’t actually go very fast, and you have to be sure you can re-charge them when you need to.

3. This version is also suitable for long journeys, unlike the car that runs only on electricity, which is only suitable for short trips.

4. He compares it to the mobile phone market in the 1980s and 1990s.

5. No, but different councils will have different methods of charging for this electricity.

4 Listen again to the interview especially to the use of certain terms listed in the order in which they occur below. Then explain the word or words underlined in your own words:

1. In an effort to kick start some serious sales.
   In an attempt to give a real impetus, or boost to sales, to really get them off the ground.

2. Islington, Camden and Lambeth are also coming on board.
   These councils are joining the campaign, supporting the initiative.

3. ....to help them drive down their carbon footprint.
   To help them reduce their carbon footprint.

4. Numbers are easy to check or I can provide them for you: here goes ...
   Here they are; here you are.

5. Not whether it’s more efficient per se when you drive it on the road.
   (Latin) By or in itself, intrinsically.

6. ... that’s one you’ll have to take up with him privately
   ... that’s one you’ll have to discuss with him...

7. ... the reason these cars haven’t really caught on ...
   ... the reason these cars haven’t become more popular...

8. ... they need places to top up the power...
   ... they need places to add more (electricity)
5 *Expressions with 'charge’*

1. He asked for the amount to be added to his account, which would be paid later.
2. ... who was supposed to be responsible for the group of children.
3. She ran heavily into me.
4. They ran up and down in a frantic way.
5. The attack of the Light Brigade ...

**Discussion points**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clean energy – no or low emissions</td>
<td>• Need to be sure electricity is produced from renewable sources</td>
</tr>
<tr>
<td>• Use electricity produced by renewable energy sources</td>
<td>• Only good for short journeys</td>
</tr>
<tr>
<td>• Don’t contribute as much to global warming</td>
<td>• Not sufficient places to charge them</td>
</tr>
<tr>
<td>• More re-charging points becoming available</td>
<td>• Not very fast</td>
</tr>
<tr>
<td>• Eventually will be cheaper to run as oil becomes more expensive</td>
<td></td>
</tr>
</tbody>
</table>

**Working with Language 1**

**Words ending in –ing (p. 23)**

This is a complex area of grammar in English. For further guidance, see R.A.Close: *A Reference Grammar for Students of English*, or Leech & Svartvik: *A Communicative Grammar of English*.

<table>
<thead>
<tr>
<th>Word</th>
<th>Type</th>
<th>Meaning /use</th>
</tr>
</thead>
<tbody>
<tr>
<td>tackling</td>
<td>3</td>
<td>Non-finite verb phrase: coping with, dealing with, facing up to</td>
</tr>
<tr>
<td>facing</td>
<td>3</td>
<td>Non-finite verb phrase: the problem which confronts us</td>
</tr>
<tr>
<td>suffering</td>
<td>3</td>
<td>Non-finite verb phrase: the poorest will be the most adversely affected</td>
</tr>
<tr>
<td>greening</td>
<td>8</td>
<td>In construction ‘ have a role in –ing something’</td>
</tr>
</tbody>
</table>
### Trade unions and the environment

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>changing</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>overwhelming</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>being</td>
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<td>car-sharing</td>
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<td>pumping</td>
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<td>22</td>
<td>heating</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>acting</td>
<td>4</td>
</tr>
</tbody>
</table>
**Lead-in Activity**

**Environment Quiz (p. 28)**

1. Which of the following are biodegradable?
   a. Food
   b. Paper

2. Which of the following are used to make biofuels?
   a. Maize
   b. Sunflowers
   c. Grass
   d. Waste products

3. In the UK, what percentage of carbon emissions are work-related?
   b. 66%

4. How much power does a normal PC use when switched on?
   d. 70 watts

5. If 7 bulbs out of every 10 in households in Denmark were replaced with electricity saving bulbs, this would reduce CO2 emissions every year by:
   c. 280 000 tons

6. What percentage, on average, of the drinking water we use in Europe actually goes to drinking and cooking?
   a. 7 %

7. What percentage, on average, of the drinking water we use in Europe is in fact used for baths and showers?
   c. 39 %

8. How much CO2 per person does a 1000 kilometre flight produce?
   b. 130 kg

9. Which of these is a greenhouse gas?
   a. Nitrous Oxide
   b. Carbon Dioxide
   d. Methane
10. Which of these chemicals damage the ozone layer?
   a. CFCs

11. Which of the following are fossil fuels?
   a. Coal
   b. Oil
   c. Natural gas

12. EEA stands for:
   b. European Environment Agency

13. EMAS stands for:
   d. Eco-Management and Audit Scheme

14. The international standard for EMAS is:
   c. ISO 14000

15. The Kyoto Protocol was opened for signature:
   a. 1997

16. To date (December 2007), how many signatories are there to the Kyoto Protocol?
   b. 174

17. Which of these countries has signed, but not ratified the Kyoto Protocol (and which are therefore not subject to its provisions on reducing emissions)?
   a. Kazakhstan
   b. USA

18. Which of the following countries have signed and ratified the Protocol, but are exempt from the reductions in emissions because they are classed as "developing countries"?
   b. China
   c. India

19. The Kyoto Protocol runs out in:
   d. 2012

20. The ETS stands for the EU’s:
   a. Emissions Trading Scheme
Trade unions and the environment

Web-search (p. 32)

Some useful addresses to help you started:


**ETS:** [http://ec.europa.eu/environment/climat/emission.htm](http://ec.europa.eu/environment/climat/emission.htm)
http://en.wikipedia.org/wiki/European_Union_Emission_Trading_Scheme

**EMAS:** [http://ec.europa.eu/environment/emas/index_en.htm](http://ec.europa.eu/environment/emas/index_en.htm)

http://en.wikipedia.org/wiki/European_Environment_Agency

Working with words 2

Why is climate change a union issue? (p. 33)

1 Read the following text, and complete it by inserting one of these -ing words into the appropriate space.

Temperatures are rising because we are (1) consuming fossil fuels at an unsustainable rate. If we don't start to act now then many fear the changes we already see (2) happening—such as (3) melting ice, (4) rising sea levels, drought and deforestation—will be irreversible.

