English for Laboratory Biomedicine Students

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Unit 1: Know thy Body

Human Body & Organs

Group work: Think of all the words related to body that you know. Make as long list as possible. Compare with other groups:

Parts of body: Organs:
Task 1: What is wrong with the people in the pictures? Where do they have an “ache” or a “pain”?

Task 2: Which of the words in the box combine with -ache?

- arm
- leg
- chest
- back
- elbow
- tummy
- bottom
- thigh
- stomach
- ankle
- wrist
- head

Task 3: Complete these sentences, using one of the following words: rash, bang, chip, swell

1. While I was opening the door I ______ my head.
2. Because of something I had eaten it came out in a ______.
3. I fell on ice and ______ my front tooth.
4. Some hooligans got me in the street and I ended up with black eye and ______ lips.
Study the words in the box. Where can you find these parts of body? Put them in the appropriate places in the table below:

<table>
<thead>
<tr>
<th>jaw</th>
<th>loin</th>
<th>calf</th>
<th>heel</th>
<th>forearm</th>
</tr>
</thead>
<tbody>
<tr>
<td>palm</td>
<td>crown</td>
<td>buttock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hip</td>
<td>thigh</td>
<td>nipple</td>
<td>groin</td>
<td></td>
</tr>
<tr>
<td>breast</td>
<td>navel</td>
<td>toe</td>
<td>ankle</td>
<td></td>
</tr>
</tbody>
</table>

Name the parts of body in this illustration:
Idioms - body

Task 4:  Select from the words in the box and complete idiomatic phrases

<table>
<thead>
<tr>
<th>skin</th>
<th>neck</th>
<th>heart</th>
<th>face</th>
<th>chest</th>
<th>tooth</th>
<th>bones</th>
</tr>
</thead>
</table>

1. Ironing is my least favourite activity. It’s a real pain in the _______.
2. The pass mark was 60% and he got 60.3%, so he made it by the _______ of his teeth.
3. I know I should go to the meeting by I just can’t _____ it.
4. She has always kept her feelings for herself. She is not a sort of person to wear her ______ on her sleeve.
5. I just cannot resist chocolate and cakes - I have a sweet _____.
6. The first thing to start solving a problem is to get it off your _____.
7. I think there is going to be trouble at the meeting tonight; I can feel it in my _____.

Task 5:  Read the text and refer to the picture on the right and complete the text:

Vital body organs

All the vital body organs except for the brain are enclosed within the trunk or ______ (the body apart from the head and limbs). The trunk contains two large cavities separated by a muscular sheet, called _______. The upper cavity, known as the _______ or chest cavity, contains the ______ and _______. The lower cavity, called the abdominal cavity, contains the ______, ______, _______ and pancreas which all play a role in digesting food. Also within the trunk are the ______ and _______ which are part of the urinary system.
Know thy body – crossword puzzle

**Across**
1. legs or arms  
4. upper front part from neck to stomach  
5. long tube through which food travels from the stomach and out of the body while it is being digested  
6. the long tube that carries solid waste from the stomach out of the body  
7. an organ in the body where food is digested  
9. large organ cleaning the blood  
10. an organ near the stomach which produces and cleans the body's blood  
13. pair of organs in a woman's body which produce eggs  
15. soft fatty tissue in the centre of a bone

**Down**
2. synonym for spine  
3. a pair of organs removing waste from blood and producing urine  
8. movement or act of emptying waste  
10. two breathing organs in a chest  
12. a synonym for backbone  
14. a tube carrying blood from heart to other parts of body
Blood is composed of many different kinds of cells, each with a specific function. Most blood cells are formed in the bone marrow and released into the bloodstream at various stages of maturity.

Red blood cells (erythrocytes) make up 45 percent of blood volume. Their primary function is to pick up oxygen in the lungs and transport it to tissues throughout the body. At the tissue site, red blood cells exchange oxygen for carbon dioxide and carry it back to the lungs to be exhaled. First, they are packed full of hemoglobin, which functions as the oxygen carrier. Interestingly, red blood cells have no nuclei, a feature which makes even more room for hemoglobin. Second, they are shaped like disks. This shape greatly increases their surface area compared with a sphere of the same volume. The large surface area is important because it improves the efficiency of oxygen transfer between hemoglobin and the tissues where the oxygen is needed. Red blood cells are formed in the bone marrow, and they have an average life span of about 120 days. After this period of time, red blood cells tend to become misshapen and they are removed from the circulation by the spleen.

White blood cells (leukocytes) are only 1/1,000 as numerous as red blood cells in the bloodstream. There are five main types: neutrophils (also called granulocytes), eosinophils, basophils, monocytes, and lymphocytes. Each plays a distinct and important role in helping the immune system fight infection.

