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MINISTRSTVO ZA ŠOLSTVO IN ŠPORT

Naložba v vašo prihodnost
OPERACIJO DELNO FINANCIRA EVROPSKA UNIJA
Evropski socialni sklad

STROKOVNA TERMINOLOGIJA V TUJEM JEZIKU - ANGLEŠČINA

KATJA HROVAT

Višješolski strokovni program: Varstvo okolja in komunala
Učbenik: Strokovna terminologija v tujem jeziku
Gradivo za 1. letnik

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Strokovni svet RS za poklicno in strokovno izobraževanje je na svoji____ seji dne ____ na podlagi 26. člena Zakona o organizaciji in financiranju vzgoje in izobraževanja (Ur. l. RS, št. 16/07-ZOFVI-UPB5, 36/08 in 58/09) sprejel sklep št._____ o potrditvi tega učbenika za uporabo v višješolskem izobraževanju.

Gradivo je sofinancirano iz sredstev projekta Impletum 'Uvajanje novih izobraževalnih programov na področju višjega strokovnega izobraževanja v obdobju 2008–11'.
Projekt oz. operacijo delno financira Evropska unija iz Evropskega socialnega sklada ter Ministrstvo RS za šolstvo in šport. Operacija se izvaja v okviru Operativnega programa razvoja človeških virov za obdobje 2007–2013, razvojne prioritete 'Razvoj človeških virov in vseživljenjskega učenja' in prednostne usmeritve 'Izboljšanje kakovosti in učinkovitosti sistemov izobraževanja in usposabljanja'.

KAZALO VSEBINE

PREDGOVOR

Učbenik, ki je pred vami, je namenjen študentom višješolskega programa Varstvo okolja in komunala, pa tudi vsem, ki vas to strokovno področje zanima.
Učbenik je zasnovan tako, da razvija različne jezikovne zmožnosti, kot so bralno razumevanje, govor in pisno sporočanje, bogati besedišče ter usmerja k samostojnemu delu. Besedila so avtentična, vendar prilagojena različnemu predznanju študentov.
Da bo zunanja podoba privlačna in aktivnost pri posamezni nalogi jasna že vnaprej, sem uporabila ikone, ki se pojavljajo v vseh enotah:


samostojno delo, delo v paru ali v skupinah


avtentično besedilo, ki razvija bralno razumevanje


naloge, namenjene usvajanju in/utrjevanju besedišča


naloge, ki usmerjajo k nadaljnjemu samostojemu delu


končni povzetek posamezne lekcije ter preverjanje naučenega

Upam, da bo učbenik dobrodošel pripomoček pri predmetu Strokovna terminologija v tujem jeziku in da boste pridobljeno znanje s pridom uporabljali pri svojem profesionalnem delu. Ker je pot do znanja ponavadi zelo zavita, cilj na koncu poti pa je izredno mamljiv, vam želim, da bi vam ta učbenik pomagal premagati vsaj kakšen ovinek oziroma oviro na tej poti.

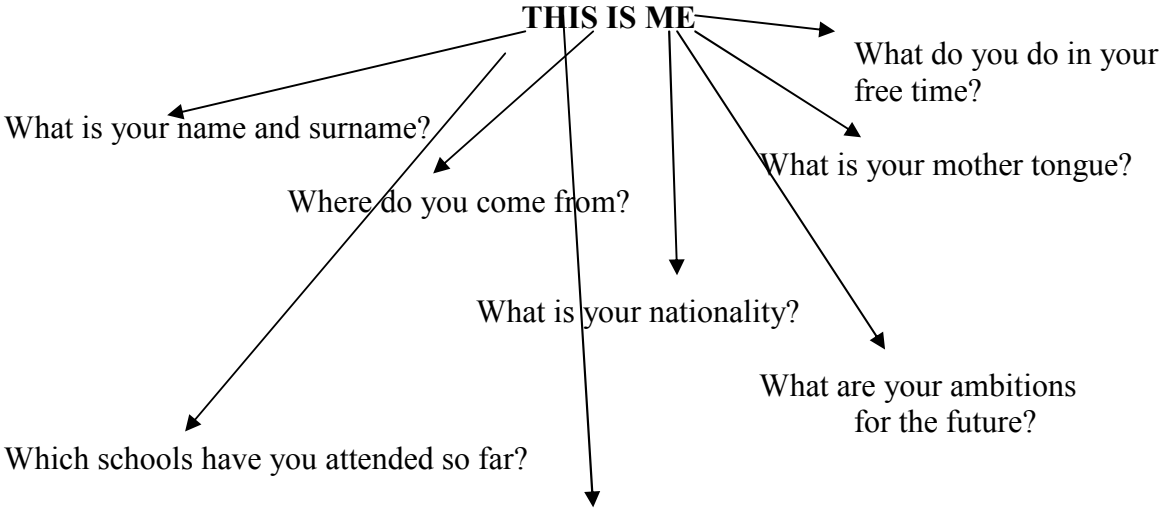
Hvala vsem, ki ste kakorkoli pripomogli k njegovemu nastanku, še posebej gospe mag. Zvonki Krištof za vzpodbudo ter vse nasvete in mojemu partnerju Rafaelu, sinu Anžetu in mojima staršema za vso potrpežljivost ter pomoč.

1 THE RIGHT PERSON FOR THE RIGHT JOB

In unit 1 you are going to study the profile of an engineer in general and, more particularly, the profile of an environmental engineer. You will revise key personal presentation questions and think about your attitude to English and yourself as a future environmental engineer. You will also be encouraged to do some independent work.

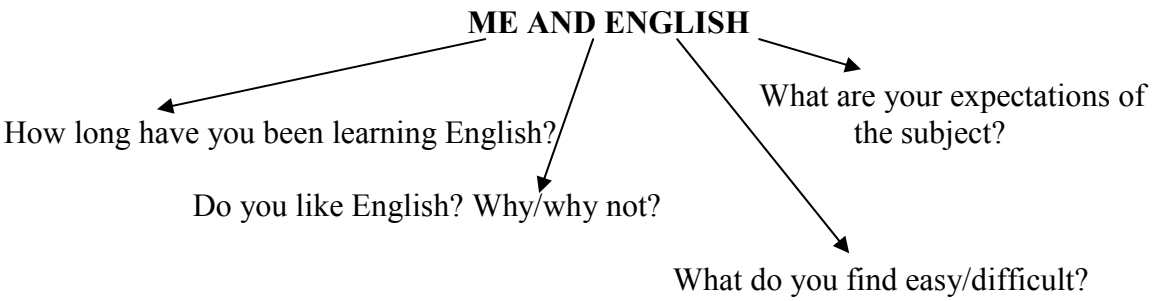
1.1 THIS IS ME

Think about yourself and your life.
Answer the questions and introduce yourself to fellow students.



1.2 ME AND ENGLISH

Think about your attitude to English and answer the questions. Discuss the answers with fellow students.



1.3 BEING AN ENVIRONMENTAL ENGINEER

How do you see the profile of an environmental engineer? What is her/his typical job like? Why did you decide to study environmental engineering? Discuss with fellow students.
MY DISCUSSION NOTES:

Read the profile of an environmental engineer and decide if statements 1-6 below are true (T) or false (F). Correct the false ones.

ENVIRONMENTAL ENGINEER
An environmental engineer works very closely with industry and companies to ensure that they are in compliance with all environmental regulations and laws. In addition to just working to ensure compliance an environmental engineer also works with the company to develop less costly methods of production that will still be effective and within regulations. This function is very important for companies as decreasing the cost of production is important in overall revenue for the company.

An environmental engineer spends a considerable amount of time keeping up-do-date with current changes to environmental regulations and codes. He or she also must be familiar with current trends in businesses and solutions that other industries are using to remain within requirements while decreasing production costs. Attending seminars, workshops and ongoing training is important for an environmental engineer. The engineer must also be able to effectively communicate this information to management teams within the various industries and help them establish plans to include new, environmentally-friendly way of increasing production and decreasing costs.

Environmental engineers are often required to write reports on the condition of various types of environmental hazards or potential environmental hazards. After completing reports the engineer is often retained to supervise the clean up or decontamination of the area based on the report. The environmental engineer may also have to supervise the clean up to be sure it is done in accordance with all regulations. Risk assessments of clean up sites, potential hazards, development of new manufacturing plants or new development areas are all completed by environmental engineers.

Common work activities include:

- Performing various soil, air or water tests to determine the risk of contamination or the degree of contamination that has occurred.
- Writing reports and proposals developed from data collected on the various environmental issues in a given area.
- Developing site clean-up plans, monitoring their completion and adherence to environmental regulations.
- Meeting with clients to formulate more cost effective and environmentally friendly processing methods or waste disposal methods.
- Meeting with government agencies to coordinate services in times of environmental accidents or catastrophes.
- Travelling to various construction or industry sites as requested.

Vir: http://www.jobprofiles.org/conenvironmental.htm (22. 2. 2011)

1. Environmental engineers have to be acquainted with currect legistation and regulations. T
2. They also try to develop economical but still efficient production methods.
3. Environmental engineers have to attend seminars to keep up to date with changes and developments of environmental legislation.
4. Environmental engineers investigate only already existing environmental dangers.
5. Environmental engineers also deal with contamination sites.
6. Environmental engineers work only in the office.

Explain the meanings of the words/phrases underlined in the text. Then provide Slovene translations. Use a dictionary to help you. You can also use on-line dictionaries. Here are some links to help you:

- http://www.ldoceonline.com/
- http://oxforddictionaries.com/
- http://evroterm.gov.si/

PHRASE IN ENGLISH	EXPLANATION/ SYNONYM	SLOVENE TRANSLATION
1. environmental regulations (n)	Law/rule/order related to the environment	Okoljski/okoljevarstveni predpisi
2. environmentally-friendly (adj.)		
3. supervise (v)		
4. risk assessments (n)		
5. contamination (n)		
6. waste disposal (n)		
7.		

PHRASE IN ENGLISH	EXPLANATION/ SYNONYM	SLOVENE TRANSLATION
8.		
9.		
10.		

Look up any other words that you have not understood (7 - 10).

What is your reaction to the profile of an environmental engineer? Are you surprised by any of the given facts?
Compare your answers about environmental engineers from the beginning of the unit and the profile you have read. Are there any significant differences? Discuss.

Browse the internet or any other literature to check companies in Slovenia and abroad that employ or would employ environmental engineers. Check if there are any vacancies. Explain in at least 60 words and discuss with fellow students.

In unit 1 you have talked about yourself and discussed the profile of an environmental engineer. You have trained reading comprehension and skills of speaking, reading and writing, enhanced your knowledge of vocabulary, learnt to use a dictionary and checked job possibilities.

PROGRESS CHECK

1. Introduce yourself to your fellow students.

2. Is your attitude to English positive or negative? Why?

3. What are common work activities of an environmental engineer?

4. Do you know any Slovene environmental regulations?

5. Why did you decide to study environmental engineering?

2 UTILITIES MANAGEMENT COMPANIES

In unit 2 you are going to compare utilities management companies in Slovenia and abroad. You are also going to study new "environmental" vocabulary and develop your reading, speaking and writing skills.

Which utilities management companies provide services in your neighbourhood? How important are they for you? Could you live without them? Why/why not? Discuss in groups.
MY DISCUSSION NOTES:

2.1 KOSTAK KRŠKO – SLOVENE UTILITIES MANAGEMENT COMPANY

Read the presentation of Kostak Krško, Slovene utilities management company and answer the questions 1-6 below. Provide short answers.

Kostak Krško today is one of the leading utilities management companies in Slovenia. It is a contemporary company engaged in a variety of business activities. Public services have been complemented by market activities, which now represent approximately 80% of the company's income.

Some of the business activities

Water Supply
We manage and maintain more than 500 km of water system comprising 100 different units such as pumps and reservoirs. We supply drinking water to more than 85% of residents of the Municipality of Krsko. We maintain 6 water systems all together.

Waste Management
The importance of having a responsible attitude towards the environment can no longer be under estimated. At Kostak we believe a responsible and caring approach starts with the individual and therefore we put great emphasis on raising awareness of how to preserve the environment. With this in mind, in the Municipality of Krško we organise a comprehensive system of waste processing , from collection through to disposal and recycling. Since 2002 we have managed a system to separate out waste paper, glass, plastics and organic waste and to materials that can be recycled, saving on primary material and energy and contributing to a cleaner environment. We now operate 120 units in the Krsko area, known as `ecological islands', from where we organise the collection of separated waste. More than 30% of all waste in the

region is separated and collected in this way. Once processed at the Kostak Waste Collection Centre in Stari Grad the separated waste is transferred to the final user of those raw materials. Organic waste is transformed into compost which is a natural manure. Other waste is transported to a regional waste collection centre, CEROD in Novo mesto. At Kostak, we not only instigate effective and modern waste management, but we also take care of further generations so that they will be able to live in a healthy and clean environment.

Wastewater Treatment

Ensuring our rivers and lakes are clean is one of the most important ways in which we can maintain a healthy environment. Well managed waste water systems result in cleaner waters and provide a viable habitat for wildlife. Waste water and run-of rain water is channelled through the sewage system and processed via waste water treatment plants. The plants purify the water allowing clean and pure water to return to nature. Kostak manages and maintains over 110 kms of sewage system as well as two wastewater treatment plants. The first is in the historic town of Kostanjevica, where an existing sewage system was connected to a newly built collector. The second waste water treatment plant is in Brestanica and purifies waste water from the sewage collected from Brestanica and Senovo. Kostak are currently participating in the construction of the sewage system of Krško and common cleaning device of Vipap Videm Company Krško.