Climate change is most definitely a union issue. The workplaces that we organise—and seek to organise—burn energy, consume resources, and generate waste. Industry alone is responsible for over half of carbon dioxide emissions (5) increasing the greenhouse effect every year.

We must act. Some of the measures needed are straightforward and relatively painless. Others may be more difficult. But unions have to be involved—(6) winning workforce commitment, (7) pushing reluctant employers and (8) making sure that (9) far-reaching change is fairly negotiated. Making workplaces sustainable is the key to making jobs sustainable.

The challenge of climate change is also an opportunity to engage with the young, who are particularly aware of the threat it poses.

Trade unionists have a special insight into the battle against climate change. We understand the power of collective action. Individuals can best tackle climate change when (10) working together.

Just as we understand the power of the collective in the workplace, we also understand the need for international solidarity. Climate change is a global threat (11) requiring global action. The UK alone emits just two per cent of the world’s carbon dioxide, but if everyone in the world lived as we do, we would need at least three planets to support us.
Intergovernmental action through the Kyoto Treaty is essential. That is why the TUC supports the International Confederation of Free Trades Unions in its work on climate change.

The TUC has funding to support six green workplace pilot projects over the next year. The Green Workplaces project aims to develop further successful workplace initiatives like those highlighted in the 2005 *Greening the Workplace* report. If you would like help to develop a green workplace project at a particular workplace, please contact cmolloy@tuc.org.uk

### 2 Opposites

<table>
<thead>
<tr>
<th>Paragraph 1</th>
<th>OPPOSITE TERM</th>
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<tbody>
<tr>
<td>melting</td>
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<td>decreasing</td>
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<thead>
<tr>
<th>Paragraph 3</th>
<th>OPPOSITE TERM</th>
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<tr>
<td>straightforward</td>
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<td>painless</td>
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<td>commitment</td>
<td>apathy</td>
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<tr>
<td>reluctant</td>
<td>enthusiastic</td>
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</tbody>
</table>

### 3 Word families

<table>
<thead>
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Trade unions and the environment

4 Make a list of the key points in the text

1. Burning fossil fuels is causing temperatures to rise.
2. This is not sustainable (it cannot continue).
3. Unions must do something, as workplaces are partly responsible.
4. Action – both simple and more difficult – is necessary, but must be fair.
5. Sustainable workplaces mean sustainable jobs.
6. Good opportunity to get young people involved.
7. Collective action will make the difference.
8. Climate change is a global threat requiring global action - need for international solidarity
9. We in the developed world must change our habits.
10. International government action is essential, such as Kyoto.
11. Green workplace-type projects can help.

Working with writing 2

What can unions do? (p.36)

Interpreting statistics

1. Complete the following sentences:

1. Only 1% of those questioned disagreed or strongly disagreed with the proposition for supporting environmental measures in the workplace. This is because it is obviously a good idea to have decent conditions in one’s place of work.
2. A large majority (95%) agreed or strongly agreed that the government should do more to combat global warming. The reason for this is that people think that change will only come about through political initiatives.
3. More than 4 out of 5 thought that unions should be doing more to protect the environment, because decent working conditions are important for a healthy workforce and sustainable jobs.
4. Two thirds said that union reps should carry out environmental audits, because this would provide information to force employers to act.
5. Only 17% were concerned that environmental policies could lead to job losses. In fact, these policies could lead to job creation and more sustainable jobs in the long run.
6. On the other hand, 81% were afraid that such policies could lead to job losses, as they are probably thinking of closing down dirty mines for example, or reducing transport-related activities.
7. Very few people (3%) thought that companies could be trusted to take care of the environment, because they are probably more interested in short-term profits.
Trade unions and the environment

8. Nearly everyone (95%) thought that companies could not be trusted to take care of the environment, as they are motivated by profit.

2. Suggested text of email:

Dear Brenda,

Please could you add an item on the environment to the agenda for our next meeting on February 8th? I think it is really important that we take the initiative and start discussing what we can do, as decisions made about protecting the environment (or not) could affect our jobs, as well as having an impact on our working conditions now and in the future.

I see that (insert Union name) adopted a policy on the environment at the last Congress – see file attached - so we should be thinking about implementing this policy here.

If you would like me to present this item, and explain why I think it is important, I will be happy to do so, and we could meet prior to the meeting to discuss this.

Thanks a lot,
Best wishes,
Joan.

Working with language 2

The progressive tenses (p. 38)

Exercise 1

1. I’m sorry, I do not understand). Do you speak English?
2. What time does Tom finish work in the evenings?
3. His parents are always telling him to switch off the light.
4. What time will she arrive? I am not sure, because she is driving.
5. Peter does not like coffee. He prefers tea.
6. What are you doing? I am cleaning the cooker.
7. What does he do? He is a train driver.
8. They do not watch TV very often.
9. What’s that noise? It is somebody knocking at the door.
10. What are you thinking of cooking for the party? I don’t know but I’ll think of something!
Trade unions and the environment

Exercise 2

There may be more than one possible answer.