Neutrophils contain granules of bacteria-killing enzymes in the cytoplasm - the substance surrounding the cell. Eosinophils attack protozoa that cause infection. Basophils are the least common type of white blood cell and their function is not completely understood. They play an important role in regulating allergic reactions such as asthma, hives, hay fever and reactions to drugs.

Monocytes are the largest white blood cells. They engulf and destroy invading bacteria and fungi and clean up debris once foreign organisms have been destroyed by other white blood cells. When monocytes leave the bloodstream and enter tissues or organs, they can evolve into larger cells called macrophages that have an increased capacity to destroy foreign organisms invading the body.
Lymphocytes are the smallest white blood cells and are the backbone of the immune system. Lymphocytes fight viral infections and assist in the destruction of other parasites.

A white blood cell count (WBC) is performed by counting the number of white blood cells in a sample of your blood. A normal WBC is in the range of 4,000 to 11,000 cells per microliter. A low WBC is also called leukopenia, a finding common in persons with HIV disease.

**Task 2: Translate into English:**

1. Povprečna življenska doba je 12 dni.

2. Pomanjkanje železa povzroča neustrezno tvorbo rdečih krvnih celic.

3. Te celice tvorijo 45% volumna krvi.


5. Neutrofili imajo sposobnost uničevanja tujkov.

**Task 3: Pronunciation - Blood and Lymphatic systems**

<table>
<thead>
<tr>
<th>anaemia</th>
<th>eosinophil</th>
<th>hypochromic</th>
<th>platelet</th>
</tr>
</thead>
<tbody>
<tr>
<td>antibody</td>
<td>erythrocyte sedimentation rate (ESR)</td>
<td>hypogammaglobulinaemia</td>
<td>polycythaemia</td>
</tr>
<tr>
<td>anticoagulant</td>
<td>erythrocytic</td>
<td>immunosuppression</td>
<td>prothrombin</td>
</tr>
<tr>
<td>antigen</td>
<td>gamma globulin</td>
<td>lymphadenopathy</td>
<td>purpura</td>
</tr>
<tr>
<td>basophil</td>
<td>haemoglobin</td>
<td>macrocyte</td>
<td>reticuloendothelial</td>
</tr>
<tr>
<td>blood</td>
<td>haemolysis</td>
<td>macrocytic</td>
<td>serum</td>
</tr>
<tr>
<td>coagulation</td>
<td>haemolytic</td>
<td>microcytic</td>
<td>thalassaemia</td>
</tr>
<tr>
<td>emboli</td>
<td>haemopoiesis</td>
<td>neutrophil</td>
<td>thrombocytopenia</td>
</tr>
<tr>
<td>embolic</td>
<td>haemopoietic</td>
<td>pernicious anaemia</td>
<td></td>
</tr>
<tr>
<td>embolus</td>
<td>haemostasis</td>
<td>phagocyte</td>
<td></td>
</tr>
<tr>
<td>embolism</td>
<td>haemostatic</td>
<td>phagocytic</td>
<td></td>
</tr>
</tbody>
</table>
A **blood film** or **peripheral blood smear** is a slide made from a drop of blood, that (1) ______ the cells to be (2) ______ microscopically. Blood films are usually done to (3) ______ hemato logical problems (disorders of the blood itself) and, occasionally, to look for parasites within the blood.

Blood films are made by (4) ______ a drop of blood on one end of a slide, and using a **spreader slide** to (5) ______ the blood over the slide's length. The aim is to get a region where the cells are (6) ______ far enough apart to be counted and differentiated.

The slide is left to air dry, after which the blood is fixed to the slide by (7) ________ it briefly in methanol. The fixative is essential for good staining and presentation of cellular detail. After fixation, the slide is stained to distinguish the cells from each other.
Unit 3: How safe are we?

Pre-reading:

Task 1: Before you start reading the text below think about your personal safety and think about the following statements. Do you agree or disagree with them?

1. The death-rate of cancer is higher among the working population than those who stay at home. Agree Disagree

2. The quality of air is better at home than at the workplace. Agree Disagree

3. Living longer means we are living healthier. Agree Disagree

Task 2: Now read the text and see whether your answers have been correct or wrong:

Tens of thousands of Britons could suffer anything from chronic ill-health to early death because of toxic chemicals used in consumer products in homes, according to a new book.

1. Fewer than a quarter of the 70,000 chemicals used in toiletries and cleaning products have been subjected to a full safety investigation, while others, officially classed as hazardous waste, are frequently found in products from baby lotion to eye drops and cleaning fluids, according to Pat Thomas, author of Cleaning Yourself to Death.

2. Women who work at home have a 55 per cent higher death rate from cancer than those who work outside the home, a statistic that Thomas argues is closely related to the increase in household cleaning products and toiletries.

3. 'We spend 90 per cent of our time at home but some of the most toxic chemicals we come into contact are bought in good faith in stores and supermarkets and brought back into our homes by us, in the form of every day cleaning products.'