Vir: prirejeno po http://www.kostak.eu/Business_Activities.htm (22. 2. 2011)

1. Does Kostak Krško provide public services? Yes, it does.
2. What are the main business activities of Kostak Krško?
3. What does their waste process system include?
4. When did they set up a waste separation system? What do they separate?
5. What is CEROD?
6. How many wastewater treatment plants do they manage and where are they situated?

The words in the box have been taken from the text. Use them in sentences 1-6. Not all are used. Use a dictionary to help you if necessary.

maintain, reservoirs, preserve, ~~recycling~~, raw material, manure, ecological, sewage, purify

1. Recycling is a very up-to date and environmentally-friendly waste management system.
2. Organic waste turns into compost which is a natural _____.
3. It is important to _____ a healthy environment for future generations.
4. "_____ islands" are places where waste is separated.
5. The company _____s 500 kilometres of water and sewage systems.
6. _____ and pumps are parts of a water-supply system.

2.2 THAMES WATER – BRITISH UTILITIES MANAGEMENT COMPANY

Read the presentation of Thames Water, the UK´s biggest wastewater service company. Then, on the basis of the text, fill in the gaps from 1-6 with appropriate numbers.

We are the UK´s biggest wastewater service company. Every day, we supply 2,600 million litres of tap water to 8.7 million customers across London and the Thames Valley.

OUR BUSINESS

- UK's largest water and wastewater services provider
- 13.8 million customers
- 4,600 employees
- One of the cheapest providers, with un-metered customers paying an average of 88p per day, and metered customers paying an average of 73p per day
- Kemble Water Limited, a consortium of institutional investors managed by the Macquarie Capital Funds (Europe) Limited, acquired Thames Water on 1 December 2006

WATER SERVICES

- 8.7 million clean water customers in London and the Thames Valley
- 2,600 million litres of drinking/tap water supplied per day
- Operation and maintenance of 100 water treatment works, 30 raw water reservoirs, 288 pumping stations and 235 clean water service reservoirs
- Our tap water costs less than a tenth of a penny per litre
- Drinking water quality is meeting 99.98 per cent of stringent tests
- Half a million drinking water quality tests undertaken each year. We carry out over 400,000 tests per year to ensure our drinking water meets stringent UK and European standards.

SEWERAGE SERVICES

- 13.8 million wastewater customers include Beckton, in East London, which is the largest works in Europe.
- 349 sewage treatment works treating 2,800 million litres of sewage per day
- 43,500 miles of sewer, 2,530 pumping stations and 1.2 million manholes
- Two sludge-powered generators and 19 combined heat and power plants generating 187 GWh of renewable electricity making us the biggest generator of 'green power' within the M25.
- All wastewater treatment facilities are currently operating within Environment Agency compliance guidelines

Vir: prirejeno po http://www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/536.htm (22. 2. 2011)

Thames Water has:

1. 13.8 million customers
2. _____ employees
3. _____ litres of tap water supplied every day
4. _____ sewage treatment works
5. _____ pumping stations
6. _____ combined heat and power plants

Match the columns A and B to make phrases used in the text. Use a dictionary to help you if necessary.

A	B
1. wastewater	____ litre
2. treatment	____ water
3. per	____ produce
4. drinking	____ electricity/energy
5. renewable	__1_ company
6. generate	____ works

Compare both utilities management companies. Where would you like to work as an environmental engineer? Why? What are the advantages and disadvantages of working in either of the companies? Put down ideas in the table and compare them with fellow students.

COMPANY	ADVANTAGES	DISADVANTAGES
Kostak Krško		
Thames Water		

In unit 2 you have compared utilities management companies where you are likely to work as an environmental engineer. You have trained reading comprehension and skills of speaking and writing. You have learnt new vocabulary and practised the use of dictionaries.

PROGRESS CHECK

1. Which services do utilities management companies provide?
2. What does waste management include?
3. What does a water supply system consist of?
4. Is drinking water in Slovenia a synonym of tap water?
5. Would you ever consider working abroad? Why/Why not?

3 ENVIRONMENTAL MATTERS

In unit 3 you are going to discuss the most worrying environmental problems. You are going to learn key vocabulary and practise your speaking and reading skills. You will be expected to use a dictionary and do some independent research.

3.1 WASTE MANAGEMENT

Comment on the picture. How much do you contribute to the world as seen in the picture? Discuss with fellow students.

Picture 1: Flooded by waste?
Vir: bethaniam.glogster.com/Environmental-matters/ (23. 2. 2011)

Read the dialogue between a journalist and an environment expert responsible for environmental issues in a municipality.

A: journalist **B: municipality environmental expert**

A: How do you **dispose of** the **waste** in your municipality?
B: We send 70% to the **landfill site**, approximately 30% is recycled. We try to **recycle** as much as possible. Plastics are the most problematic material since they are not **biodegradable**.
A: How much plastics do you recycle?
B: We recycle polyethylene by melting it down. After a long process the material is then used for carrier bags in supermarkets.
A: Most carrier bags are not **environmentally-friendly**, are they?
B: Yes, that is right. They are not **recyclable**. That is why shops are introducing paper bags that can be recycled.
A: Since the EU and consequently the government introduced a new landfill tax, we are planning to build an incineration plant to reduce landfilling. **Incineration** is, despite carbon monoxide that is produced in the process, still less **harmful** to the environment than landfilling.
A: Are the EU and government environmental standards tough?
B: Yes, quite. And environmental **legislation** is getting tougher and more complex each year. They want us to reduce the amount of waste, recycle and save as much **raw materials** as possible on a national level.
A: What happens if you exceed the limits?
B: We have to pay heavy fines.

Translate the words in bold to Slovene.Then match them with appropriate dictionary definitions. Use a dictionary to help you if necessary.

ENGLISH WORDS/PHRASES	SLOVENE TRANSLATIONS
1. dispose of	
2. waste	odpadki
3. landfill site	
4. recycle	
5. recyclable	
6. biodegradable	
7. environmentally-friendly	
8. incineration	
9. harmful	
10. raw materials	

DICTIONARY DEFINITIONS

_____ (n.) the basic material from which a product is made
_____ (v) destroy (something, especially waste material) by burning
_____ (adj.) able to be recycled in the future, cf. recycled
_____ (adj.) capable of being decomposed by bacteria or other living organisms and thereby avoiding pollution
___2___ (n) litter, rubbish, garbage, trash (inf.), usually by-product; cf. waist
_____ (v) convert (waste) into reusable material
_____ (n) a place where waste material is disposed of, especially by burying
_____ (adj.) causing or likely to cause harm, the opposite of harmless
_____ (v) to get rid of something, especially something that is difficult to get rid of, cf. Waste disposal (n)
_____ (adj.) not harmful to the environment

Vir: http://oxforddictionaries.com/ (6. 3. 2011)

Use appropriate "environmental" vocabulary to fill in the gaps. The first letters are given to help you.

1. Most types of paper are recyclable. It can be recycled after use.
2. I try to be as en_____-fr_____ as possible: I use public transport, separate waste and try to cut down on the amount of waste I produce.
3. SYSAV is an in_____ plant in Malmö, Sweden is capable of handling 25 metric tons (28 short tons) household wa_____ per hour.
4. The Landfill Directive 1999/31/EC obliges Member States to reduce the amount of bio_____waste that they landfill to 35% by 2016, which will significantly reduce the problem of methane production in la_____s.
5. Iron and crude oil are important ra_____ materials.

Browse the internet or any other literature to check how your municipality deals with your waste. Where does it go once it leaves your house? Check what the situation with waste management is like in Slovenia. Explain in at least 60 words and discuss with fellow students.

You might need to use this internet link or any other:

- http://www.mop.gov.si/si/delovna_podrocja/odpadki/ (6. 3. 2011)

3.2 AIR & WATER & GROUND POLLUTION

Comment on the statements. What is your reaction as a future environmental engineer? Discuss with fellow students.

- "In Mexico City, Tehran, Kolkata, Bangkok, Shanghai, and hundreds of other cities, the air is no longer safe to breathe. In some cities, the air is so polluted that breathing is equivalent to smoking two packs of cigarettes per day." (Lester Brown, Mobilizing to Save Civilization)

Vir: http://www.grinningplanet.com/6001/environmental-quotes.htm#air (6. 3. 2011)

- Pollution should never be the price of prosperity." (Al Gore, in a 2000 presidential-campaign speech)

Vir: http://www.grinningplanet.com/6001/environmental-quotes.htm#pollution (6. 3. 2011)

Match the headings with appropriate paragraphs. Use a dictionary to help you if necessary.

3.2.1 Air pollution

Picture 2: Is the Earth going to suffocate?
Vir: http://www.sustainable-environment.org.uk/Images/pollution.gif (27. 3. 2011)

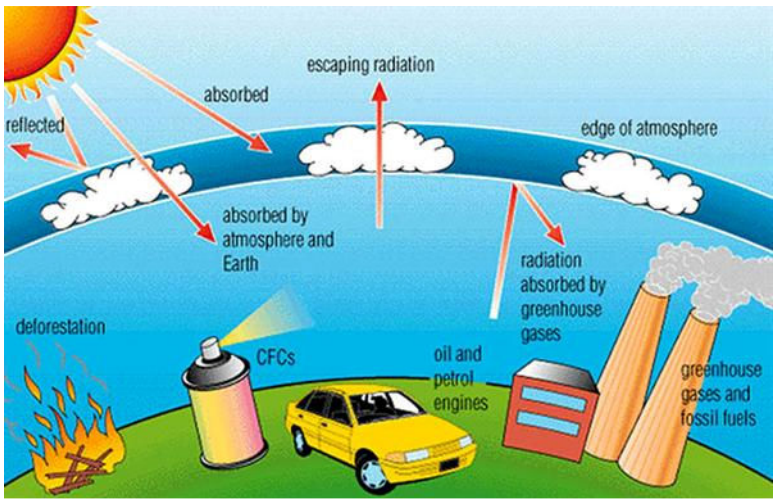
ACID RAIN
TRAFFIC
THE GREENHOUSE EFFECT
~~**HOLES IN THE OZONE LAYER**~~

HOLES IN THE OZONE LAYER

- Ozone is a vital sunscreen gas that protects us from UV radiation.
- Destroying it in the stratosphere may have serious consequences for life on the Earth.
- For example, cases of skin cancer and allergies are becoming more frequent.
- Ozone-damaging gases (e.g. CFCs - chlorofluorocarbons) that are in aerosols, packaging, building materials, etc. should no longer be used.
- Ozone-friendly products should only be used.

- It is a gradual warming of the atmosphere, also known as global warming.

- It is noticeable in higher temperature in the last years
- It is the result of producing too much greenhouse gases, especially carbon dioxide (CO2) by burning fossil fuels (oil, natural gas, coal).
- Greenhouse gases trap the heat that comes from the sun and cannot go back into space.
- Greenhouse gases act much like the glass panes in a greenhouse.
- As a result the temperature rises causing melting of the ice caps, especially at the South Pole, rising of sea-level and, consequently, coastal flooding.



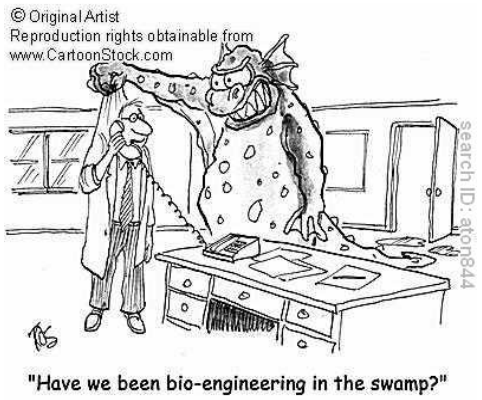
Picture 3: The Greenhouse Effect
Vir:
http://marchantscience.wikispaces.com/file/view/the_greeenhouse_eeffectt.jpg/77222411/the_greeenhouse_eeffectt.jpg (16. 3. 2011)

- Ground-level ozone as a greenhouse gas created by high concentrations of pollution and daylight UV rays at the Earth's surface: can harm lung function and irritate the respiratory system and result in premature death, asthma, bronchitis and heart attack.

- When burning fossil fuels, sulphur dioxide (SO2) is produced and released into atmosphere.
- Sulphur dioxide dissolves in rain water as it is soluble.
- Thus acid rain is formed.
- It damages or even kills trees, damages statues and buildings, pollutes drinking water, harms animals and plants.

- The increase of car use causes traffic jams (traffic congestion) and produces harmful exhaust fumes.
- The use of catalytic converters that convert harmful pollutants into carbon dioxide, water vapour and nitrogen and fitted in the exhaust systems of cars has reduced but not done away with air pollution.
- Another positive change was the use of unleaded petrol.
- One of the solutions for reducing traffic is providing better public transport with subsidised fares.
- In towns, especially in winter, there is a lot of smog (smoke+fog) that already presents a threat to people´s health.