Example: For ten years I lived (I / live) in Madrid, but at present I am staying (I/ stay) with my parents in Sevilla.

It is raining a lot here at the moment. I forget what it used to be like, but I am not sure this is due to global warming. I am hoping/ was hoping to visit China next year for the Olympics, but I understand that flying is not a good idea as far as the climate is concerned. At the moment I am reading Mark Lynas’ book Six Degrees in which he describes the impact of our actions, and it seems important that we try to do something. I am always forgetting to switch off my computer, for example, but I am quite good at turning off the lights when I leave the room.

Exercise 3

1. When I saw Barbara last night she was wearing her new dress.
2. What were you doing when they announced the news of his resignation?
3. When the policeman asked him how fast he was going he wasn’t sure.
4. John did not attend the meeting yesterday because he was ill.
5. That’s not my case. I think it belongs to that man over there.
6. When Pepe opened the window, he saw that the sun was shining.
7. The lecturer asked me if I could see the screen properly from where I was sitting.
8. She was giving a talk about climate change, based on the latest government report.
9. She asked if we understood all the figures she presented / was presenting during her talk.
10. Studies in the 1990s suggested that attitudes on global warming were changing.
Trade unions and the environment

Working with video 1

Brendan Barber interviews Al Gore – Global Warming Alert (p. 42)

Transcript

Introduction:
Well the Environment and climate change were big issues here today. We’ll be catching up in a moment with the debate, but first Al Gore. The former Vice President is one leading American politician who is in no doubt about the dangers of global warming. He’s produced a hard-hitting film and was in London recently for its launch. While here he was keen to talk to the TUC and to General Secretary, Brendan Barber.

Extract from “An Inconvenient Truth”
I am Al Gore. I used to be the next President of the United States of America!

AG: Hi!
BB: Really good to see you.
AG: You too. How are you?
BB: Welcome to London
AG: Thank you very much. It’s good to be here.
BB: (voice over) Al Gore was in London last week to promote his new film, so I asked him how did he feel about his new career in the movies?
BB: So did you ever think you’d be in the movie business?
AG: Never in a million years did I think my slide show would get me to the red carpet at Cannes!
BB: ... OK...
AG: ... and I’ve enjoyed it, but I’m old enough to know that a red carpet is just a rug, so that I can enjoy it without losing a sense of proportion about it.
BB: Out of all the issues you could have devoted your energies to - terrible problems of poverty round the world, HIV Aids - why have you focussed so much on this issue of climate change?
AG: Actually it will, it would prove impossible to solve these other issues unless we get on top of this climate crisis. It’s the only one of these crises that has the potential to end human civilisation.

Extract from “An Inconvenient Truth” (MELTING ICE FLOES)
The Arctic is experiencing fast(er) melting....if this were to go, sea levels worldwide would go up twenty feet.
This is what would happen in Florida...
Around Shanghai, home to 40 million
The area around Calcutta...60 million
Trade unions and the environment

Here is Manhattan…the World Trade Centre Memorial would be under water.

Think of the impact of a couple of hundred thousand refugees, and then imagine a hundred million...

BB: There’s a lot of interest in what we could do as individuals, and a sense of growing debate on that, but an awful lot of damage is done in the workplaces, and that’s why we’ve been trying to identify, look, what we can do at workplace level to bring more of a collective approach to tackling these issues.

AG: There’s more CO\textsubscript{2} from buildings than from cars and trucks. And the retro fitting of workplaces with more efficient technologies, more insulation, better systems – this is a big part of the solution. The new modern designs that actually cut way down on the amount of pollution, and they’re better places to work. People like the modern facilities if they’re done right.

Extract from "An Inconvenient Truth"

This is Patagonia 75 years ago, and the same glacier today.

This is Mount Kilimanjaro 30 years ago, and last year. Within a decade there will be no more snows of Kilimanjaro.

This is really not a political issue so much as an moral issue.

Temperature increases are taking place all over the world and that’s causing stronger storms.

BB: Are you finding the trade unions in America are starting to really to engage with this issue now?

AG: Yes. There are exceptions, but yes. Steel workers for example are really out in front. AFL, CSIU, there are quite a few of them. Some are still worried that perhaps… Some of the mineworkers, for example, might be worried about what the impact on coal might be, and that’s understandable, sure. The truth is we’ll continue to use a bit of coal and hopefully we’ll perfect this new way of burying - sequestering, as they say, capturing and sequestering the carbon – clean coal technologies. But the labour union movement in the United States is now beginning to change and they’re seeing the potential for all these new jobs.

BB: And you’ve recruited Arnold Schwarzenegger to your cause!

AG: You know, he saw the movie in June, and he said “I’m going to sell my Hummer!”. And he came to one of my book signings and said very nice things about the impact the movie had on him. And the Democrats in the legislature had been trying in California to get this law passed and he worked with them, and they crossed the party line and this is really a historic law.

There have been times in the past in my country when the federal government refuses to act, California steps out and other states imitate California. Pretty soon the businesses have to comply with all these different requirement in different states and the go to the national government and say help, we need a single law. And that process is beginning in the US, and that’s a positive sign.
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BB: It’s been really good to talk, and keep up all the good work!
AG: Thanks you for your interest in this issue and your focus on it and your members can make all the difference.
BB: Thanks very much.
AG: Thank you.

1 After you have viewed the interview, answer the following questions. You may want to view it two or three times to hear all the answers.