4. Thomas believes that the lack of legislation has meant that chemicals banned in other, more tightly controlled areas are still commonly used in thousands of household products.

5. She believes this contributes heavily to the US Environmental Protection Agency’s recent finding that the air quality in homes is more toxic than the outdoor air, often containing between two and five times the concentration of toxic chemicals.

6. 'Most people cross their fingers and pray that the companies who put these chemical soups together really do have the consumer’s welfare and best interests at heart, but the emerging evidence is that many of these chemicals have the potential to make us and our children very ill indeed,' she said.

7. Although no national research has been carried out in Britain, a survey by the National Institute of Occupational Safety and Health in America found that of 2,983 chemicals found in personal care products, more than 30 per cent were toxic.
According to Thomas, toiletries and cleaning products regularly include ingredients which contain carcinogens, hormone-disrupting chemicals and central nervous system disrupters.

'This has remained hidden because people assume that if we're living longer, we must be healthier,' said Thomas. 'But we are actually strikingly unhealthy: chronic diseases are on the rise, respiratory problems such as asthma and bronchitis have doubled in recent years, and vague disorders such as sinusitis and allergic rhinitis are becoming major problems. Heart disease, diabetes and thyroid problems are also on the rise and infertility of both males and females is becoming more common, as are other hormonally linked disorders.'

Thomas found high levels of sodium lauryl sulphate, a harsh detergent commonly used as an engine degreaser, in toothpastes, shampoos and cleansers. One of the most dangerous chemicals Thomas found was nitrosamine, a carcinogenic commonly used in baby and body lotions, facial moisturisers and shampoos.

Source: How a clean home can be a killer, by Amelia Hill, Sunday February 25, 2001
The Observer

Task 3: Post-reading: Discuss in pairs 🌐 🌐:

1. What have you find most striking about the facts presented in this article?
2. How aware are you of the potential dangers coming from the products we use every day?
3. Who do you think is responsible for this?

Task 43: Word study

Find words with the same meaning in the text:

<table>
<thead>
<tr>
<th>Par 6: prosperity, well being</th>
<th>Par 8: component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Par 6: proof</td>
<td>Par 9: extremely, highly</td>
</tr>
<tr>
<td>Par 9: accept as true</td>
<td>Par 9: unclear, indistinct</td>
</tr>
<tr>
<td>Par 4: prohibit</td>
<td>Par 8: causing disorder</td>
</tr>
</tbody>
</table>
Task 4: Cause and Effect

Refer to the information in the grid below and make sentences which state the causes and effects of hazards. Use phrases from the box. Look at the example first:

**Example:** Multiple chemical sensitivity is caused by chemicals and can cause allergies.

<table>
<thead>
<tr>
<th>Cause of hazard/symptom</th>
<th>Where does the hazard come from?</th>
<th>impacts on people’s health</th>
</tr>
</thead>
<tbody>
<tr>
<td>multiple chemical sensitivity</td>
<td>chemicals</td>
<td>allergy</td>
</tr>
<tr>
<td>lack of legislation</td>
<td>state policy</td>
<td>uncontrolled production</td>
</tr>
<tr>
<td>oestrogen</td>
<td>detergents</td>
<td>fertility in men</td>
</tr>
<tr>
<td>modern diseases</td>
<td>chemicals</td>
<td>higher death rate</td>
</tr>
<tr>
<td>carcioneongens</td>
<td>toiletries, cleaning products</td>
<td>nervous system disruption</td>
</tr>
<tr>
<td>fumes</td>
<td>traffic</td>
<td>asthma</td>
</tr>
</tbody>
</table>

1.
2.
3.
4.
5.
Task 5: Read the descriptions of some common hazardous laboratory substances:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Xylene</strong></td>
<td>is a moderately flammable liquid which is a mild eye and mucous membrane irritant. It is a primary skin irritant and a central nervous system depressant. It will de-fat skin and may cause dermatitis. Over-exposure leads to respiratory failure.</td>
</tr>
<tr>
<td><strong>Toluene</strong></td>
<td>is a flammable liquid. It can be absorbed into the body by inhalation, ingestion or through the skin. It is mutagen and should never be handled during pregnancy. The most rapid route of entry is through the pulmonary system, and nacrosis can develop before signs of irritation are apparent. 2000 ppm can cause death.</td>
</tr>
<tr>
<td><strong>Ammonium nitrate</strong></td>
<td>is an allergen and possible carcinogen that supports combustion. It is an eye, skin and respiratory tract irritant. If ingested it causes dizziness, abdominal cramps, vomiting, bloody diarrhoea, weakness and collaps.</td>
</tr>
<tr>
<td><strong>N,N-dimethylaniline</strong></td>
<td>is toxic and causes headaches, shortness of breath, weakness, nausea and confusion. High levels lead to convulsions, coma and possibly death. Chronic effects include central nervous system disorders, liver, kidney and bone marrow damage, weight loss, anaemia and weakens.</td>
</tr>
<tr>
<td><strong>Hydrochloric acid</strong></td>
<td>is a strong irritant and corrosive and must be handled with great care. It will cause severe burns to exposed skin. Always use a fume hood when handling this acid. Always add acid to water and never water to acid as the heat generated may cause a violent reaction.</td>
</tr>
<tr>
<td><strong>Potassium chloride</strong></td>
<td>is a strong oxidising agent and can be explosive. It is a strong eye, skin and respiratory tract irritant and is toxic by inhalation and ingestion.</td>
</tr>
</tbody>
</table>
Task 6: Look at the safety symbols: How would you label the containers with substances from the descriptions above?