3.2.2 Water pollution



Picture 4: The effects of modern technology...
Vir: http://www.cartoonstock.com/directory/c/creature_from_the_black_lagoon.asp (23. 2. 2011)

CONSEQUENCES
POSSIBLE SOLUTIONS/IMPROVEMENTS
MAJOR POLLUTANTS

- One of the major pollutants are people by using too much washing powders and other substances containing chemicals and acids
- Furthermore, farmers spray pesticides on their crops and fishermen destroy marine life by overfishing.
- Another important pollutant is industry by discharging waste water containing acids, chemicals, paints directly into rivers, lakes.
- In Slovenia in 2009 approximately two thirds of waste water discharged from public sewage system was treated.

Table 1: Waste water by sources of pollution, Slovenia, 2009

Waste water pollution sources -Total	1000 m^3
Waste water from agriculture, forestry and fishing	542
Waste water from industrial activities - Total	17,647
Mining and quarrying	1,735
Manufacturing	14,696
Electricity supply	827
Construction	389
Waste water from other activities	9,288
Waste water from households	63,445
Other waste water	77,555
Waste water from agriculture, forestry and fishing	542

Vir: http://www.stat.si/eng/novica_prikazi.aspx?id=3320 (17. 3. 2011)

- Drinking water is polluted: much of it does not come up to acceptable standards anymore.
- Oil leakages and spills of crude oil, mainly from tankers, are responsible for long-lasting damaging pollution of the coast and the sea.

- ❖ Many animals are endangered and already on the verge of extinction, e.g. whales
- ❖ Pesticides enter the food chain thus having a negative effect on people´s health.

- ❖ Heavy fines should be introduced for major pollutants.
- ❖ The use of certain pesticides should be banned or limited.
- ❖ Sewage systems should be improved.
- ❖ More purification plants/effluent treatment plants should be built.

3.2.3 Ground pollution

Picture 5: Modern waste management?
Vir: http://www.midvaal.gov.za/images/Photos/Ground_pollution.jpg (27. 3. 2011)

RECYCLING
WASTE
DESTRUCTION OF THE EARTH´S LUNGS

- ❖ The production of household waste (=litter, rubbish, garbage,*trash) is increasing.
- ❖ It is necessary to introduce proper waste collection and disposal systems: separate paper, plastic, glass, organic waste on "green islands"
- ❖ Waste separation reduces the amount of waste for landfilling on landfills and enables recycling

* informal

- ❖ The most serious threat is deforestation (excessive cutting of forests for heating, making space for farming and raw material for wood industry).
- ❖ Destruction of rainforest which provides the supply of oxygen is a burning issue nowadays.
- ❖ It is important to start reforestation (planting trees), especially on bare land, to prevent erosion.

- ❖ It is a process of creating new products from the old ones.
- ❖ Specialised recycling centres recycle mainly plastics, glass and paper.
- ❖ Only recyclable materials can be recycled, most of them is not bio-degradable.

Use appropriate words from the box to complete the sentences 1-5. Use a dictionary and the text above to help you if necessary. Not all words are used.

separated, pollute, ~~discharge~~, crude, exhaust, litter, unleaded, islands, layer, purification

1. Factories are not allowed to <u>discharge</u> waste water into the lakes. It must be treated in a _____ plant first.
2. Cars produce _____ fumes that are directly responsible for the greenhouse effect and acid rain. More _____ petrol should be used to minimize the damaging consequences.
3. _____ oil spilled from tankers can destroy a sensitive eco-system.
4. A notice on the notice board: We kindly inform all the inhabitants of our municipality that waste should be _____ (plastics, paper, glass, organic) on green _____ to reduce landfilling and increase recycling.
5. A near synonym of the word "waste" is _____.

Form new words from the ones given in brackets. Use a dictionary and the text above to help you if necessary.

1. Many animal species are <u>endangered</u> (danger). They are on the verge of _____ (extinct).
2. Our municipality is building a new effluent _____ (treat) plant.
3. All cars must use _____ (lead) petrol.
4. Glass is not bio - _____ (degrade) > it does not break naturally in the process of rotting.
5. Paper is _____ (recycle) so it can be recycled.

Do you separate waste on "green" islands? Is any of it recycled? Where? Describe in at least 60 words. Make enquiries if necessary.

Here is a recycling survey to fill out to check how environmentally-conscious you are. Find out how well you recycle, reduce, and re-use at home. The results are at the end of the unit.

1. If you take more food than you can eat, do you throw the leftovers in the trash? YES/NO
2. Do you buy packed lunches (crisps, etc) for school lunch? YES/NO
3. Do you use paper cups and plates for cookouts or picnics? YES/NO
4. Do you throw away aluminium cans or plastic bottles? YES/NO
5. Do you use just one side of your writing paper? YES/NO
6. If you make a mistake when writing or drawing, do you throw away your piece of paper and get a new one? YES/NO
7. When you see papers on the floor or ground do you leave them there? YES/NO
8. Do you buy lots of books and magazines instead of using the library? YES/NO
9. Do you ask for or take a bag when buying small things like candy or gum? YES/NO
10. Do you buy juice or chips in single serving packages? YES/NO
11. Do you use paper towels for drying your hands or cleaning up spills? YES/NO
12. Do you leave the light on in your room when you're not there? YES/NO
13. Do you leave litter lying around your home? YES/NO
14. Do you throw away broken crayons? YES/NO
15. Do you throw away clothes you've outgrown? YES/NO

Vir: prirejeno po http://www.dnr.state.wi.us/org/caer/ce/eek/earth/recycle/recyquiz.htm (16. 3. 2011)

Discuss the meaning of the diagram below. What message is it trying to convey? Do you agree with it? Why/why not?

Picture 6: The Three R´s about the Environment
Vir:
http://img2.prosperent.com/images/250x250/rlv.zcache.com/reuse_reduce_recycle_sticker-p217385762953935076tdcj_400.jpg (27. 3. 2011)

In unit 3 waste management and different types of pollution with reasons, possible consequences and solutions were discussed. You have trained reading comprehension and skills of speaking and writing, enhanced your knowledge of vocabulary and practised to use a dictionary.

PROGRESS CHECK

1. What is a landfill site?

2. What happens to biodegradable waste naturally?

3. What are the consequences of the greenhouse effect?

4. Where should waste water be treated before it is discharged to a river?

5. Are you environmentally-conscious? Why/Why not? How can this be observed in your every-day life?

Here are the results of the surveys:
You´ve got _____ out of 15 earth-friendly “NO” answers.
If you have 10 or more "no" answers, congratulations, you are really helping conserve resources.

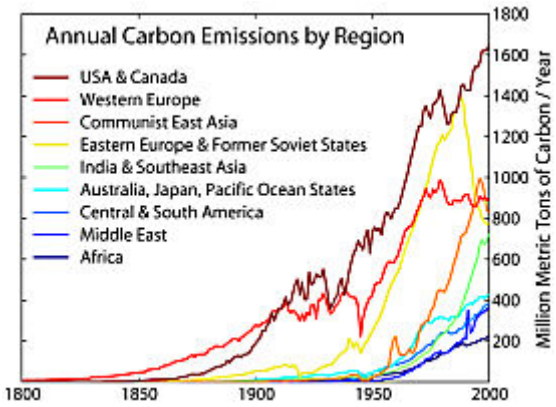
4 ECO READING

In unit 4 you are going to improve your reading and speaking skills and enhance your "eco vocabulary". The topics of authentic reading comprehension texts are all related to ecology and environment.

4.1 WHAT IS THE KYOTO PROTOCOL?

Read about the Kyoto protocol and answer the questions 1-6 below by choosing the most appropriate answer A, B or C.

The Kyoto Protocol was an agreement negotiated by many countries in December 1997 and came into force with Russia's ratification on February 16, 2005. The reason for the lengthy timespan between the terms of agreement being settled upon and the protocol being engaged was due to terms of Kyoto requiring at least 55 parties to ratify the agreement and for the total of those parties emissions to be at least 55% of global production of greenhouse gases. The protocol was developed under the **UNFCCC** - the United Nations Framework Convention on Climate Change.
Participating countries that have ratified the Kyoto Protocol have committed to cut emissions of not only carbon dioxide, but of also other greenhouse gases, being:
Methane (CH_4)
Nitrous oxide (N_2O)
Hydrofluorocarbons (HFCs)
Perfluorocarbons (PFCs)
Sulphur hexafluoride (SF_6)
If participant countries continue with emissions above the targets, then they are required to engage in emissions trading; i.e. buying "credits" from other participant countries who are able to exceed their reduction targets in order to offset.
The goals of Kyoto were to see participants collectively reducing emissions of greenhouse gases by 5.2% below the emission levels of 1990 by 2012.
While the 5.2% figure is a collective one, individual countries were assigned higher or lower targets and some countries were permitted increases. For example, the USA was expected to reduce emissions by 7%. This chart gives you an idea why different countries were apportioned different targets:



Graph by Robert A. Rohde

India and China, which have ratified the Kyoto protocol, are not obligated to reduce greenhouse gas production at the moment as they are developing countries; i.e. they weren't

seen as the main culprits for emissions during the period of industrialization thought to be the cause for the global warming of today.
This is a little odd given that China is about to overtake the USA in emissions, but take into account the major differences in population and that much of the production in these countries is fuelled by demand from the West and influence from the West on their own culture. As a result of this loophole, the West has effectively outsourced much of its carbon emissions to China and India.
This phenomenon, whether intended or coincidental is a major hole in the Kyoto Protocol.

Kyoto - success or failure?
The Kyoto Protocol, while well intentioned, would appear to be doomed to failing its objectives even before the 2008-2012 averaging period commences. Carbon dioxide levels in the atmosphere are rising at a frightening rate with no sign of slowing. Global temperatures are continuing to rise.
The science behind Kyoto was shaky due to the limited availability of crucial data and knowledge at the time; particularly in regard to positive feedback loops in nature being revealed that amplify warming and prevent carbon dioxide from being absorbed. Scientists studying global warming are finding Nature fighting back in ways they never contemplated daily.
Without the USA ratifying the protocol or recently emerging economic powerhouses such as China reducing emissions drastically; the targets will likely not be met.
Even the "permissible" degree of global warming generated by target levels (if reached) will have far greater environmental impact that was originally envisioned.
Kyoto should be viewed as a stepping stone to more drastic action. And that action is required now.

Vir: prirejeno po http://www.carbonify.com/articles/kyoto-protocol.htm (16. 3. 2011)

1. How many countries needed to ratify the Kyoto Protocol in order to become valid?
   A) 55% of countries
   B) 55% of countries producing at least 55% of greenhouse gases
   C) The number was not set
2. Which greenhouse gases should be cut down according to the Kyoto Protocol?
   A) Only CO2
   B) CO2 and other greenhouse gases
   C) All the greenhouse gases except CO2
3. Emissions trading is
   A) Buying and selling emissions
   B) Buying and selling equipment and services to reduce the greenhouse gases
   C) Buying credits in case a country still produces too much greenhouse gases
4. Why isn´t China obliged to cut down the production of the greenhouse gases?
   A) It does not produce too much greenhouse gases
   B) It did not ratify the Kyoto protocol
   C) It is still classified as a developing country
5. Are CO2 levels still rising despite the Kyoto protocol?
   A) Yes
   B) No
   C) Yes but more slowly
6. Has the USA ratified the Kyoto Protocol?
   A) Yes
   B) No
   C) It is in the process of ratification

Find the words/phrases in the text about the Kyoto Protocol to match Slovene translations. Mind the context and use a dictionary if necessary.

SLOVENE TRANSLATIONS	ENGLISH WORDS/PHRASES
1. ratificirati sporazum, ratifikacija	ratify an agreement, ratification
2. sodelujoče države	
3. zahtevati	
4. zmanjšati izpuste toplogrednih plinov	
5. krivec, odgovorna država	
6. cilj	
7. začeti	
8. ključne informacije	
9. globalno segrevanje	
10. vpliv na okolje	

4.2 LET`S CLEAN SLOVENIA IN ONE DAY

Read the article about Slovene "environmental" statistics and on the basis of the text decide what the numbers 1-6 below refer to.

In 2008 on average 1.24 kg of municipal waste per person per day was generated in Slovenia. 74% of all municipal waste was brought to landfills. Only about 11% of municipal waste was collected separately.

The largest voluntary action in our country entitled "Očistimo Slovenijo v enem dnevu" (Let's clean Slovenia in one day) was held on Saturday, 17 April 2010. The aim of this environmental project was to mobilise 200,000 volunteers and carry out the largest environmental action in the history of Slovenia, to produce the first digital register and national map of illegal waste dumps in our country, to remove at least 20,000 tons of illegally dumped waste, to combine all ecological actions, and to educate and raise awareness among the general public about waste management. The project follows a similar project entitled "Let's do it, Estonia", which was implemented in 2008 and achieved a remarkable response from the people in Estonia.

In Slovenia on average 1.2 kg of municipal waste per person per day

The growth of waste has been particularly rapid in the last three decades due to economic growth and a very consumer-oriented society. The data show that the amount of municipal waste is increasing with a country being more developed and with the growth of the standard of its population. In the developed world a person produces on average from 1 to 3 kg of municipal waste per day. According to this criterion, Slovenia is among the medium-developed countries, with about 1.24 kg of municipal waste per person per day generated in 2008.

The amount of municipal waste is increasing

In 2008, 922,830 tons of municipal waste was generated in Slovenia, of which 3,024 tons of hazardous municipal waste. Compared to 2007, the amount of municipal waste increased by 4.2% and the amount of hazardous municipal waste by 4.0%.