1. BB: Hi! Really good to see you.
   AG: You too. How are you?
   BB: Welcome to London
   AG: Thank you very much. It’s good to be here.
2. Very friendly, informal and relaxed, as if they are old friends.
3. He is making a joke of the fact all U.S. presidential candidates are routinely introduced as “the next president of the United States”.
4. He was there at the Cannes Film Festival to promote his film, An Inconvenient Truth, which was shown there.
5. He is comparing the traditional red carpet which is put down is someone’s honour, as it was at Cannes, to a rug (a small carpet) which can be pulled away from under you (and make you fall down)!
6. It is more important than poverty or HIV Aids because it is the only one that has the possibility of ending all human civilisation.
7. They are predicted to rise by 20 feet (about 6 metres).
9. For Shanghai, 40 million; for Calcutta, 60 million. An overall figure of 100 million is mentioned.
10. He says buildings cause more CO₂.
11. Buildings need to be re-fitted, re-designed, to work more efficiently, using new technology.
12. ‘The snows of Kilimanjaro’ is the title of a famous story by the iconic American writer, Ernest Hemingway. These are regarded as something permanent.
13. Some, like the mineworkers, are worried they will lose jobs, but the steelworkers are trying to do something positive
14. By identifying with the cause, and promoting relevant legislation in California, which serves as a role model for other states, as well as for the national level. He also says he is going to sell his Hummer – a large gas-guzzling 4 x 4 vehicle.
15. ‘Your members can make all the difference.’
Trade unions and the environment

2 View the video clip again and listen out for the expressions underlined below. Can you provide synonyms, or explanation?

1. It will prove impossible to solve these other issues unless we can find a way of overcoming / confronting climate change crisis.
2. Sea levels would rise …..
3. … to bring a collective approach to the debate about confronting / facing up to these issues
4. … the new modern designs make significant reductions on the amount of pollution …
5. People like the modern facilities if they are carried out / built / properly.
6. The steel workers for example are really in the vanguard / in the lead / pioneers.
7. … we’ll perfect… methods where carbon emissions can be captured and stored after the coal is burned.
8. They did not vote according to party policy, or instructions, but according to conscience or beliefs in what is best for the country or state.
9. California puts itself forward / steps forward.
10. Carry on the good work!

4 Look at these extracts from reviews of the movie, and decide whether they are favourable or unfavourable. Underline any particular words that influenced your decision:

1. First and foremost, the central point about the movie doesn’t seem to be about Global Warming, but rather about selling Al Gore as a saint, a human being and possibly a future presidential candidate.
   **Negative**: the speaker does not like the personalisation of the problem, and thinks Al Gore is just using the arguments for his own self-advancement.

2. This propaganda piece is slick…
   **Negative**: the use of the word propaganda is derogatory, as is slick when used in the same phrase a propaganda (clever, smooth). The speaker implies that a particular message is being presented in a clever, effective way – but that it is not necessarily true.

3. But this expertly put together lecture, with illuminating animation and special effects, is absolutely riveting.
   **Positive**: the speaker admires the techniques used, and found the information interesting and convincing.

4. It’s an enduring irony of movies that one guy talking can be more compelling than a million dollars in locations, extras and effects.
   **Positive**: the speaker admires the lecture-type format of the movie, which is convincing (although there are location shots too – and special effects!).
Trade unions and the environment

5. Al Gore drones on and on, promising gloom and doom if we don’t believe him and do what he says, it is easy to be seduced by his pictures of disaster and ominous graphs’

**Negative**: the speaker finds Al Gore’s presentation boring and unconvincing, and sees the pictures etc. as some kind of trickery designed to persuade us to believe his warnings.

6. The film is, of course, exactly the kind of didactic, issue-oriented documentary that tends to preach to the converted, and Gore himself (who had to be persuaded to take part in the project) originally doubted that anyone would buy a ticket to hear his grim message.

**Negative**: the speaker thinks the film may work for those who already believe climate change is a problem, but that for others it is too obviously trying to tell us what to think, and so not very interesting.

7. Al Gore is persuasive and passionate about his subject, his slide show being a polished but serious presentation that joins the dots in a way that defies argument.’

**Positive**: the arguments are sound, and well-presented, in a sincere and convincing way.

For more views, discussion and information on the movie see:
http://www.climatecrisis.net/
http://www.participate.net/educators/

Working with reading 2

How green is my union? (p.45)

3. Now answer these questions:

Section 1

1. There was support for a policy which states that the union should promote sustainability in the curriculum, and to develop sustainable policies and practices in all the workplaces where it is represented (universities and colleges in the UK).

2. He is the union’s health and safety rep at South Thames College, and he is involved in discussions on the reduction of energy costs in the workplace, and for transport options.

Section 2

3. This was the Trade Union Sustainable Development Advisory Committee, for discussions between the (UK) government and trade unions on environmental issues, including sustainable development.

4. Because workplaces use energy and resources, and create waste and travel.

5. Because the union can play a role in making university and college campuses greener, as well as introducing sustainability into the curriculum.
Section 3

6. Roger Kline lists the trade values of participation, justice, equality, cooperation and internationalism.

7. Through meetings at TUSDAC (see Answer to Question 3 in section 2) as well as in responses to the House of Commons science and technology committee enquiry into renewable energy technologies.

8. The first step will be to conduct an environmental audit, to assess the impact of its activities (energy, transport etc.).

4 Explain what each of the following expressions means, in your own words

1. ... bargain for agreements that promote non-exploitative commercial arrangements between supplier and purchaser, and where the producer receives a just reward for his/her efforts, and where decent working conditions are respected.

2. ... encourage means of transport for work and study that have a minimum impact on the environment, such as more use of public transport, walking, or cycling.

3. ... finding a way of ensuring that workers in a particular workplace (union, university, college) are committed to the idea of a greener workplace.