1. dangerous for the environment
2. flammable
3. explosive
4. oxidising
5. irritant
6. toxic
7. harmful

Task 7: Dictionary work: Word formation
Use a good dictionary and find the word forms stemming from the same root and complete the grid where appropriate:

<table>
<thead>
<tr>
<th>verb</th>
<th>noun</th>
<th>adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>irritant</td>
<td>inhalation</td>
<td>combustible</td>
</tr>
<tr>
<td>ignition</td>
<td>effect</td>
<td>flammable</td>
</tr>
<tr>
<td>breathe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>digest</td>
<td></td>
<td>oxidising</td>
</tr>
<tr>
<td>danger</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Task 8: Fill in the blanks with a suitable form of the words given in the table above:

1. The fuel spontaneously ________ because of the high temperature and pressure.
2. There can be no doubt whatsoever that smoking __________ your health.
3. I’ve never played ice hockey - it's far too __________.
4. __________ system is the organs of a body which _________ food.
5. The __________ in an engine is the electrical system that causes the fuel to burn or explode in order to start the engine.
6. Too much smoke may _________ your eyes.
7. If you have ________ toxic fumes, go out for a _______ of fresh air.
8. He sat by the fire, staring at __________ .
9. If a substance __________, it means it combines with oxygen.

Task 9: Fill-in the gaps. Use the words below:

<table>
<thead>
<tr>
<th>explosion</th>
<th>stored</th>
<th>separate</th>
<th>flammable</th>
<th>rubber</th>
<th>gaseous</th>
</tr>
</thead>
<tbody>
<tr>
<td>coat</td>
<td>liquid</td>
<td>agents</td>
<td>washed</td>
<td>discharged</td>
<td>spill</td>
</tr>
</tbody>
</table>

Oxidising agents

Powerful oxidising agents are liable to promote fire and/or ________ and should not be stored with ___ _2__ liquids or poisonous substances. Keep oxidising and reducing agents ________ . For example, acids should never be ________ close to ammonia. If a ________ does occur, protective clothing, including ________ gloves, a face shield and a laboratory ________ , should be worn. A respirator is also required for such ________ as chlorine or bromine.

If the oxidising agent is a ________ or solid, cover it with the reducing agent which would promote rapid reduction. The resultant mix can be ________ safely into the sewage system with a large excess of water. The site of the spill should be ________ with a soap solution containing some reducing agent.

If the oxidising agent is ________ it can be bubbled through the reducing agent and the gas can be vented into the fume hood.
Unit 4: Understanding technical language: Modifiers

Technical language is difficult to understand because of noun-noun combinations. Study the following word combination and try to translate it into Slovene.

```
virtual image magnification
culture-treated polyester membrane
```

- Which word is the main one in each example?
- Which element(s) define (modify) this word?

The above example is a noun-noun combination. All the words standing in front of the last word in the row are called modifiers. Modifiers provide additional information about the main word which is the last word in the cluster. They can denote either:

1. a substance of which something is made (e.g. paraffin wax = parafinski vosek)
2. purpose for which something is used (e.g. growth area = gojitvena površina)
3. an object of which something is a part (e.g. head filter = filter pri glavi)
4. object of the action (e.g. mucous formation = tvorba sluzi)

See how the meaning of the following two noun phrases can be changed!

- gas turbine = turbine which is driven by gas
- turbine gas = gas which drives the turbine

For paraphrasing the noun combinations you must use various prepositions or of-phrase, e.g.

<table>
<thead>
<tr>
<th>of-phrase</th>
<th>noun-noun combination</th>
<th>paraphrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>length of the tube</td>
<td>tube length transport system</td>
<td>length of the tube system of transport</td>
</tr>
<tr>
<td>data on safety</td>
<td>safety data</td>
<td>data on safety</td>
</tr>
<tr>
<td>knob for focusing sth.</td>
<td>focus knob</td>
<td>knob for focusing sth.</td>
</tr>
<tr>
<td>safety from fire</td>
<td>fire safety</td>
<td>safety from fire</td>
</tr>
<tr>
<td>engineering in safety</td>
<td>safety engineering</td>
<td>engineering in safety</td>
</tr>
<tr>
<td>design of a system which controls combustion against heat</td>
<td>combustion control systems design heat protector</td>
<td>design of a system which controls combustion against heat</td>
</tr>
<tr>
<td>scrapers for cells</td>
<td>cell scrapers</td>
<td>scrapers for cells</td>
</tr>
<tr>
<td>area on which sth. grows</td>
<td>growth area</td>
<td>area on which sth. grows</td>
</tr>
</tbody>
</table>
Task 1: Look at the picture of the microscope and explain the following noun-noun combinations. Use of-phrases or prepositions.