Municipal waste generated per person, Slovenia, 2002–2008

Between 2002 and 2008 municipal waste accounted for 12% to 17% of total waste generated in Slovenia – the bulk of total waste was waste from manufacturing and service activities, i.e.

so-called industrial waste. In 2008, manufacturing and service activities generated 5.9 million tons of waste, of which nearly 144,000 tons of hazardous waste. Compared with 2007, the amount of industrial waste generated in 2008 went down by 2%. Most waste was generated in manufacturing (31%), followed by construction (29%) and electricity, gas, steam and air conditioning supply (26%), while the remaining 14% was generated in other activities.

Table 2: Waste generated by type, Slovenia, 2002–2008

	Generated waste in tones						
	2002	2003	2004	2005	2006	2007	2008
Municipal waste	812,058	834,000	832,827	844,949	865,620	885,595	922,830
... of which hazardous waste	858	617	906	1,000	1,461	2,907	3,024
Industrial waste	4,089,604	4,686,134	5,981,378	5,669,138	6,031,088	6,150,037	6,111,368
... of which hazardous waste	66,780	67,137	108,882	126,848	101,506	103,236	150,915
Together	4,901,662	5,520,134	6,814,205	6,514,087	6,896,708	7,035,632	7,034,197
... of which nonhazardous	4,834,024	5,452,380	6,704,417	6,386,239	6,793,741	6,929,489	6,880,258
... of which hazardous	67,638	67,754	109,788	127,848	102,967	106,143	153,939

Source: SORS

Waste management

In 2008, 61 landfills operated in Slovenia, of which 14 industrial, 47 municipal and 1 hazardous waste landfill. From 15 July 2009 on only landfills can operate that have permits under the EU Directive on Integrated Pollution Prevention and Control - IPPC. The regional concept of waste management from July 2009 on stipulates operation of 15 regional centres with IPPC permits.

In Slovenia the most common waste management method is disposal of municipal waste by landfilling.

In 2008, 684,719 tons of municipal waste was landfilled; this is 74% of all municipal waste or 336 kg per person per year. The remaining 25% of municipal waste was recycled or disposed of in another way (by other waste treatment methods). Less than 1% of municipal waste was transported out of the country. Statistical surveys show that in the past two years the share of landfilled waste started to decrease.

As in Slovenia, in most of the European countries landfilling is the main method of municipal waste disposal.

If we examine the amount of landfilled waste per person in more detail, in 2006 the largest amount of municipal waste per persons was landfilled in Cyprus (652 kg/person) and the smallest amount in Germany (4 kg/person). In Slovenia, 361 kg of municipal waste per person was landfilled in 2006, which is well above the EU-27 average of 213 kg. Overall, the amount of waste landfilled in the EU is slowly decreasing.

In view of EU requirements, by 2010 the amount of landfilled waste should be reduced by 20% compared to 2000. It is also necessary to reduce the amount of landfilled biodegradable waste, which represents the greatest problem. This is waste that is unstable, since under the influence of micro-organisms from the environment it decays and causes emissions of harmful gases and leachate.

Too little separately collected waste

As regards municipal waste management, Slovenia is lagging behind, especially as regards separate collection of waste, since the amount of municipal waste is increasing, while only about 11% of municipal waste is collected separately (data for 2008). Compared with landfilled waste too little waste is recovered.

The problem of illegal waste dumps in Slovenia

In addition to an excessive share of landfilled waste, another large problem in Slovenia is illegal dumps, where waste is also disposed of, the difference being that waste is disposed of without control on areas that are not designed for this.

Of over 2 million people living in Slovenia in 2008, 97% were included in public collection of municipal waste. The remaining 3% of the population was not included in the public waste disposal system. The share of people included in public collection has increased from 92% in 2002 to 97% in 2008. The aim is to ensure 100% inclusion of the population of Slovenia in public collection of municipal waste as well as all other types of waste, mainly construction waste (including hazardous), which most often ends up in illegal dumps.

Vir: prirejeno po http://www.stat.si/eng/novica_prikazi.aspx?id=3059 (16. 3. 2011)

1. 20,000 volunteers were planned to be mobilised on 17th April 2010
2. 1.24 kg
3. 3,024 tons
4. 31 %
5. 61
6. 97 %

Match the columns A and B to make most appropriate phrases used in the text. Use a dictionary if necessary.

A	B
1. Collect	____ average
2. Environmental	____ project, action “Let´clean Slovenia...
3. Illegal	____ person
4. Economic	____ landfills
5. On	____ waste dumps
6. Electricity	____ of municipal waste
7. Municipal	____ management/disposal
8. Waste	____ growth
9. Per	__1_waste separately
10. Public collection	____ supply

4.3 NEW REPORT HIGHLIGHTS TWO-WAY LINK BETWEEN OZONE LAYER AND CLIMATE CHANGE

Read the article about the depletion of the ozone layer and finish the sentences 1-6 below with the information from the text.

Geneva/Nairobi, 16 September 2010 – International efforts to protect the ozone layer—the shield that protects life on Earth from harmful levels of ultraviolet rays—are a success and have stopped additional ozone losses and contributed to mitigating the greenhouse effect, according to a new report.

The executive summary of the Scientific Assessment of Ozone Depletion 2010 provides new information about the effects of climate change on the ozone layer, as well as the impact of ozone changes on the Earth's climate.

The report reaffirms that the Montreal Protocol is working. "It has protected the stratospheric ozone layer from much higher levels of depletion by phasing out production and consumption of ozone depleting substances."

Given that many substances that deplete the ozone layer are also potent greenhouse gases, the report says that the Montreal Protocol has "provided substantial co-benefits by reducing climate change."

Changes in climate are expected to have an increasing influence on stratospheric ozone in the coming decades, it says.

Key findings on the ozone layer:

• Over the past decade, global ozone and ozone in the Arctic and Antarctic regions is no longer decreasing but is not yet increasing.

• As a result of the phase-out of ozone depleting substances under the Montreal Protocol, the ozone layer outside the Polar regions is projected to recover to its pre-1980 levels some time before the middle of this century.

• In contrast, the springtime ozone hole over the Antarctic is expected to recover much later.

• The impact of the Antarctic ozone hole on surface climate is becoming evident, leading to important changes in surface temperature and wind patterns.

• In Antarctica large UV levels continue to be seen when the springtime ozone hole is large.

Key findings on ozone depleting substances and substitutes:

Many ozone depleting chemicals, such as CFCs (chlorofluorocarbons), once present in products such as refrigerators and spray cans, have been phased out. Demand for replacement substances called HCFCs (hydrochlorofluorocarbons) and HFCs (hydrofluorocarbons) has increased. Unfortunately, many of these are powerful greenhouse gases the production of which has increased since 2000.

Achim Steiner, UN Under-Secretary General and UNEP Executive Director said: "This represents a further potential area for action within the overall climate change challenge.

Commenting on the International Day for the Preservation of the Ozone Layer, he added: "Today's report underlines that action to protect the ozone layer has not only been a success, but continues to deliver multiple benefits to economies including on efforts to meet the Millennium Development Goals. The contribution to combating climate change is one, but so are the direct benefits to public health. For without the Montreal Protocol and its associated Vienna Convention atmospheric levels of ozone-depleting substances could have increased tenfold by 2050. This in turn could have led to up to 20 million more cases of skin cancer and 130 million more cases of eye cataracts, not to speak of damage to human immune systems, wildlife and agriculture."

The International Day for the Preservation of the Ozone Layer 16 September marks the signature date, in 1987, of the Montreal Protocol on Substances that Deplete the Ozone Layer.

Vir: prirejeno po http://www.theozonehole.com/unreport898.htm (18. 3. 2011)

1. Ozone layer is the shield that protects the Earth from harmful levels of ultraviolet rays.
2. The Montreal Protocole is successful because _____ _____.
3. It has been observed that the global ozone in the Arctic region is _____ _____.
4. The UV levels in the Antarctic region are _____.
5. HCFCs and HFCs are _____ _____.
6. 16th September is celebrated _____.

Translate the words/phrases from the text about the ozone depletion to Slovene. Mind the context and use a dictionary if necessary.

ENGLISH WORDS/PHRASES	SLOVENE TRANSLATIONS
1. Ozone loss (n)	Izguba/tanjšanje ozona/ozonskega plašča
2. Ozone depletion (n)	
3. Ozone layer (n)	
4. Phase out (v)	
5. Climate change (n)	
6. Decrease (v)	
7. Increase (v)	
8. Refrigerator (n)	
9. Combat climate change	
10. Skin cancer (n)	

In unit 4 you have read three authentic texts related to ecology and environment protection. You have improved your reading and speaking skills and learnt new vocabulary.

PROGRESS CHECK

1. What is the Kyoto Protocol and is it successful?
2. What is the Montreal Protocol and is it successful?
3. Why was the voluntary action "Let´s clean Slovenia in one day!" organised? Have you participated? If yes, how? If no, why not?
4. What is the most common waste management method in Slovenia?
5. Is ozone necessary for the preservation of life on Earth? Why/why not?

5 ENERGY

In unit 5 you are going to learn about energy. You are going to develop your reading and speaking skills and lean a lot of new words related to different types of energy. A special emphasis will be placed on "green energy".

Comment on the statements. What is your reaction as a future environmental engineer? Discuss with fellow students.

- "Pollution often disappears when we switch to renewable resources." (David Morris, in "Utne Reader", 1989)

Vir: http://www.grinningplanet.com/6001/environmental-quotes.htm#pollution (6. 3. 2011)

Test your knowledge of key "energy" vocabulary. Match the columns A and B to make most appropriate phrases. Use a dictionary if necessary.

A	B
1. distribution	____ energy
2. gas-fired central	____ power (related to the sun)
3. nuclear	____ nuclear fuel
4. fossil fuels:	__1_ network
5. geothermal	____ renewable energy (source) (e.g. coal)
6. solar	____ oil, coal, natural gas
7. bio-	____ heating
8. electric	____ fuel
9. non	____ current
10. plutonium	____ power plant/station

5.1 HOW "ENERGETIC" IS SLOVENIA?

Read the presentation of the Slovene energy statistics and finish the statements 1-10 below with information from the text. Use a dictionary if necessary.

Despite the fact that Slovenia is completely dependent on the import of liquid and gas fuels, with 52.1 per cent in 2008**,** the country's energy dependency was 1.7 per cent below the EU-27 average of 53.8 per cent and the reason for classifying Slovenia among the Member States with medium dependency. On the other hand, the use of liquid fuels has been increasing at fast pace, which means that Slovenia's energy dependence is set to increase in the coming years. In 2008, the use of liquid fuels was up 16 per cent over the year before and the final use of oil products continues to be on the rise in Slovenia.

The use of diesel fuel almost doubled in the last five years, which the office ascribes to an expansion of passenger transport and even more so of cargo road transport.

Heating oil used by household customers was also up in 2008 by 10 per cent as the average temperatures in the first quarter of the year were 2 degrees centigrade lower than a year earlier and 4 degrees centigrade lower in April in comparison with April 2007.

Slovenia covers 77 per cent of its needs for hard fuels through domestic production and almost all of its needs for energy from renewable sources. These two categories, however, account for a meagre 9 per cent of the final energy use in Slovenia. The share of electricity produced in Slovenia from renewable sources was 26 per cent in 2008, 22 per cent in 2007 and 29 per cent in 2000.

Power generated by hydro power plants still accounts for some 90 per cent of power generated in Slovenia from renewable sources, and the waste- and biogas-fired power plants are still rare.

Renewable fuels
Slovenia held the 5th place among the EU-27 Member States in 2007 with a 22-per cent share of electricity generated from renewable sources (solar, wind and hydropower energy). In terms of gross electricity consumption, Slovenia held the 8th place. With a 60-per cent share Austria was in the lead with Estonia being at the bottom with only a 2 per cent production of electricity from renewables. The EU-27 averaged 16 per cent and the goal to be reached is 20 per cent by the year 2020.
In 2008, 26 per cent of electricity produced in Slovenia was generated from renewable sources of energy. Hydroelectric power plants accounted for the biggest share of electricity generated from renewable fuels – producers generating electricity as their core business (87 per cent), followed by small hydroelectric power plants (4 per cent) and small-scale hydroelectric power plants that serve the needs of their owners (2 per cent). The rest of electricity from renewable sources was generated using wood, wood waste and bone flour (5 per cent), as well as photovoltaic, landfill gas, sewage gas from treatment plants, other biogases and formaldehyde gas.

Power generation industry
In Slovenia all forms of primary energy sources are used to generate electricity. The predominant share of electricity production is carried out in conventional power plants (thermal power plants, hydroelectric power plants, and in one nuclear power plant), while the production share at the distribution level accounts for less than four percent of the total production.

Nuclear power
Slovenia has a 696 MWe Westinghouse nuclear reactor in operation, the NPP Krško, which is jointly owned by Croatia. This pressurized water reactor was the first western nuclear power plant in eastern Europe. Construction started in 1975 and it was connected to the grid in 1981, entering commercial operation in 1983. In 2001 its steam generators were replaced and the plant was uprated 6% then and 3% subsequently. Its operational life was designed to be 40 years, but a 20-year extension is being sought.
NPP Krško supplied a record 5.8 billion kWh in 2008, split equally between Slovenia and Croatia. Nuclear power from the single reactor supplied 40% of Slovenia's electricity and 15% of Croatia's electricity in 2008.
A further Krško unit is under consideration, possibly of 1000 MWe, being built between 2020 and 2025 costing EUR 5 billion.