4. ... to develop a list or manual of suggestions which will ensure that all activities at a particular workplace are least damaging to the environment.

5. ... take steps to ensure that the energy used (and CO₂ produced) in carrying out the union’s work is less in the future than it is at present.

Working with language 3

Climate change – Avenues for trade union action (p. 50)

A Germany’s Alliance for Work and Environment

2 Complete the grid below with your answers. Now look at Working with Language 1 on p. 25. State which use of the -ing form is employed in each case, as in the example:

<p>| | | |</p>
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<tbody>
<tr>
<td>1</td>
<td>collaborating</td>
<td>Present participle used to form present continuous tense (1.)</td>
</tr>
<tr>
<td>2</td>
<td>creating</td>
<td>After whilst (6)</td>
</tr>
<tr>
<td>3</td>
<td>improving</td>
<td>After whilst (6) – still depends on this conjunction, even if it isn’t repeated here.</td>
</tr>
</tbody>
</table>
| 4 | heating       | Verbal noun, used with ‘bills’ to form compound noun (5)  
Or adjective (9)* |
3 **Explain the following expressions which occur in the text, in your own words:**

1. Jobs which can be maintained while not causing undue damage to the environment.
2. Sources of energy which can be replaced in a relatively short time span, such as wood, wave power, solar energy, etc.
3. Green methods (of production) which do minimum damage to the planet.
4. Houses, flats, places where people live.
5. Renewal, putting new life into these areas.

B **Trade unions involved in company mobility plans**

1 **Read the following text carefully, and fill in the gaps with the appropriate form (gerund or infinitive). Pay attention to your spelling!**

Trade unions in Europe are [1. taking] action to [2. improve] the sustainability of work-related transport. They are [3. helping] to devise "company mobility plans", which are now under development in various European countries pursuant to regulations [4. obliging] companies of a certain size to [5. develop] mobility plans that include employees’ travel between their homes and the workplace.

The unions emphasise the positive relationship between more environmentally friendly transport modes and the benefits for workers’ health, the quality of the [6. work or working] environment and the creation of jobs in alternative modes of transport or even new jobs altogether (e.g. ‘mobility manager’), not to [7. mention] the economic gains for the company.
In Italy, for example, the three trade union confederations UIL, CISL and CGIL met in 2004 to propose [8. introducing] a “transport voucher”, based on the same principle as the ‘lunch voucher’. This scheme will [9. allow] employers to contribute to their employees’ transport costs by [10. providing] transport vouchers that can be used on all types of public transport, including taxis. This system would [11. help] boost [12. financing] of and demand for public transport, but would not be very costly thanks to the tax exempt status of the amounts in question for both companies and employees.

2 Answer the following questions:

1. It is a plan which looks at the travel needs of a particular company, including employees’ travel to and from work.
2. Because such a plan proposes more energy-efficient methods to meet those needs.
3. This scheme involves employers giving vouchers to their employees which will help pay for public transport, or even taxis.
4. Apart from persuading people not to sue their cars for work, there are tax exemptions for employers and employees.

Working with reading 3

Choosing our future (p. 53)

1 Answer the following questions:

Paragraph 1

1. Because they drive to supermarkets instead of using local shops.
2. People think that it involves sacrifice and suffering – that it is difficult to live satisfactorily if we produce little CO2.
3. An increased sense of community, because you get to know more people by doing more things locally

Paragraph 2

4. By introducing carbon-rationing.
5. We would have a swipe card, which would register how much carbon we were using.
6. Flexibility would be ensured because you could purchase extra permits if you needed.
Paragraph 3
7. We would create a different kind of society, which put quality of life before greedy consumerism.
8. Mark Lynas says it would mean the end of the world: ‘life will very largely not go on at all.’

Paragraph 4
9. Because we live on a unique and wonderful planet
10. Because we need to do something constructive, instead of being fatalistic assuming that it’s not worth making the effort, because it’s too little too late.

2 Summarise the main idea of each paragraph in one or two sentences:

1. People still equate happiness with consumerism, and do not appreciate that a low-carbon lifestyle can be positive.
2. Carbon rationing would improve our lives, and can be introduced easily. This could also be flexible in that we could purchase extra carbon permits if needed. The result would be safer street and a generally better quality of life.
3. Life and society would certainly be different – but if we don’t make these changes, there may be no life at all.
4. A low-carbon society would appreciate the wonders of the planet much more than we do at present, and would look back and realise that we started to do something constructive to save it just in time.

3 Explain the following underlined words or expressions:

1. ... no amount of energetic verbal attacks, criticisms.
2. ... people who live an alternative lifestyle, and who have dropped out of normal society, and are part of a counter-culture (the term hippie derives from the 1960s youth movement in the USA; the men did not shave to show that they did not conform to normal expectations of what was then considered as smart, or respectable).
3. ... the constant pressure to buy new things, which never ends, as there is always something new that you are encouraged to buy (a treadmill is a contraption which goes round and round as a result of human or animal weight, sometimes used to pump water, or even used as an instrument of torture).
4. ... the purchase of items to show off, to demonstrate to others that you can afford to buy expensive things.
5. ... with all its troubles and difficulties (note the alliteration of the original phrase).
6. ... this wonderful gift to be passed on to future generations.
Find a word or expression in the text that could be replaced by:

| ‘marked’ (para. 2) | dramatic |
| ‘system’ (para. 2) | scheme |
| ‘giving up’ (para. 2) | surrendering |
| ‘stopped’ (para. 2) | ceased |
| ‘solidarity’ (para. 2) | ‘we’re all in it together’ |
| ‘restrict’ (para. 3) | constrain |
| ‘legacy’ (para. 4) | inheritance |

Note: The expression used in Paragraph 2, ‘the old Blitz spirit’ refers to the concerted efforts of British people to cooperate and help each other during the bombings that took place in London and elsewhere during the Battle of Britain in 1940.