- specimen holder
- aperture adjustment
- rubber feet
- lamp housing
- filter holder
- heat filter
- field flattening lens elements
- virtual image magnification
- peripheral image focus error

Task 2: Paraphrase the following noun-noun combinations:

1. syringe needle ____________________
2. vaporization chamber ____________________
3. fire suppression system ____________________
4. flow rate ____________________
5. automated powder dispensing station ____________________
(1) This dedicated station automates your time-consuming, routine powder dispensing tasks. Station accepts a variety of off-the-shelf laboratory sample containers. To operate, simply load the station with a rack of containers and the powder to be dispensed, input the target weight and dispensing tolerance, and start the unit. Note: Variations in powder texture and grain size can affect operation.

(2) The station places a container on the balance, determines the tare weight, calculates the target gross weight, dispenses the powder to the target gross weight, and returns the container to the rack. This sequence continues until all containers have been processed, freeing you for other tasks.

(3) All communications to and from the computer, transport system, dispensing module, and balance are sent via a built-in RS-232 interface. Statistical information such as the tare weight, gross weight and calculated net weight on each dispensing are stored in a data file for further processing or printing.

Station comes complete with a 100-mL powder reservoir, a powder dispensing module, a Satorius balance and IBM-compatible laptop computer, your choice of rack, a transport system, three fingers to hold a variety of containers and a 6-ft cord with three-prong plug.
Task 4: Write down all noun-noun combinations from paragraph 1 and try to paraphrase them:

1. ________ paraphrase:
2. ________ paraphrase:
3. ________ paraphrase:
4. ________ paraphrase:
5. ________ paraphrase:
6. ________ paraphrase:

Task 5: Read paragraph 2. Find the instructions for operating the instrument. Draw a flow-chart and label it:

Task 6: There are five steps in the operation of this instrument. Describe the operational process. Which tense (form) will you use? Write in the space below:
Task 7: What else does the station include? Read paragraph 3 and list the items below:

1. ______
2. ______
3. ______
4. ______
5. ______
6. ______
7. ______
8. ______

Task 8:
Role play: work with your partner. Imagine you are representing a company which produces powder dispensing instruments. Try to persuade the customer to buy it. Put forward all the advantages of this instrument.

Task 8:
Dictionary work: Refer to Par 1 where the following words appear. From these words derive as many other word-forms as possible and use them in sentences below:

Example:
automates (automated, automation, automatic)

- consuming __________________________
- dispensing _________________________
- operate ___________________________
- tolerance __________________________
- variations _________________________
- determine _________________________
Task 9: Complete the text: inset the correct form using the words above:

1. There is a vending machine on the platform that __________ snack.
2. Global temperatures ___________significantly over the last 140 years.
3. _________ protection takes care of buyers of goods and services against low quality or dangerous products.
4. Repairs have already begun and we expect the factory to be fully ___________ again within six months.
5. It seems these animals can _________ temperatures which would kill other species.
6. Work on the production line is monotonous and lacks ________
7. Your health is ___________ in part by what you eat.
8. We have representatives ___________ in most countries.
Study the format of an official letter.

**Heading**

**Date**

**Reference**

**Address**

**Salutation**

**Opening and closing sentence**

**Complimentary close**

**Signature**

---

**Gradens & Jones Ltd.**

July 28, 1992

Laurence Green & Co Ltd.

25 Kings Road

Manchester MR 4 8BD

Dear Sirs,

We understand that you are the British agents for Iliippos of Athens. Will you please send us price lists and catalogues for all products manufactured by your company, together with details of trade discounts and terms of payment.

We look forward to hearing from you.

Yours faithfully,

Gradens & Jones Ltd.

J.A. Stevens

Chief Buyer
Basic components of official correspondence

**Dates**

You can use one of the following ways in writing the date:

- July 13, 2007 (Am.)
- July 13\textsuperscript{th}, 2007 (Brit.)
- 13 July 2007 (general)

Note! Avoid confusion:

13.7.2007= understood as July 3\textsuperscript{rd} in British English, but March 7\textsuperscript{th} in American English.