Vir: prirejeno po http://www.sloveniapartner.net/en/facts-figures/infrastructure-utilities/energy/ (24. 3. 2011)

1. Slovenia is classified as a country with medium energy dependency <u>because its energy dependency is below the EU average.</u>
2. The Slovenes have used more diesel fuel in the last five years because _____ _____.
3. Households use _____ _____ for heating the use of which varies according to the temperatures.
4. Energy from hydro power plants covers _____ per cent of power generated from renewable sources.
5. _____ per cent of electricity is produced from renewable sources.
6. Austria produces _____ per cent of electricity from renewable sources.
7. Different gases are used for electricity production as renewable sources: _____, _____, _____.
8. Most of Slovene electricity is still produced in traditional power plants: _____, _____, _____.
9. The Nuclear Power Plant Krško (NEK) started its operation in the year _____.
10. Between 2020 -2025 the plans of the Nuclear Power Plant Krško are to _____ _____in Krško.

Copy <u>the underlined words</u> from the text to column A and translate them to Slovene in column B. Mind the context. Use a dictionary if necessary.

A	B
THE WORDS/ PHRASES IN ENGLISH	**SLOVENE TRANSLATIONS**
1. liquid fuels	tekoča goriva
2.	
3.	
4.	
5.	
6.	

Browse the internet or any other literature to check how "energetic" the European Union and the United States of America are and compare the data with Slovenia. Discuss and compare your findings with fellow students.

These internet links might help you:

- http://ec.europa.eu/about/ds_en.htm
- http://ec.europa.eu/energy/index_en.htm
- http://www.energy.eu/
- http://www.energy.gov/
- http://en.wikipedia.org/wiki/Energy_in_the_United_States
- http://www.world-nuclear.org/info/inf41.html

5.2 FROM NUCLEAR ENERGY TO ELECTRICITY: THE NUCLEAR POWER PLANT KRŠKO

Read the presentation of the only Slovene nuclear power plant Krško and put down <u>key information</u> from the text related to the words/phrases given below. Do not copy the text directly, make necessary adjustments. Use a dictionary if necessary.

NEK has been in operation for twenty years and will continue to operate for roughly another twenty.

NEK functions in a similar way to a conventional fossil fuel power plant, except that heat is not produced by burning coal, oil or gas. Instead, it makes use of the heat released during the fission of uranium nuclei in a reactor. The reactor consists of a reactor vessel with fuel assemblies which create the core. Ordinary purified water and chemically treated water circulate through the reactor under pressure and carry the released heat into the steam generator, where it is turned into steam. The steam drives a turbine which in turn drives the electrical generator. All the equipment of the reactor and the primary coolant loop is housed in the reactor building, which in view of its function is also known as the containment building.
The reactor vessel containing the fuel assemblies and primary coolant loops are sealed during operation. For scheduled refuelling, the power plant needs to be shut down. The period between two refuellings is known as the fuel cycle. At NEK, the fuel cycle lasts 18 months. At the end of every fuel cycle, the spent fuel elements are replaced with fresh ones.

SAFETY SYSTEMS
In the case of an accident the safety systems prevent uncontrolled release of radioactive substances into the environment.
Great attention is paid to nuclear safety, especially even during the phases of plant design and construction. Safety systems are designed to ensure safety in all operating conditions, even in the case of a system component failure.
A nuclear power plant is in a safe condition if the following three basic safety conditions are met at all times:

- effective control of the reactor power,
- cooling of the nuclear fuel in the reactor, and
- prevention of the release of radioactivity.

A series of multiple physical barriers are used to prevent the escape of radioactive material (defence-in-depth):

- The first barrier is the nuclear fuel itself (solid ceramic fuel pellets), in which radioactive byproducts of the fission reaction are tightly bound.
- The second barrier is the cladding that surrounds the fuel pellets and prevents the escape of radioactive gases from the fuel.
- The third barrier is the primary system boundary (the pipe walls, the reactor vessel and other primary components). This serves to contain the radioactive water used to cool the reactor.
- The fourth barrier is the hermetically sealed, massive, reinforced steel and concrete structure – the containment, which seals off the primary cooling system from the environment.

The basic aim of the first three barriers is to prevent radioactive substances from reaching the next barrier. The fourth barrier prevents the direct release of radioactive substances into the environment of the nuclear power plant.
Since the functioning of the safety systems in the case of an error, malfunction or even the unlikely case of an accident, is of paramount importance, all components of the safety systems are duplicated. The two safety systems perform key functions independently, such that, if one fails, there is always another to back it up, thus providing continuous protection. Furthermore, all the safety systems or their individual components are systemically tested during plant operation.

IMPACTS ON THE ENVIRONMENT

In comparison to conventional thermal power plants, the impact of nuclear power plants on the environment is exceptionally small. Nuclear power plants do not release carbon dioxide into the atmosphere and therefore do not contribute to global warming via the greenhouse effect. Calculations show that the use of nuclear energy means that Europe emits approximately 800 million tonnes of CO_2 a year less than it would otherwise. To achieve an equivalent saving, we would need to remove 200 million cars from our roads.
Every inhabitant of the planet Earth is exposed to radiation. Natural radiation is caused by radioactive minerals and radiation that comes from space. Among artificial sources of radiation are the operation of nuclear power plants, and the use of radioactive sources in medicine, industry and R&D.
Radiation from nuclear power plants is 1000 times less than the level of radiation from natural sources. Strict safety measures are in place at the power plant to ensure radiation protection.

Another impact on the environment includes an increase in the temperature of the River Sava water by a few degrees. Water from the Sava cools the steam in the condenser and turns it back into water, which the pumps send back to the steam generator. Because of the nature of the physical process it is not possible to use all the heat in the conversion of thermal energy to electrical energy. Thus part of this heat finds its way to the Sava in the form of heated water.

The low- and intermediate-level waste is stored at Krško, as well as the spent nuclear fuel. The 1996 strategy for long-term management of the spent nuclear fuel recommends its direct disposal, but leaves open the possibility of a later decision to reprocess it. A permanent repository for low- and intermediate-level wastes (LLW and ILW) is scheduled to open in 2013 at Vrbina, near the Krško plant. It took some five years to find a suitable site and compensation of EUR 5 million per year will be paid to the local community. The repository will consist of two silos having combined capacity of 9,400 m^3 of low-level and intermediate-level radioactive waste arisings - enough for half that produced by Krško during its entire lifetime and decommissioning.

Vir: prirejeno po http://www.nek.si/en/ (24. 3. 2011)

1. fission: of uranium nuclei in the reactor produces heat which turns into steam in a steam generator, steam drives a turbine which drives an electricity generator
2. refuelling: _____
   _____
3. nuclear safety: _____
   _____
4. three basic safety conditions: _____
   _____

5. the first barrier: _____
   _____
6. duplicated: _____
   _____
7. carbon dioxide: _____
   _____
8. radiation: _____
   _____
9. the River Sava: _____
   _____
10. low-level waste: _____
    _____

In the text find the English expressions for the Slovene translations given below. Use a dictionary if necessary.

PHRASES IN ENGLISH	SLOVENE TRANSLATIONS
1. fossil fuels (coal, oil, gas)	fosilna goriva (premog, nafta, plin)
2.	kemično obdelana voda
3.	radioaktivni stranski proizvodi
4.	umetni viri sevanja
5.	strogi varnostni ukrepi
6.	dolgoročno ravnanje z radioaktivnimi odpadki

5.3 BISOL, SLOVENE SOLAR COMPANY

Read the presentation of the Slovene company Bisol producing photovoltaic modules. Decide if statements 1-6 below are true (T) or false (F). Correct the false ones.

BISOL is a customer oriented European company with rich international experience in manufacturing the core elements of solar power plants - the premium quality photovoltaic modules. Headquartered in Slovenia, BISOL finds its place predominantly in diverse international markets where BISOL has proven to be a well established trade mark. In 2009 the company started its representative office in Belgium and continued to expand its international activities by opening local offices in France and Italy.

To installers targeting the domestic market, BISOL offers kit-complete solutions composed of highly aesthetical photovoltaic modules and a complete range of best quality components necessary for highly efficient PV installations. In addition to its core business, BISOL also provides large-scale turn-key PV installations.

Corporate responsibility is a priority for BISOL. The company fully assesses its impact on society, the environment and the economy in which it operates. BISOL takes special pride in its contribution to programs that support green energy sources awareness among the young.

Photovoltaic modules

BISOL premium quality mono- and multicrystalline silicon photovoltaic modules exhibit the highest energy yield and consist of high quality, proven, and certified materials. All products are manufactured in Europe and undergo strict quality control at every stage of the production process. The modules are light weight and comply with the principal international standards IEC 61215, Ed.2 and IEC 61730 and carry the MCS certificate (Microgeneration Certification Scheme), mandatory for the UK market. BISOL offers an extended 10-year product warranty, in addition to the standard 25-year warranty of power output.
Power plants installed with Bisol modules offer the highest energy yields and long-term performance.

Vir: prirejeno po http://www.bisol.com/en/index.php (17. 3. 2011)

1. Bisol produces parts of solar power plants. T
2. It has got offices all over the world.
3. Bisol is an environmentally-conscious company.
4. The photovoltaic modules are heavy.
5. The Bisol photovoltaic modules also meet the standards of the British market.
6. The Bisol photovoltaic modules are guaranteed to produce electricity for at least 25 years.

Find the words in the text that match definitions 1-6. Use a dictionary if necessary.

1. Relating to the sun > solar (e.g. cells, energy) (adj.)
2. At home, not abroad > _____ (e.g. market) (adj.)
3. Influence, effect on sth/sb > _____ (n)
4. The amount of profit, benefit (e.g. energy) that is produced > _____ (n)
5. Produce, make goods, usually in large numbers and amounts: _____ (v)
6. Continuing for a long period of time in the future > _____ (e.g. interests, future, performance) (adj.)

Browse the internet or any other literature to find out interesting information about accidents that happened in nuclear power plants in the past. Think of possible consequences if a nuclear accident happened in Slovenia. Explain in at least 60 words and discuss with fellow students.

In unit 5 you have read and discussed three authentic texts giving you an insight into Slovene "energy statistics" and the work of two Slovene companies related to energy production. You have improved your reading and speaking skills and learnt new vocabulary. You have also done internet search as a part of independent studies.

PROGRESS CHECK

1. Which non renewable fuels do you know? Where does the term originate from?

2. What does BISOL produce?

3. What impact does the Krško nuclear power plant have on the environment?

4. Which renewable energy sources do you know? How much are they present in Slovenia?

5. How dependant/independent is Slovenia as far as energy production is concerned?

6 SPATIAL PLANNING

In unit 6 the topic of spatial planning in Slovenia and abroad is going to be discussed. The skills of reading and speaking are going to be further developed. Moreover, you are going to aquire new vocabulary related to spatial planning.

Read an encyclopaedic definition of spatial planning. Highlight the main points and discuss them with fellow students.

Spatial planning refers to the methods used by the public sector to influence the distribution of people and activities in spaces of various scales. Discrete professional disciplines which involve spatial planning include land use planning, urban planning, regional planning, transport planning and environmental planning. Other related areas are also important, including economic planning and community planning. Spatial planning takes place on local, regional, national and inter-national levels and often result in the creation of a spatial plan.

Vir: http://en.wikipedia.org/wiki/Spatial_planning (24. 3. 2011)

Have you got any experience with spatial planning? Would you to do it professionally? Is it important for the lives of common people? Why/why not? Discuss in group(s).
MY DISCUSSION NOTES:

6.1 SPATIAL DEVELOPMENT STRATEGY OF SLOVENIA (SDSS)

Read the extract of Spatial Development Strategy of Slovenia and answer the questios 1-10 below. Provide short answers.

Development of Spatial Systems with Guidelines for Development at Regional and Local Levels

Settlements shall be planned and managed in harmony with the natural and other restrictions so that the inhabitants and their property are not endangered by natural processes and there is no economic damage. Settlements shall be planned in such a way as to diminish the consequences of any fire, flood, landslide, erosion, or war as far as possible. The protection against floods, and torrential waters in the existing settlements shall be planned primarily by regulating standing and running waters in the hinterland of such settlements. Water reserves to provide for fire fighting flow shall be planned. For safety reasons, there should be as many green areas in settlements as possible to balance extreme temperatures and enable gradual drainage of rainwater.

Settlements shall be planned so as to ensure rational energy consumption. Energy saving and the reduction of energy use shall be taken into consideration in urban planning, in architectural solutions and in the selection of building materials. Rational use of energy shall be ensured through appropriate planning of new structures and areas, and in the reconstruction of existing buildings, and particularly through such orientation of buildings and distance between buildings, which enables unhindered exposure to the sun irrespective of the season,

and reduces the need for air-conditioning, through preventing the duplication of district heating systems, moderate density of new residential districts, and the arrangement of buildings which enables rational planning of the distribution network, and the energy consumption reducing renewal of buildings in the framework of the renewal of cities, towns and other settlements or their part.