Working with video 2

A Tale of Two Cities (p. 58)

Transcript

According to the GLA a fifth of all London’s emissions comes from bringing food into town. Trucks, ships and 888 freight flights a day bring food from all over the world.

This is New Spitalfields. It’s the largest fruit and vegetable market in London. London consumes roughly 7 million tonnes of food every year of which 81% is imported from outside the UK

John Clegg, London Fruit & Veg: American red apples, Australian produce, there’s no end to the amount of stuff that comes in from literally all over the world.

John Edwards, Knight’s of London: Now they’re making a hue and cry about the environmental situation but unfortunately it’s just part and parcel of this business and any other businesses.

The giants of the food sector are the supermarkets, which account for 73% of all food sold in London, with produce from all over the world.

By contrast, nearly all the food in Beijing – 70% - is locally produced. This is Xin Fadi, Beijing’s largest food market. It’s 3 km long.

Fruit trader: The imported fruits are too pricey. These are much more affordable for the majority of people.

Although Beijing has twice as many people as London they consume slightly less food - 6.35 million tonnes per year. A third of this is grown around Beijing itself.
Fruit trader: We’ve got pears from Hebei province, and apples from Shanxi and Shandong provinces.

As Beijingers grow in wealth, lifestyles and diets improve. In the past five years their food bill has gone up by almost a billion dollars.

Diner in restaurant: For example I already have a bigger belly, probably because my diet has changed from vegetables to meat. And so my own belly is getting bigger and bigger. Now I understand why Westerners are stronger than us Chinese because they have more meat in their diet.

Waste is a currently a major obstacle to London’s hopes of becoming a sustainable city. Londoners produce about 17 million tonnes of waste per year. Of that, 17.7% is recycled, double the amount from five years ago. But London is still a long way behind its European neighbours. The Germans recycle half their waste, the Dutch two-thirds. 73% of London’s waste goes to landfill sites. But the amount of landfill space is running out. The city authorities have set a target to recycle 35% of all waste by 2015. But people are not yet obliged by law to recycle.

Jim Perkins, Waste Expert, London Remade (business consultancy advising businesses and local governments): There’s no real impetus at the moment for the householder to recycle apart from it being a good thing to do.

The three million tonnes of waste that is recycled in London every year is brought into sorting centres and separated out. Some of it is then burnt in giant incinerators to generate power which is put back in the national grid. But waste experts say London stands no chance of meeting its targets by 2015 unless more facilities like this are available for local councils to work with.

Jim Perkins, Waste Expert, London Remade: There’s not a great deal that local authorities can’t collect as long as there’s somewhere to take it. The creation of this new infrastructure may need up to and including two billion pounds for London alone.

After being recycled, London’s waste paper is sold on to different countries around the world, including China. By contrast China has a tradition of recycling that’s for many both a way of life and a business opportunity. These people are Beijing’s recycling collectors. They scour the city hoping to find rubbish that can be sold to scrap dealers and then recycled. Throughout Beijing there are over 120,000 people recycling rubbish, mostly from poor regions outside Beijing. They earn up to $5 US dollars a day.

Feng Ning, Recycling Yard Owner: People think those collectors are at the very bottom of society, that they are lower than us. In fact they are giving us, society, the whole city, a lot. They should have our respect.

Professor Wang Weiping, People’s Parliament of Beijing: Rubber is taken to Dingzhou city [Hebei]. Glass goes to Handan city. Each year they will transport around 2 million tonnes of waste.

The recyclers move over 2 million tonnes of waste a year. Beijing recycles 30% - half as much again as London. The rest either goes to landfill or is incinerated. What they can’t sell, the recyclers bring to 821 waste collection points dotted all over Beijing. Here waste is compressed and shipped out to landfill sites. But some experts want to approach the problem from a different direction.
Trade unions and the environment

Professor Wang Weiping, People’s Parliament of Beijing: Why not work on producing less rubbish? For example reducing packaging, trying to obtain materials from nearby so they take a shorter journey, re-using and second hand trade. These are all possible ways to reduce the amount of rubbish so we hope in the near future rubbish will decrease. It’s a shame because at the moment rubbish is increasing.

Chen Gang, Deputy Mayor of Beijing: In recent years many people have been able to afford a better lifestyle and that creates a very challenging problem for us. The amount of overall waste, also household rubbish, is increasing. Many of our landfill sites are full and we need to find new ones. China is a developing country. Both recycling and reducing waste are a good direction for the future. It’s a difficult task – we’ll keep working hard on it.

Both Beijing and London won bids to host green Olympics, but both cities are a long way off meeting their targets. Both still rely heavily on fossil fuels for energy. London has improved its transport problems, with less cars on the road, but Beijing is squeezing more and more cars on to already crowded roads. On the other hand, Beijingers still buy most of their food locally, whilst Londoners meals come from across the world. London recycles just twenty per cent of its waste, whereas Beijing recycles 30%. London still wastes a third of its water whilst Beijing is having to bring it in from the South to avoid a major crisis.

While both cities have made some improvements, so far the ambitious targets set for sustainability are not met. But there’s still time. In Dickens’ famous words, will it be the best of times or will it be the worst of times?