**Salutations**

“Dear Sir or Madame,” (Dear Sir/Madam,) if you don’t know whether the recipient is a man or a woman
“Dear Sir,” or “Dear Madam,” when you know the name of the person who is receiving this letter
Dear Chairperson, Dear Committee, in more specific occasions

**Complimentary close**

Yours faithfully,
Yours sincerely,
Sincerely yours, (Am)
Faithfully yours, (Am)
Respectfully yours,
Cordially,
Respectfully,
Letter of Inquiry

When we write letters of inquiry we usually ask for some information, advice, directions, etc. You need to state the main purpose, or subject at the beginning.

Structure of the letter of inquiry

- Open (say where you got the information from)
- State the reason for writing (e.g. why a certain product is interesting for you)
- Request (what you would like them to do)
- Close (polite phrase)

Buying a product

You may be interested in how to order a product, how to pay, etc. There are at least three basic questions one might ask when writing an inquiry letter:

- price
- shipment
- samples
discounts for large orders
delivery time
pro-forma invoice
insurance
price (quotation), a price-list
insurance
method of payment (cheque, credit card, bank transfer)
terms of payment (advance payment, credit)
servicing
warranty, maintenance
### Useful language:

#### Opening:
- With regard to your advertisement...
- We saw your product demonstrated at the Biomed Fair, held in...
- Ms. King has advised us to get in touch with you concerning....
- We saw your advertisement in this month’s issue of ....
  - ... and would like to know...
  - ... and would be grateful if you could ...

#### Reason:
- As a laboratory worker I am interested in ...
- We are most interested in developing (improving, extending)...
- There is a demand here for ...
- There is no representative here for articles of this type.
- What we have in mind is ...
- What we need is ...

#### Request:
- We wonder if you could help us (advise us, send us, let us have)....
- Will you please send us a catalogue (price list)...
- We would be glad to receive specifications on.... together with export prices.
- We are interested in ordering ....
- We would like to place an order...
- We are interested in terms of payment.
- We are interested in discounts offered for large orders ....
- Please send us a pro-forma invoice.
- We would appreciate a sample for each item.

#### Close
- An early answer will be appreciated.
- We are looking forward to receiving you early reply.
- We are looking forward to receiving the prices (catalogue).
- We look forward to hearing from you.
- Thank you in advance for any information you can give us.
Task 1: Complete the letter. Insert the salutation and the complimentary close too.

1.

________________

We have been given your name ______ our associates from Italy.
There is ______ demand here ______ Ljubljana ______ the qualities you ______ , and we believe we could ______ large orders ______ you.
______ you please send us your illustrated ______ , together with your ______ list.
We ______ forward to ______ ______ you.

______yours,
Slavko Pirc
(Research Laboratory Assistant)

2.

________

With ______ to your advertisement ______ the Science Journal ______ 3rd November, we ______ ask you for ______ about a new apparatus, shown ______ page 7.
______ a clinical laboratory we have a great ______ for such products.
We ______ be glad to ______ an estimate for the costs of installation of this ______ in our laboratory.
Please, let us ______ your quotation as ______ as ______.

Yours ______,
Martina Rode
(Senior Researcher)
Task 2: Read this letter of inquiry and correct mistakes/improprieties (there should be 12 in total)

9. april, 2000

Instruments Ltd.
USA
Fax: 204-344-6785

Dear sir or madam,

We saw yours products advertised in Biotechnology. They seem appropriate for use in our laboratory. We are interesting if they are semi- or completely automatic.
We kindly ask you to send us more informations. Send us also the price list.
We would like to stress that we will need a considerable amount of these products and we may order quite a lot of them if you won’t exaggerate with the prices.

I am waiting for you answer.

Looking forward to hear from you.

Sincerely your,

Purchase Department

Task 3: Translate:

1. Naši poslovni partnerji so nam povedali, da bi nam lahko posredovali nekaj informacij o ...

2. Oglas za vaš izdelek smo zasledili v časopisu DELO.

3. Veselilo bi nas, če bi nam lahko poslali tehnične podrobnosti za to napravo in izvozno ceno.

**Task 4: Write a letter of inquiry**

**Situation 1:**
Write to the Drake Company in Australia. You’ve seen a new model of an automated microplate transporter at an exhibition in London. Ask for details, terms, delivery time, servicing, warranty.

**Situation 2:**
Write to Mr. Nikemoto, Sakura Company, Japan. They produce special chromatographs. You have heard about them from your partners. Indicate there is a good market for their products in Slovenia. Ask questions about their European representative, address, contact person.

**Situation 3:**
Write to Prentice Hall Ltd. Ask them to send you a handbook on analytical methods. It was advertised in a catalogue. Ask for a discount since you work for a non-profit organisation. Tell them you would like to pay by credit card.
Saves Time—Unique design facilitates the shortest position of the slide carrier between staining solutions. Economical too—Efficient operation reduces solution contamination increasing stain/solution life.

- Stain and coverslip using the same basket. Stain up to 60 slides per staining cycle. Stain up to 180 slides per hour.