1. What will be taken into account when planning settlements? Natural and other restrictions.

2. How will the flood protection be planned?

3. Why are green areas important for any settlement?

4. How can urban planning impact the efficient energy consumption?

5. Does the arrangament of building affect the planning of distribution networks?

Residential areas

Based on the relevant research, developed building land shall be planned and provided in urban settlements for housing construction and for the renewal of the existing residential areas, particularly where the functions of residential areas will be thus completed and stabilized.

The share of land for organized housing construction is increasing. Individual new residential areas in settlements shall be linked into larger units while considering the possibilities of rehabilitating the existing dispersed settlement.

Organized housing construction shall be carried out in new, larger areas allocated for housing. Different types of dwellings shall be provided in residential areas to enable a socially mixed structure of inhabitants and also to meet the typologically differentiated family structure. The types of buildings shall be harmonized with the existing buildings, while taking into consideration modern trends in architecture. The principles of a high-quality living environment – ensured, interalia, by appropriate density of buildings and aesthetic design of the entire residential area (district) as well as of individual buildings – shall be observed. The types of housing construction, arrangement and positioning, which encourage social contacts and enable proportionally higher density of buildings, while providing for adequate public and particularly green areas. Walking access to all services required on a daily basis shall be provided in a residential area. Land developing activities in the existing urban structure shall be performed only on the basis of a comprehensive expert assessment.

Appropriate supply activities and services, sports facilities, recreational and green areas shall be furnished in residential areas. Residential areas can also include elementary education and health care activities, social services, kindergartens, trade and business activities, craftsmen services, tourist and administrative activities, intellectual and artistic services, and other activities which cause no deterioration of the living environment quality, and contribute to a more rational exploitation of land, public utility and transport networks and to the integrated functioning of a settlement.

6. Is the area for residental housing expanding?

7. Why will different types of houses be provided?

8. How are the principles of high-quality living ensured?

9. Are sports halls and playgrounds included in the development of residental areas?

10. What services activities for children are planned in residental areas?

Vir: prirejeno po
http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/publikacije/drugo/en/sprs_eng.pdf
(26. 3. 2011)

Form new words from the ones given in brackets. Use a dictionary and the text above to help you if necessary.

1. The inhabitant (inhabit) of any Slovene town must enjoy a high-quality living in modern _____ (resident) areas.
2. The Slovene _____ (economy) development enables efficient urban development.
3. Modern architectural trends emphasize ecological planning _____s (solve).
4. The _____ (dense) of population is one of the factors influencing the quality of life in a certain area.
5. All developments should be made only on the basis of a comprehensive expert _____ (assess).
6. Different sources and activities should not cause any _____ (deteriorate) of the quality of living.

6.2 CHANDIGARH 2020 (A FUTURISTIC PERSPECTIVE)

In September 2010 at Urban Planning Institute of the Republic of Slovenia Gopal Krishan, Professor Emeritus, Panjab University & Senior Professor & Principal Advisor, MGSIPA Chandigarh, India gave a lecture about the development of the city Chandigarh, the first planned Indian city.
Read the extract of his presentation and discuss the questions 1-3 below.

Paradigms of town planning evolved from that of the physically aesthetic city to dynamic city, healthy city, sustainable city and now harmonious city.
Being an eco-friendly city – Chandigarh attracting massive investments by multination, non-resident Indians, and others.

Fast escalating land values and rents in the process making the city elitist – per capita income of over one hundred thousand dollars, the highest in the country.

Evolving as a cosmopolitan city with its global connections and influence – with one hundred thousand internet connections and over one million mobile and landline connections.

Proliferation of vehicle population with the highest vehicle/population ratio in India, comparable to that in developed countries – eight hundred thousand motor vehicles.

By 2020, the city will be the core of an extensive urban sprawl spread over three states of Punjab, Haryana and Himachal Pradesh, and of course, the Union Territory of Chandigarh.

It will be the country's only massive concentration on planned of largely middle class population - no less than 2.5 million strong.

City itself will grow into a dense urban mass, primarily through:

- infilling of the partially built sectors and construction of the newly carved out ones;
- completion of the upper stories not built so far;
- proliferation of the cooperative housing societies building groups of flats and thus changing the city´s skyline;
- construction of new offices and commercial establishments along the arterial roads, apart from completion of the Information Technology Park
- multiplexes and malls to take shape as impressive features of the townscape;
- the same holds true for metro and overbridges;

In 2020, 65 per cent of the population in the Periphery Zone will be urban as compared to hardly 10 per cent in 1951, 14 per cent in 1971, and 45 per cent in 2001.
Vir: prirejeno po
http://www.urbinstitut.si/images/100917%20_%20UI%20lecture%20_%20Gopal%20Krishan%20_%20Chandigarh%202020.pdf, (26. 3. 2011)

1. Do you believe that life in such a fast-developing city is of high quality? Enumerate advanatages and disadvantages of living in such a city.

ADVANTAGES	DISADVANTAGES

2. Would you ever live in such a big, fast-growing city? Why/why not? Give reasons.

3. Check the Fact file below. It has been taken from the city´s official website. Do you find any of the facts surprising? Compare it to Slovenia (find data at Statistical Office of the Republic of Slovenia or in any other source) and discuss with fellow students.

Fact File

Table 3: The basic geographical and demographic profile of Chandigarh:

Area	114 sq kms
Longitude	76^0 47' 14E
Latitude	30^0 44' 14N
Altitude	304-365 meters above MSL with 1% drainage gradient

Annual Rainfall (average)	1110.7 mm
Monsoon	July-September
Temperature	Winter Min. (Nov.-Jan, 2006) 1^0 C-16^0 C Summer Max. (April-July, 2004) 27^0C-44^0C
Total Population (2001 census)	900,635 (Rural population-92,120 - 10.2% urban population-808,515 - 89.8%, projected population on March 2010: 1,368,000)
Density of population/sq. km.	7,900
Birth Rate (per 1000)	21.45 (2005)
Death Rate (per 1000)	10.22 (2005)
Infant Mortality Rate (per 1000)	44.13 (Proportion of 0-6 year-olds: 12.83%)
Sex Ratio (females per 1000 males)	777
Population Growth (2001 Census)	40.33%;
Literacy Rate	81.9%

Vir: http://chandigarh.nic.in/knowchd_general.htm (26. 3. 2011)

Unit 6 discusses the principles of spatial planning and urbanism. Slovene spatial planning strategy is presented and compared to spatial planning abroad, in India. Reading and speaking skills have been further developed.

PROGRESS CHECK

1. What is spatial planning?
2. Is it important for people´s quality of life? Why/why not?
3. What basic principles are observed when planning residential areas in Slovenia? Would you add any other?
4. What was the most suprising fact about the planned Indian city Chandigarh for you?
5. Do you know any other such fast-developing cities worldwide?

7 BUSINESS CORRESPONDENCE

In unit 7 you are going to study basic principles of participating in meeting, giving presentations and writing formal letters of application, faxes and emails. Concrete examples will be given. The emphasis will be placed on formal vocabulary and developing writing skills.

Test your knowledge of business etiquette. Choose the correct answers A, B, C or D. Sometimes more than one answer is possible. The correct answers are at the end of the unit.

Business etiquette questionnaire

1. Your boss, Ms Jones, enters the room when you're meeting with an important client, Mr Johnson. You rise and say "Ms Jones, I'd like you to meet Mr Johnson, our client from San Diego." Is this introduction correct?
   a) Yes
   b) No

2. At a social function, you meet the director of an important Japanese corporation. After a brief chat, you give him your business card. Is this correct?
   a) Yes
   b) No

3. You're hosting a dinner at a restaurant. You've pre-ordered for everyone and indicated where they should sit. Are you correct?
   a) Yes
   b) No

4. You're invited to a reception and the invitation states "7:00 to 9:00 PM." You should arrive:
   a) at 7:00 PM
   b) anytime between 7:00 PM and 9:00 PM
   c) between 7:00 PM and 7:30 PM
   d) go early and leave early
5. You're greeting or saying good-bye to someone. When's the proper time to shake his/her hand?
   a) When you're introduced
   b) At their home
   c) At their office
   d) On the street
   e) When you say good-bye

6. When you greet a visitor in your office, do you:
   a) say nothing and let her sit where she wishes?
   b) tell her where to sit?
   c) say "Just sit anywhere"

7. You're scheduled to meet a business associate for working lunch and you arrive a few minutes early to find a suitable table. 30 minutes later your associate still hasn't arrived. Do you:

a. order your lunch and eat?
b. continue waiting?
c. tell the head waiter you're not staying and give him your card with instructions to present it to your associate to prove you were there?
d. after 15 minutes call your associate?

8. You've forgotten a lunch with a business associate. You feel terrible and know he's furious. Do you:
   a) write a letter of apology?
   b) send flowers?
   c) keep quiet and hope he forgets about it?
   d) call and set up another appointment?

9. When phoning to a company, do you start a conversation by saying "I am Peter. May I speak to Mr Brown, please?"
   a) Yes
   b) No
10. You are writing a letter of enquiry about a new product. You know the manager of the company personally since you have met him at some business lunch some time ago. Do you still write a formal letter of enquiry?
    a) Yes
    b) No

Vir: prirejeno po http://www.gradview.com/articles/careers/etiquette.html (26. 3. 2011)

7.1 MEETINGS

USEFUL TIPS FOR...

THE CHAIRPERSON	THE PARTICIPANTS
Be well-organised > preparation for the meeting is just as important as the meeting itself	Be well-organised > preparation for the meeting is just as important as the meeting itself
Complete agenda (list of things discussed) in advance > do not make any last minute changes	
Distribute the agenda around to everyone concerned, if possible, before the meeting	
Prepare/check the venue, equipment	
Start on time > do not wait for latecomers	Do not be late
Avoid digressions	Avoid digressions
Be polite and tactful	Be polite and tactful
Make sure everyone has the chance to make their point	Make sure everyone has the chance to make their points, be constructive
Finish on time	

USEFUL PHRASES

OPENING A MEETING AND INTRODUCING ONESELF

- It´s about time we got started./Let´s begin, shall we?/Shall we make a start?
- My name is *Peter Brown* and I am *a marketing director.*
- As you are aware
  - I have arranged this meeting to …
  - the purpose of this meeting is to…
  - the main objective is to….

Vir: http://office.microsoft.com/slsi/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

INVITING PEOPLE TO SPEAK

- Would you like to open the discussion, Mary/Mrs Smith?
- What do you think about this, Keith/Mr Smith?
- What are your views on this, Mary/Mrs Smith?
- What is your opinion about this, Keith/Mr Smith?
- What is the/your general feeling on this, Keith/Mr Smith?

MAKING THE POINT

- I believe that …
- As I see it…
- In my opinion…
- Personally I think …
- It looks to me as if…

Vir: http://office.microsoft.com/slsi/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

AGREEING

Strong agreement

- You are perfectly right.
- I couldn´t agree more.
- Precisely./Exactly./Absolutely.

Mild agreement

- That´s true, I suppose.
- I suppose so.

DISAGREEING

Mild disagreement

- That´s not really how I see it.
- I don´t really agree.
- I think you are mistaken.
- I am afraid I can´t agree with you.

Strong disagreement

- I´m sorry, that´s out of the question.
- I think you are wrong.
- Of course not.

Vir: http://office.microsoft.com/slsi/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

CONCLUDING

- We are running out of time so we´re going to have to stop here.
- To go over what´s been said…
- To sum it up…
- I´ll let you know my decision…
- Unless anyone has anything else to add, I think that´s it.
- Thank you all for coming.

Vir: prirejeno po Mascull, 2002, 100 – 104

Role play: Form groups and distribute roles. One of you is a director and a chairperson of a meeting. One of you agrees, the other one always disagrees, another one likes to make her/his points very clear and another one is neutral and makes only rational comments. Choose a topic of a meeting. Take a couple of minutes to prepare by making notes in advance. Use the tips and phrases above.

MY DISCUSSION NOTES:

7.2 GIVING A PRESENTATION

Have you ever given a presentation? What was it about? What are your greatest fears when preparing for/giving a presentation? Discuss with fellow students.
MY DISCUSSION NOTES:

USEFUL TIPS FOR GIVING A PREPARATION

PREPARATION	❖ Find out about the audience ❖ Check/prepare the venue and equipment ❖ Plan the structure and contents in advance ❖ Try to memorize the first five sentences of your presentation ❖ Prepare visual aids (projector, diagrams, pictures, etc.) ❖ Rehearse your presentation with family, friends, colleagues
TIMING	❖ Start on time > do not wait for latecomers ❖ Stick to the planned timetable ❖ Do not digress ❖ Finish on time
VOICE	❖ Use a natural tone of voice ❖ Do not shout ❖ Do not speak in a monotone. Vary the pitch of your voice.
BODY LANGUAGE	❖ Make eye contact ❖ Face the audience ❖ Smile at appropriate moments but not too much ❖ Do not move around too much ❖ Use gestures to emphasize key points

USEFUL PHRASES

INTRODUCTION

- Introduce yourself and your subject: My name is… I work for…
  My talk is called…
- Outline the contents of the presentation: There are three main areas I want to talk about today…
- Say when people will be able to ask you questios: at the end, in the middle

Vir: http://office.microsoft.com/slsi/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

MAIN PART

- To begin, let´s look at…
- That´s all I have time for on…
- Let´s move on…
- As you can see…
- Let´s turn to…

CLOSING

- Let me sum up…
- In my view…
- That brings me to the end…
- Are there any questions?
- Thank your for your attention/listening.