Section 1

Food

2 View the first section and list all the produce shown at the two markets under the appropriate headings:

It is difficult to see exactly what is on sale – but use this exercise as an opportunity to guess, and list all the vocabulary for fruit and vegetables the class can think of. In Beijing, there are some items for which we probably don’t have names in English. Below are listed some of the items we can see and recognise, or which we hear about:

<table>
<thead>
<tr>
<th>New Spitalfields Market, London</th>
<th>Xin Fadi Market, Beijing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>Lots of green leafy vegetables, in bundles – difficult to identify</td>
</tr>
<tr>
<td>Apples</td>
<td>(Chinese) lettuce</td>
</tr>
<tr>
<td>Pears</td>
<td>Cabbages</td>
</tr>
<tr>
<td>Pineapples</td>
<td>Citrus</td>
</tr>
<tr>
<td>Lettuces</td>
<td>Plums</td>
</tr>
<tr>
<td>Onions</td>
<td>Pomegranates</td>
</tr>
<tr>
<td>Lemons</td>
<td>Garlic</td>
</tr>
<tr>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td></td>
<td>Pears</td>
</tr>
<tr>
<td></td>
<td>Apples</td>
</tr>
</tbody>
</table>
In London, the market looks modern, and goods (fruit and vegetables) are moved by mechanised means, on pallets, which are lifted by forklift trucks. The market is under cover, in what looks like a big warehouse or shed. It looks very organised.

In Beijing, the stuff is moved by manual labour, rather than by mechanised means. Some of the market is open air. It looks chaotic, but is probably reasonably organised, with stallholders having particular places. Another big difference is the amount of leafy green vegetables, as well as the presence of bicycles.

3 Now view the section again, and supply the missing figures in the transcript below:

See first part of transcript above for answers to this question.

4 Can you give synonyms or explanations for the following terms that appear in the transcript above?

<table>
<thead>
<tr>
<th>Term in transcript</th>
<th>Synonym or explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: trucks</td>
<td>lorries</td>
</tr>
<tr>
<td>freight</td>
<td>cargo, load of goods for transport</td>
</tr>
<tr>
<td>no end to</td>
<td>a constantly increasing supply of</td>
</tr>
<tr>
<td>a hue and cry</td>
<td>angry pursuit, outcry; loud disapproval</td>
</tr>
<tr>
<td>part and parcel</td>
<td>inseparable component</td>
</tr>
<tr>
<td>lifestyles</td>
<td>way people live their lives, things they eat and drink, clothes they wear, habits etc.</td>
</tr>
</tbody>
</table>

5 True or false?
1. False; it also comes in by truck and ship.
2. True
3. False; in London, 73% of food is sold via supermarkets.
4. True
5. False; in fact, they eat just under a half of what people in London eat.
6. True
Section 2
Waste

2. **Now watch the second section of the video. Read the questions before you watch, then try to answer them.**

1. Because it produces 17 million tonnes of waste every year, but recycles a lot less of this than its European neighbours.
2. The Dutch, who recycle two-thirds (66%) of their waste, compared to the Germans who recycle 50%, or a half.
3. Most of it (73%) is buried in landfill sites, which is unsustainable as space will run out.
4. This generates power (electricity which is fed back into the national grid (supply).
5. After recycling, it is sold to different countries, including China.
6. They move over two million tonnes of rubbish per year, and take it to waste collection points.
7. 30% of Beijing’s rubbish is recycled.
8. He suggests that less rubbish be produced in the first place, by buying more locally and using less packaging.

3 **Write a definition of the terms underlined below that occur in this clip:**

1. A sustainable city is one which uses less energy, water and food, by using more green transport, renewable energy sources for power, and insulates buildings. It also creates fewer waste products.
2. These are sites where rubbish is buried.
3. There’s no real encouragement or incentives to recycle.
4. They search in every corner of the city hoping to find rubbish...
5. Both Beijing and London won bids to host Olympic Games which are not damaging or detrimental to the environment, and which do not create a huge carbon footprint.

4 **Fill in the gaps in the grid below according to information given in the conclusions of the video clip:**

<table>
<thead>
<tr>
<th></th>
<th>Beijing</th>
<th>London</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fossil fuels for energy</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Transport / cars</td>
<td>More and more cars</td>
<td>Fewer cars</td>
</tr>
<tr>
<td>Food supply</td>
<td>70% locally produced</td>
<td>From all over the world</td>
</tr>
<tr>
<td>Waste recycling %</td>
<td>30%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Water</td>
<td>Brings water in from South</td>
<td>Wastes a third</td>
</tr>
</tbody>
</table>
A Study the following examples and see if you can explain the difference.

1a. *Remember* and *forget* take the –*ing* form when they refer to an action which happened beforehand.
1b. These verbs take an infinitive when they refer to an action which comes afterwards, or which didn’t happen.

2a. When used with the –*ing* form, the verb *stop* means ‘cease’.
2b. With an infinitive, *stop* means to interrupt one action in order to perform another.

3a. With the –*ing* form, *try* means ‘experiment, and may not have a successful outcome. In this sentence, you will have no difficulty looking through your pockets, but the action may not be successful if you do not find your keys!
3b. With an in infinitive, *try* means ‘attempt’. You may or may not be successful in remembering when you last used your keys.

4. *Like* and *love* take the infinitive when they mean ‘want’ or ‘wish’. When ‘prefer’ is used in a comparison, the gerund is always used.

5. With the –*ing* form, *mean* is the same as ‘involve’. With no infinitive, it means ‘intend’.

6a. With the –*ing* form, *regret* refers to the past.
6b. With the infinitive *regret* is used with the infinitives ‘to say’, ‘to tell’, and ‘to inform’.