- Microprocessor provides for user-friendly operation. Place up to 16 programs into memory. Identify solutions by name and concentration.

- Compact design maximizes space utilization.

- The Fume Ventilator is designed to prevent air contamination in the working environment.

- Plastic staining reservoirs eliminate breakage. Special tab facilitates identification of reagents. Removable trays provide for rapid changing of solutions or exchange of trays to permit different staining procedures.

- Agitation speed can be programmed by the user.

- If errors are made during the initial programming of the staining sequence, special warning and error codes alert the user to incorrect program instructions.

- Unique three-way drive system provides for flexible slide carrier movement, left to right, front to rear and diagonally. Transition time from reagent to reagent is reduced.

- Reagent usage is monitored. Eliminates the need to change reagents needlessly. Cross-contamination and carry-over are reduced due to special basket design.
Task 1: Look at the advertisement for the Sakura Automated slide stainer on previous page. As you can see, the labels in each paragraph are missing. Chose from the following titles and label each paragraph:

1. Space Saving Design
2. Coverslipper Compatible
3. Programmability
4. Fume hood
5. Staining Reservoirs
6. Agitation Frequency
7. Program Entry Protection
8. Quality Control Program
9. Slide Carrier Mobility

Task 2: Look at these sentences and change the sentences (you need to make a verb from the noun):

Example: Compact design maximises space utilization.
You can utilize space more efficiently.

1. Plastic staining reservoirs eliminate breakage.
2. Special tab facilitates identification of reagents.
3. Agitation speed can be programmed by the user.
4. Transition time from reagent to reagent is reduced.
5. Cross-contamination and carry-over are reduced due to special basket design.

Task 3: Write a letter of inquiry to SAKURA Ltd, Japan.

The situation is the following: you work in a laboratory and would like to buy the slide stainer from the advertisement. You already have an old model but you need answers to additional questions on:
- compatibility of baskets
- size of the apparatus
- delivery time, terms of payment, method of payment
- warranty
Unit 6: Laboratory techniques

Read the text on Gas chromatography
In gas chromatography (GC), the sample is vaporized and injected onto the head of a chromatographic column. Elution is brought about by the flow of an inert gaseous mobile phase. In contrast to most other types of chromatography, the mobile phase does not interact with molecules of the analyte; its only function is to transport the analyte through the column. Two types of chromatography are encountered: gas-solid chromatography (GSC) and gas-liquid chromatography (GLC). Gas-liquid chromatography finds widespread use in all fields of science, where its name is usually shortened to gas chromatography (GC).
GSC is based upon a solid stationary phase in which retention of analytes is the consequence of physical adsorption. Gas-solid chromatography has limited application owing to semi-permanent retention of active or polar molecules and severe tailing of elution peaks. Thus, this technique has not found wide application except for the separation of certain low-molecular-weight gaseous species.

Task 1: Word formation:
The following words have been taken from the text and arranged according to three categories: VERB, NOUN and ADJECTIVE. Try to derive other word-forms from these words. In some cases it will be possible to derive more than one word. Use a dictionary.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Noun</th>
<th>Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>chromatography</td>
<td>vaporised</td>
<td></td>
</tr>
<tr>
<td>elution</td>
<td>gaseous</td>
<td>mobile</td>
</tr>
<tr>
<td>interact</td>
<td>analyte</td>
<td></td>
</tr>
<tr>
<td>transport</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>application</td>
<td>adsorption</td>
<td></td>
</tr>
<tr>
<td>retention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note the difference between family words: solid, dissolve, solvent, solute, solution.

**Task 2: Word formation**
Complete the text by adding a corresponding ending:

Liquid chromatography (LC) is an analytical chromatography technique that is useful for separating ions or molecules that are dissolved in a solvent. If the sample solution is in contact with a second solvent or liquid phase, the different solvents will interact with the other phase to differing degrees due to differences in adsorption, ion-exchange, partition, or size. These differences allow the mixture components to be separated from each other by using these differences to determine the transit time of the solute through a column.

**Task 3: Prepositions**
Insert prepositions: in, within, of, on, through, for, with, at (some may be used several times!)

Spectrophotometry is the study and analysis of inorganic and organic substances. This includes organisms such as bacteria in a solution. Spectrophotometry of the visible light range depends on how light (electromagnetic radiation) is absorbed and transmitted in a solution with an analyte. An understanding of electromagnetic radiation and Lambert-Beer’s Law is needed to know how spectroscopy works. In general, when light from the visible range shines through a solution, specific wavelengths will be absorbed and unabsorbed wavelengths will pass through. Transmitted wavelengths are responsible for the color and compliment the color absorbed by the species in solution. Absorbed light has energy associated with it and causes an electron from the ground state to be excited to a higher energy level. A spectrophotometer is an instrument used to determine at what wavelengths the sample absorbs light and the intensity of the absorption.