DEALING WITH QUESTIONS

- That´s a fair point.
- That´s not really my field.
- Sorry, I didn´t catch the question.
- I´m afraid we ´ve run out of time.

Vir: prirejeno po Mascull, 2002, 116 – 130

Prepare a presentation of the company, where you work or you worked during your practical work. Otherwise choose a company where you would like to work when you graduate. Optionally, you can also present a topic related to your studies. Use the tips and phrases above. Ask your fellow students to give you an objective feedback.

7.3 TELEPHONING

Telephoning has become a common and efficient way of communication. When calling/phoning/telephoning someone, it is, of course, necessary to know the number that can be quite complicated depending on where the person you are calling is. Look at the example of a number needed when calling from abroad to Slovenia, the Dolenjska region:

ACCESS CODE	COUNTRY CODE	AREA CODE	NUMBER
00	386	7	442 5 789
Double oh (British English) Zero zero (American English)	three eight six	seven	double four two five seven eight nine

PHONING SCENARIOS

ASKING TO SPEAK TO SOMEONE 1
A: Peter Philips, business partner
B: James Brown, marketing director

A: This is Peter Philips. Can/Could I speak to Mr Brown, please?/Mr Brown in Marketing, please.
B: James Brown speaking./Speaking.
A: Is it a good/convenient time to call?
B: I´m (rather) tied up at the moment.

I am afraid I´m ⟹
- on another line
- with someone right now.
- in a meeting.
- not in/out of the office.
- off sick today.
- on holiday.

Can you call back later?
A: Of course. I´m very sorry to bother you. Can we arrange a meeting tomorrow? I will call around 11?
B: I´ll just check my diary. Perfect. Goodbye.
A: Goodbye.

ASKING TO SPEAK TO SOMEONE 2
A: Peter Philips, business partner B: receptionist
A: This is Peter Philips. Can you put me through to extension 258, please?/Can I have extension 258, please?/Extension 258, please./258, please.
B: One moment, please. I´m putting you through. The extension is ringing for you./ Sorry to keep you waiting. I think you´ve got the wrong extension. I will try to transfer you.
A: I phoned an hour ago but I was cut off.
B: I am very sorry for that, sir. I am afraid the line/extension is busy/engaged./I´m sorry, but there is no reply. Do you want to hold or would you like to call back?
A: I´ll hold/call back later. Thank you. Goodbye.
B: Goodbye.

Vir: http://office.microsoft.com/slsi/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

GIVING A MESSAGE

- I am calling about…
- I am calling to confirm…
- Can I leave a message?
- Could you tell Mr Brown that…
- Could you ask Mr Brown to call me back? My number is ….

TAKING A MESSAGE

- (Can I ask) Who´s calling?
- Can/May I ask what it´s about?
- Can/May I take a message?
- Would you like to leave a message?
- I will ask him to call you (when he/she gets back).

Vir: http://office.microsoft.com/sl-si/images/??Origin=EC790014051060&CTT=6&ver=12&app=winword.exe (26. 3. 2011)

VOICEMAIL

If there is no one to answer the phone, you may hear this:

- You reached the voicemail of James Brown. Please, leave message and I´ll get back to you as soon as possible. Thanks.

Remember: Don´t hang up when hearing a voicemail. It is extremelly rude.

Vir: prirejeno po Mascull, 2002, 104 – 110

Make the telephone conversations more polite by using the phrases above.

A: Ian Potter B: Barbara Fleming

A: ~~Hello. I want to speak to Mrs Barbara Fleming.~~ Can I speak to Mrs Fleming, please?
B: It´s me but I can´t talk right now. I´m busy.
A: I am Ian Potter. I want to talk about your presentation.
B: Call back later, OK? Bye.
A: Bye.

A: Gary Muller B: Mark Applegate

A: Are you Jack Poppins?
B: No. Who are you?
A: Mark Applegate. Is Jack Poppins there and can I speak to him?
B: He is in a meeting so he can´t speak to you. I´ll take a message, if you want, OK?
A: I will wait.
After a while...
A: Tell him to call me as soon as he can. I am Gary Muller. Bye.
B: Bye.

Match the questions in column A with appropriate responses in column B. Use the phrases above to help you.

A

1. Can you put me through to extension 123, please?
2. Can you call back, please? Mr Brown is busy at the moment.
3. Could I speak to Mrs Widsor, please?
4. Is this a convenient time to call?
5. Can I take a message?
6. Shall we arrange a meeting next week? How about Monday?

B

__4___ I´m afraid I´m in a meeting. Could you call back later, please?
_____ One moment, please. I am putting you through.
_____ Of course. Could you ask him to call me back? My number is 567 528. Thanks.
_____ I´ll check my diary... That´s fine. See you on Monday.
_____ Speaking. How can I help you?
_____ Of course. I´ll call again in the afternoon. Thanks.

7.4 FAXES

SENDING A FAX

- Send something by fax
- Fax someone something
- Send the fax again/resend the fax
- **Cover sheet**: the first page of a fax with key information: name and addreess of the sender, name of a recipient, etc. (see below)

RECEIVING A FAX

- Receive/get a fax

TROUBLESHOOTING

- Paper can get stuck and machine jammed
- Pages are not legible > you can´t read them

Vir: prirejeno po Mascull, 2002, 112 – 114

COVER SHEET

Name (of the company)
Addresss
City, State Zip
Phone: 505-555-1212
email@email.com
Job Title

Fax Cover

To:	Fax:
From:	Date:
Re:	Pages: *(including fax cover sheet)*
CC:	

Urgent For Review Please Comment Please Reply Please Recycle

COMMENTS:

Signature

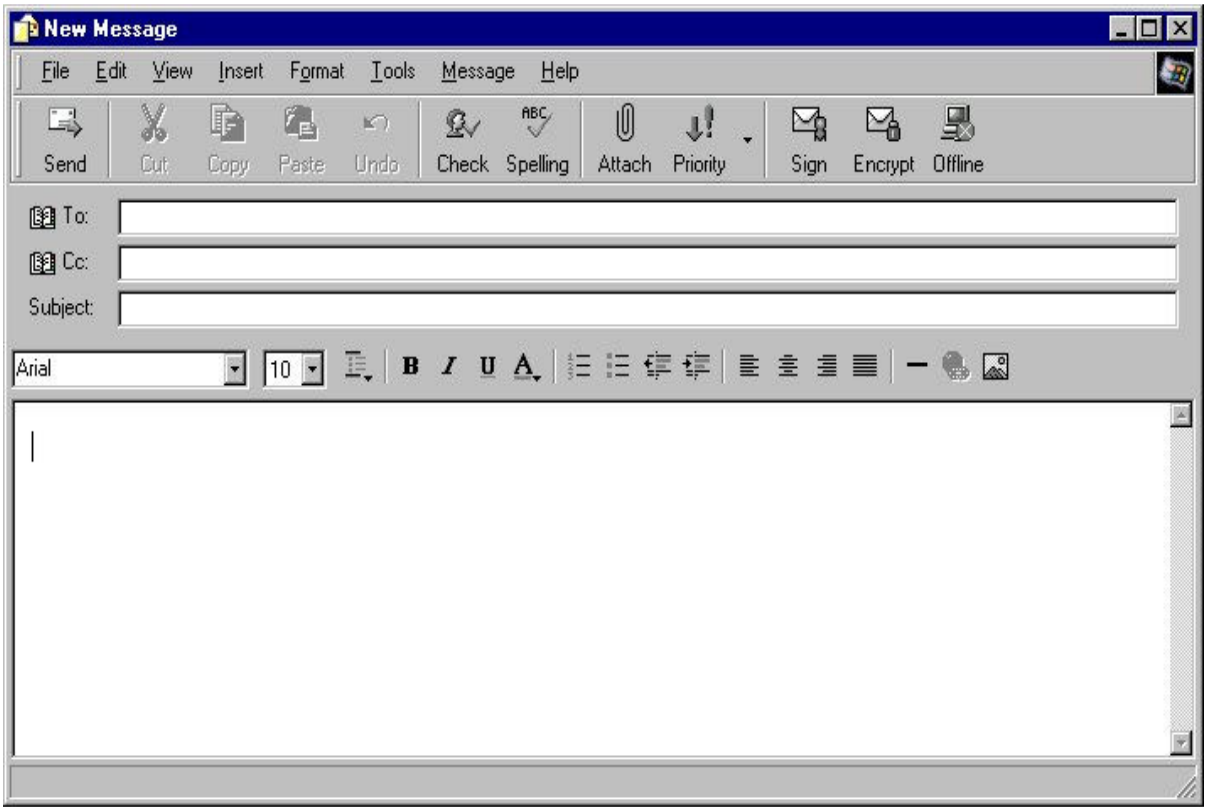
This fax may contain confidential information. If you are not the intended recipient, advise the sender and destroy this document. If you do not receive all pages, or any pages are illegible, please phone +00 386 1 393 5 789 immediately.

Vir:
http://www.abusinessresource.com/Additional_Resources/Business_Letters_and_Forms/Fax_Cover/Simple-Fax-Cover-Sheet.html (26. 3. 2011)


Imagine you are writing a fax to Mr Blair with machine maintenance instructions (10 pages). You are also informing him when the maintenance can be carried out by one of your staff. Complete the cover sheet fax above with all necessary information. These information and phrases may help you:
Sender: you/your company
Receiver: Mr Patrick Blair, Milton Woodwork, Ltd., 110 Oxford Street, Bath 0875
Phrases:
Dear...
The following pages give ...
It is possible for us to ...
If you require any further information, please do not hesitate to contact us.
Best regards/Yours sincerely

7.5 EMAILS

Email stands for electronic mail. A person can send an email to someone or email him/her. He/she will reply to your email or send you an email back. Emails are usually informal although formal emails are becoming more and more frequent.



Vir: http://www.webterrace.com/outlook/emailing.jpg (26. 3. 2011)

Common e-mail expressions

- Thanks for your email...
- Please find attached...
- The attachment is a Word document.
- I´m copying Mark Stewart in on this (= you are sending a copy of an email that you are sending to someone else)
  - I will forward the document to other members of the project group.
  - Looking forward to receiving your reply.
  - Best wishes/Regards/Best regards/All the best (informal)
  - Abbreviations: AFAIK: as far as I know
    ASAP: as soon as possible

Complete this email using more appropriate form of expressions that mean the same as the underlined expressions.

Tina, Thanks for your plans on reducing the budget of the sales department. I´d be grateful if you could (1)send copies to Chris Jones of any emails you send to me. (2)With this email, you will find a Word document with my comments. Please let me know if for any reason you can´t open the (3)document that comes with this mail. I´m (4)sending your proposals to all members of the board. (5)Greetings, Robert

(1) copy Chris Jones in on
(2) _____
(3) _____
(4) _____
(5) _____

Vir: prirejeno po Mascull, 2002, 114 – 116

7.6 FORMAL LETTER OF APPLICATION AND CV

What is your dream job like? Why is it your dream job?
Have you ever applied for a job by writing a letter of application and a CV? Do you know any rules for writing them in English? Discuss with fellow students.
MY DISCUSSION NOTES:

Study the layout of a sample letter of application. Fill in the gaps with the missing words from the box.

fluent, ~~job~~, employer, advertised, have, can, email

Volčičeva 10*
1000 Ljubljana
Slovenia

Thames Water
PO BOX 286
Swindon
SN38 2RA
UK

11th January 2011

Dear Sir /Madam**

I am writing to apply for the ____ job_____ of waste management supervisor _____ in the Delo newspaper on 7th January 2011.

I am twenty years old. I have a degree in environmental engineering. I am _____ in French and English. I have a lot of experience with Waste management as I _____ worked in the Slovene utilities management company Kostak Krško for the last 10 years as a waste management assistant. I _____ drive and I am very communicative and sociable.

I enclose my CV and the reference from my previous _____.
Could you send me more details about working hours and accommodation?
Please let me know if you need any more information. You can contact me on my _____ address janez.kranjski@gmail.com.

I look forward to hearing from you.

Yours faithfully

Janez Kranjski
JANEZ KRANJSKI***

* do not write your name/surname at the beginning of the letter
** if you know the recipient´s name, start a letter with Dear Mr/Mrs/Miss/Ms (if you do not know if a woman is married) + surname and end it with "Yours sincerely"
*** sign a letter and then write your name/surname in block capitals
**** do not use short forms (e.g. I´m) and informal language (e.g. gonna, wanna, OK, etc.)

Study the sample CV or Curriculum Vitae. Complete it with information about yourself.

CURRICULUM VITAE

CONTACT INFORMATION
Name/surname
Address
Telephone
Mobile Phone
Email

PERSONAL INFORMATION
Date of Birth
Place of Birth
Citizenship
Sex

Optional Personal Information:
Marital Status
Spouse's Name
Children

EMPLOYMENT HISTORY*
Work History

Research and Training

EDUCATION**
Secondary school, course

University

PROFESSIONAL QUALIFICATIONS
Certifications and Accreditations

Computer Skills

Language skills

Other skills

INTERESTS

*List in chronological order, include position details and dates
** Include dates and details of degree and training

Vir: prirejeno po http://jobsearch.about.com/od/cvsamples/a/cvtemplate.htm (26. 3. 2011)

Write a letter of application for the post advertised below. Enclose a CV. Although it may not be directly linked to your studies and a degree, you decide to apply to get new experience and improve your English.