7a. With the –*ing* form, *go on* means ‘continue an action’.
7b. With an infinitive, *go on* means ‘introduce a new action’.
Study the following sentences. Some of them contain wrong verb forms. Some sentences are correct. Identify the mistakes, say why they are wrong and rewrite them correctly.

1. I shall always remember meeting you last July.
   (Need to use the –ing form after remember in the past tense, as it refers to something that happened beforehand.)

2. Please remember to send the memo.
   (Need the infinitive after remember as here the action has not yet happened.)

3. Don't forget to pay the gas bill.
   Correct – it hasn’t yet happened

4. You should stop smoking - it's bad for you.
   (Need the –ing form as stop here means ‘to cease’)

5. He stopped his car to fill up with petrol.
   Correct – he interrupted his driving in order to do something else.

6. He welcomed the delegates warmly and then went on to explain the plans for the day.
   Correct – he did one thing and then he did another.

7. I regret to tell you that you have failed your driving test.
   Correct.

8. I regret telling her what I thought, although it annoyed her.
   (Need the –ing form because action refers to something that happened in the past.)

9. I mean to visit Madrid next month.
   Correct.

10. If you don't know his telephone number, try asking the operator for his number.
    (Here the –ing form is necessary, because you can ask, but you may not be successful in that the operator may not be able to give you the information.)
Communication activity 1

To fly or not to fly? (p. 66)

Some useful websites:
http://www.carbonplanet.com/downloads/clearing_the_air.pdf
Several of the quotes come from this article:
http://www.guardian.co.uk/travel/2006/may/20/ecotourism.guardiansaturdaytravelsection
http://www.foe.co.uk/resource/briefings/aviation_in_the_euets.pdf

Role play

Here are some notes to help you get started. These can be photocopied and handed to each participant.
Trade union environment officer
You present the new environment policy that your union wants the company to adopt, which is in line with your union’s national objective towards a greener workplace; in terms of travel, this means using the train rather than the car or plane for business travel, but with safeguards for members’ time.
You want to protect your members’ working conditions, and argue that extra travel time for business (not commuting to and from work) must be seen as part of normal paid working time.
You are keen to protect your members’ right to first class rail travel.
You do not agree with the Chief Accountant that the company should use cheap airlines like Ryanair, because the workers in that company are not encouraged to join unions.

Head of International Relations Dept.
You foresee problems if this policy is adopted, because the company is involved in two major new projects with organisations in two of the new member states (choose two), and which therefore involve a number of transnational meetings. In addition, there is a new initiative with a trade union in Latin America which involves exchange visits for groups of trade unionists.

Accountant
You want to balance the books, and are concerned that business travel is getting more and more expensive, especially since current agreements state that first class rail travel will be reimbursed if used instead of flights. Some of these agreements are out of date in your view, because now flying can be very cheap, especially between certain destinations. You are an advocate of low-cost air travel which saves time and money.

Manager
You think it is a good idea to be seen as green organisation, so you like the idea from a Public Relations point of view, but need to be convinced that it is a cost-effective measure which will not adversely affect the work of your organisation. You think that some of the meetings are maybe not necessary, and can be replaced by conference telephone calls, and video-conferencing. You ask the Accountant to find out how much it would cost to install video-conferencing facilities.
You support the transnational projects, but don’t want people to spend too much time travelling. Trains are more efficient and economical in some countries than in others.
You introduce the idea of encouraging car-sharing amongst employees for travel to and from work.
Vocabulary

**Note to tutor:** This list could be distributed to participants in advance of a course so that they could familiarise themselves with some of the important terms they are likely to use.

**Note to learner:** After you have completed the unit, check that you understand the meanings and use of all these words.

| 1. acid rain | 38. icecap / ice floe |
| 2. agrochemicals | 39. incinerate (to); incinerator |
| 3. air-conditioning | 40. insulate (to); insulation |
| 4. aspirated vehicles | 41. integrated transport system |
| 5. audit (eco-/energy/ environmental) | 42. integrated waste management |
| 6. awareness | 43. ISO (International Standards Organization) |
| 7. battery charger | 44. landfill (sites) |
| 8. benchmarking | 45. lifecycle |
| 9. best (environmental) practice | 46. low carbon economy / lifestyle |
| 10. bio-degradable | 47. mobility plan |
| 11. biodiversity | 48. offset (to); carbon offsets |
| 12. biofuels | 49. ozone (layer) |
| 13. biomass | 50. packaging |
| 14. carbon cards | 51. photovoltaic (cells, panels, systems) |
| 15. carbon footprint | 52. pollution |
| 16. carbon rationing | 53. public transport |
| 17. car-sharing | 54. rainforest |
| 18. charging bays | 55. ration (to); carbon ration(ing) |
| 19. clean coal technology | 56. recycle (to) |
| 20. congestion charging | 57. reduce (to) |
| 21. conserve (to); conservation | 58. renewable |
| 22. commute | 59. re-use |
| 23. desertification | 60. rubbish |
| 24. dumping | 61. smog |
| 25. emission | 62. solar (energy) |
| 26. environmental management system | 63. stakeholder |
| 27. environment rep | 64. standby |
| 28. fair trade (agreements) | 65. sustainable development |
| 29. gas-guzzlers | 66. sustainability |
| 30. global warming | 67. SUV (sports utility vehicle) |
| 31. greenhouse gas (GHG) | 68. tackle |
| 32. greening | 69. target |
| 33. grey water | 70. toxic |
| 34. grid | 71. transport voucher |
| 35. heating | 72. usage |
| 36. hydrocarbons | 73. unsustainable |
| 37. hybrid vehicle | 74. waste |