Job details
Dual Skilled Electricians
Job Reference: e20001308
Location: Isleworth Middlesex
Business Area: Maintenance
Contract Type: Permanent
Hours: Full-time

What is the purpose of this role?
Reporting to the Team Manager you will fault diagnose, inspect, test and certificate plant equipment, as well as installing, modifying or repairing electrical plant equipment at Mogden Sewage Treatment Works and local Pumping Stations. At all times working in a safe, efficient, timely and effective manner with minimum supervision.
This is an exciting and challenging opportunity for you to join a dedicated Maintenance Team working at Mogden Sewage Treatment Works, where your work in the role will directly impact maintenance objectives.

What skills are we looking for?
-- You are required to fault diagnose and repair electrical equipment such as three phase motors, starters and control panels, so experience in working with these is essential.
-- You will have the ability to analyse and assess plant failure modes and also experience of electrical installation and commissioning of plant equipment following servicing.
-- You must have the ability to read and understand electrical drawings, and be able to identify the parts and components.
-- You will support other team members and recognise collective team responsibility to ensure the smooth running of the team.
-- Ideally you will have a strong understanding of the Health and Safety compliance requirements in a Water or Waste Water process role.
-- You will be pro-active in your own career development and personal skill base.
-- Ideally you will have completed a recognised apprenticeship and have acquired a City and Guilds Part one and two or an Ordinary National Certificate (ONC) or a Higher National Certificate (HNC) or quivalent, in electrical engineering or environmental engineering.
-- This role will require travel to other Treatment Works within the Thames Water Business, therefore you must have a full UK driving licence.

Thames Water information and salary details
Grade L8
Permanent Role - 2 roles
£23,111 - £27,193
Mogden Sewage Treatment Works, on the outskirts of Isleworth.

Why join us?
We offer a welcoming work environment and extensive benefits. Our 5,000 employees have plenty to be proud of - our tap water is the best it's ever been, we've beaten our leakage target for the last three years and have an enviable record of achievement in waste treatment.

Please contact the Thames Water Recruitment Team on 0845 4607 305 or email thames.water@reed.co.uk. Letter of application obligatory to Thames Water PO BOX 286 Swindon, SN38 2RA.

Vir: prirejeno po https://erecruitment.thameswater.co.uk/sap(bD1lbiZjPTEwMCZkPW1pbg==)/bc/bsp/sap/hrrcf_unrg_srch/application.do?rcfContext=TWRC (26. 3. 2011)

In unit 7 different types of business correspondence were analysed by giving key phrases and concrete examples. The skills of writing and speaking were developed.

PROGRESS CHECK

1. What are common ways of starting a meeting as a chairperson?

2. What is a CV?

3. Imagine a situation: you telephone a business partner and a receptionist answers. You ask her for extension 526 in a polite way.

4. How much do you use emails? Do you write formal or informal emails? What is the difference?

5. When having a presentation, is it necessary to wait for latecomers or do you begin on time no matter what?

Here are the answers to the Business etiquette questionnaire from the beginning of the unit.

1. No. Introduce the more important person first. You should address your client and say "Mr Johnson, I'd like you to meet our Vice President of Development, Ms Jones."
2. No. In Japan (unlike in the United States or the UK), business cards are taken as a serious reflection of their owner and are exchanged with great ceremony. Researching the importance of business cards in various cultures can help in avoiding embarrassing moments.
3. Yes.
4. A, B, or C. It's terribly impolite to arrive/leave early.
5. A, B, C, D, and E. In other words, it's rarely improper to shake someone's hand. Make sure you have a firm (but not painful) handshake for both men and women.
6. B. Indicating where your guest should sit will make her/him feel more comfortable.
7. A. You've waited 30 minutes. Expect an apology later, though.
8. D. Call and set up another appointment. And don't forget to apologize for your error. Imagine how you'd feel if it was you!
9. No. A proper polite introduction is “It´s/this is Peter (here). Can/Could I speak to...
10. A, definitely. You are not close friends so it is appropriate for the first enquiry to be formal. You may, however, telephone him later and discuss the possibilities of a business deal.

8 REVISION

In this unit you are going to revise vocabulary and practised writing and reading skills. Use previous units to help you. The exercises are a good exam practice.

8.1 VOCABULARY

1. Fill the sentences with approapriate »energy« words. The first letters are given to help you.

There are two sources of energy: renewable and non–renewable. The first will run out sooner or later whereas the second (s_____, water, wave and wind) won´t. They are also called al_____ sources of energy. Energy from the sun is also called so_____ energy. For using it you need solar cells and panels on the roof. We do not use them enough. We prefer using fo_____ f _____ (coal, oil, natural gas). We also have a nuclear p_____ pl _____ in Krško. There are also several hy_____ power plants (e.g. Fala, Mariborki otok, Zlatoličje).

2. Explain the following terms in English. Give key information.

1. power plant:
   _____
2. acid rain:
   _____
3. residential area:
   _____
4. ozone layer:
   _____
5. traffic congestion/jam:
   _____

3. Complete the following sentences with a form of the word in brackets.

1. Heating a liquid may cause explosion (explode). It is also very _____ (harm) to your health.
2. Despite the earthquake there is no _____ (structure) damage.
3. This process of producing steel is one of the cheapest _____ (industry) processes.
4. Engineers solve problems by giving a _____ (define) first.
5. Working in a _____ (noise) factory without ear protection is very _____ (danger).
6. _____ (environment) engineers try to save the world.
7. Waste can be _____ (recycle).

4. Fill the sentences with appropriate expressions.

nuclear, waste, wastewater, purification plant, litter, ~~pipe~~, emissions, emit, legislation, oxygen, leak, issue, drinking, spill, fume, leakage, deforestation, rainfall, depletion, sewage system

1. The water-supply system consists of many pipes and fire hydrants. It supplies _____ water to households. The opposite of drinking water is _____ (liquid waste) or effluent. It is cleaned in _____s.
2. Slovene _____ (=laws) is adapted to the EU standards.
3. _____ is cutting down trees. It can be very dangerous as trees produce _____ in the process of photosynthesis.
4. Another word for waste is _____.
5. The _____ of the ozone layer (= getting thinner and thinner) is very worrying. Also car´s exhaust _____s are responsible for this problem.

garbage, storage, smog, ~~biodegradable~~, density, breaks down, disposal, packaging

1. Plastic is not biodegradable but paper is. Paper _____ easily in the environment.
2. Low _____ of a new residential district contributes to high living quality.
3. _____ is a combination of smoke and fog.
4. In America there are tonnes of instant _____ (e.g. toothpaste boxes) that people throw away right after they buy the product.

5. Translate to English.

1. Promet je eden glavnih onesnaževalcev zraka.
   Traffic is one of the main air pollutants.
2. Na svetu je vse več odpadkov, toda vse manj odlagališč in sežigalnic.
3. Inženirji uporabljajo kovine in nekovine pri svojem delu.
4. Ali lahko dobim interno 120, prosim?
5. Prošnji za službo prilagam življenjepis.
6. Vsak avto mora imeti katalizator.

6. Make the sentences out of given words. Put them in the right order.

1. of / you / waste / how / your / do / dispose?
   How do you dispose of your waste?
2. power / an alternative / of energy / is / solar / source.
   _____.

3. is having / pollution / on / the / world climate / an effect.

   _____.

4. exhaust / produced / are / cars / fumes / by?

   _____.

5. I / to / Mr Smith / can / speak / please?

   _____.

6. fluent / I / in / English / am / German / and.

   _____.

7. Form new words from the ones given in brackets.

1. Inventors are trying very hard to find cure for cancer.
2. We should only use ozone-_____ (friend) products.
3. In many parts drinking water does not come up to _____ (accept) standards.
4. It is very difficult to find the _____s (solve) to this problem.
1. Risk _____(assess) should be done before the beginning of the _____ (construct).

8.2 READING COMPREHENSION

Read the text and answer the comperehension check questios 1-6 below. Provide short answers.

Lutz Werner: Environmental Engineeer

While studying Civil Engineering at university, I became increasingly interested in water, in particular water supply. So, I went back to the university and did a post-graduate qualification in Environmental studies. Today I work in the Environmental Department of a large engineering company. I am responsible for environmental assessments, strategic assessments, contamination assessments and waste management.

Nowadays, I am mainly office-based. In a typical day I review proposals for new works, for example building airport in the Far East, designing a solid waste management plant, or carrying out an environmental assessment proposal for a resort development in the Caribbean. I have to look at the environmental impacts, the scale and design of a project, and the pricing. Civil Engineers, geologists, ecologists, environmental scientists and landscape architectures are some of the specialists involved. The effects a project will have on habitats and the ecology of the area are really important, and we also have to think about sustainability. This includes looking at the effects a project will have on the people who live locally, both during construction and after the project is completed. I regularly review on-going projects with the Project Managers.

I like my job because I am very interested in the subject. It gives me a great sense of satisfaction to feel I can make a difference. When we are designing engineering facilities, there is a real sense of excitement when the plans turn into reality, especially with something innovative. It is great to work with people who all share a desire to see sustainable development.

Vir: Glendinning in Pohl, 2008, 77

1. Where does Lutz Werner work? In the Environment Department of a large engineering company.

2. What aspects of the environment does Lutz work with?

3. Does he mainly do field work?

4. Who does he have to work with when preparing a project?

5. What does he enjoy about his job and why?

6. Does he pay attention to sustainable development?

Find the words in the text that suit the definitions 1-6 below.

1. provide people with something they need, e.g. water: water supply
2. not a liquid or a gas: _____
3. effect, influence, e.g. on the environment: _____
4. the natural home of a plant or animal: _____
5. the process of building sth.: _____
6. a place or a building used for a particular purpose, e.g. sports: _____

Vir: prirejeno po http://www.ldoceonline.com/ (9. 4. 2011)

Would you ever like to do the work similar to Lutz Werner´s? Why/why not? Discuss with fellow students.
MY DISCUSSION NOTES:

8.3 WRITING

1. Write a formal e-mail to one of your fellow students. Imagine that she/he is a director of a large waste management company. You, as an environmental engineer, would like to set up a meeting to discuss the possibility of doing your practical work there. Be polite and formal.

2. Apply for the job advertised below.

ENVIRONMENTAL ENGINEER

We are a well-established medium engineering company (Liverpool area) specialising in waste separation, waste management and incineration. We require an environmental engineer for the maintenance and supervision of the working processes.

The applicant should be aged 21-40 and must have a sound and practical engineering background. She/he should have some previous experience and must be able to work on her/his own initiative and liaise with customers.

This is an extremely responsible position with good prospects for further advancement.

Please reply in writing with full CV to BOX 1582, The Tribune, Liverpool, M12 1QP.

Vir: prirejeno po Glendinning, 2001, 172

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APPENDIX

Table 4: List of most common irregular verbs

Base Form	Simple Past Tense	Past Participle
be	was, were	been
become	became	become
begin	began	begun
break	broke	broken
bring	brought	brought
build	built	built
buy	bought	bought
catch	caught	caught
choose	chose	chosen
come	came	come
cost	cost	cost
cut	cut	cut
do	did	done
draw	drew	drawn
drive	drove	driven
drink	drank	drunk
eat	ate	eaten
fall	fell	fallen
feel	felt	felt
fight	fought	fought
find	found	found
fly	flew	flown
forget	forgot	forgotten
get	got	gotten
give	gave	given
go	went	gone
grow	grew	grown
hear	heard	heard
hide	hid	hidden
hit	hit	hit
hold	held	held
hurt	hurt	hurt
keep	kept	kept
know	knew	know
lay	laid	laid
leave	left	left
lend	lent	lent
let	let	let

lie	lay	lain
lose	lost	lost
make	made	made
meet	met	met
pay	paid	paid
put	put	put
quit	quit	quit
read	read	read
ring	rang	rung
rise	rose	risen
run	ran	run
say	said	said
see	saw	seen
sell	sold	sold
send	sent	sent
shake	shook	shaken
shine	shone	shone
shut	shut	shut
sing	sang	sung
sink	sank	sunk
sit	sat	sat
sleep	slept	slept
speak	spoke	spoken
spend	spent	spent
spread	spread	spread
stand	stood	stood
steal	stole	stolen
sting	stung	stung
stink	stank	stunk
swim	swam	swum
take	took	taken
teach	taught	taught
tear	tore	torn
tell	told	told
think	thought	thought
understand	understood	understood
wear	wore	worn
win	won	won
write	wrote	written

Vir: prirejeno po http://www2.gsu.edu/~wwwesl/egw/verbs.htm (9. 4. 2011)

Projekt **Impletum**
Uvajanje novih izobraževalnih programov na področju višjega strokovnega izobraževanja v obdobju 2008–11

Konzorcijski partnerji:

Operacijo delno financira Evropska unija iz Evropskega socialnega sklada ter Ministrstvo RS za šolstvo in šport. Operacija se izvaja v okviru Operativnega programa razvoja človeških virov za obdobje 2007–2013, razvojne prioritete Razvoj človeških virov in vseživljenjskega učenja in prednostne usmeritve Izboljšanje kakovosti in učinkovitosti sistemov izobraževanja in usposabljanja.