**Task 4: An experiment: Preposition**
Insert the correct preposition: with, in, under, until, over, at, for, on, by, through

A 1-L, three-necked, round-bottomed flask equipped with a pressure-equalizing dropping funnel, a thermometer, a magnetic stirring bar, and serum caps, is charged with 50 g (0.12 mol) of methyltriphenylphosphonium iodide and 320 mL of tetrahydrofuran and is flushed with argon. The flask is cooled in an ice bath and the suspension is stirred under a positive pressure of argon, while about 0.2–0.6 mL of 2.05 M phenyllithium in 30:70 ether: cyclohexane is added dropwise until the suspension develops a permanent yellow color. Then 56 mL (0.115 mol) of 2.05 M phenyllithium is added dropwise for 10 min. The ice bath is removed, and the orange suspension containing excess phosphonium salt is stirred at room temperature for 30 min. The reaction mixture is stirred and cooled to 0–5°C, and 17.2 g (0.11 mol) of geranial in 50 mL of
tetrahydrofuran is added dropwise for 10 min. The dropping funnel is rinsed with a small amount of tetrahydrofuran. The mixture is stirred at room temperature for 2 hr. The light-orange mixture is hydrolyzed by adding 2 mL of methanol, and most of the solvent is removed by a rotary evaporator. A slurry results. The slurry is diluted with 200 mL of petroleum ether (bp 60–68°C), and the supernatant solution is decanted and filtered through 150 g of Celite on a Büchner funnel. The solids remaining in the flask are heated with three 100-mL portions of hot petroleum ether, and the supernatant solutions are also filtered through Celite. The filtrate is concentrated by rotary evaporation to a yellowish liquid that is filtered through 150 g of Florisil on a Büchner funnel, and the Florisil is washed with 300 mL of petroleum ether. Rotary evaporation of the eluate provides approx. 15 g of clear liquid.

**Task 5: Articles**

**Insert the article: a, an, the, or ∅**

A 2-L, three-necked, round-bottomed flask is dried in an oven and equipped with a mechanical stirrer, a thermometer, an Claisen adapter, and two pressure-equalizing dropping funnels. The flask is charged with 500 mL of dichloromethane and 20 mL (29.2 g, 0.23 mol) of oxalyl chloride. The solution is stirred and cooled at −50 to −60°C as 34 mL (37.5 g, 0.48 mol) of dimethyl sulfoxide in 100 mL of dichloromethane is added dropwise at a rapid rate. After 5 min 30.8 g (0.2 mol) of geraniol is added dropwise over 10 min maintaining the temperature at −50 to −60°C. After another 15 min, 140 mL of triethylamine is added dropwise while keeping the temperature at or below −50°C. Stirring is continued for 5 min, and the mixture is allowed to warm to room temperature and 700 mL of water is added. The aqueous layer is separated and extracted with two 300-mL portions of dichloromethane. The organic layers are combined, washed with two 100-mL portions of saturated sodium chloride, and dried over anhydrous magnesium sulfate. The filtered solution is concentrated to 500 mL by rotary evaporation and washed successively with 1% hydrochloric acid until it is no longer basic. The dichloromethane solution is washed with water, 5% sodium carbonate, water, and saturated sodium chloride before drying over anhydrous magnesium sulfate. Rotary evaporation of the solvent gives ca. 30 g of crude product.
UNIT 7: Dealing with numbers and units

**Microcarrier beads**

Anchorage-dependent cell cultures are easy to grow with these microcarrier beads. Microscopic readings can be taken of these transparent beads. They are shape-stable, so dried cells will not be distorted. The surface area is 255 sq cm/gram of microcarrier, which provides a large culture area per litre of media. Microcarrier bead density is 1.05 g/cc; only minimal agitation is required to suspend the beads. Particle diameter varies from 160 to 300 µm. Powder weight of beads is 0.63 g/cc.

Note how the numbers and units have been written in the text. Would you write them down in the same way in Slovene?

0.63 g/cc  
1.05 g/cc

Note how numbers are written and read in English:

- 1,350 one thousand three hundred and fifty  
- 45.73 forty-five point seven three  
- 3.05 three point oh five  
- 26% twenty-six percent

! Decimals are indicated by a .(point) and not by a , (comma).

**Reading mathematical symbols and fractions:**

- $\frac{1}{2}$ a half  
- $\frac{2}{3}$ two thirds  
- $\frac{1}{3}$ a third  
- $\frac{5}{8}$ five eighths  
- $\frac{3}{4}$ three quarters

- $3 + 8 = 11$ three plus eight equals eleven  
- 16-5 sixteen minus five  
- 8 x 2 eight times two  
- 6÷2 six divided by two  
- 50 kg/sq cm = 50 kilograms per square centimetre  
- 70 kph 70 kilometres per hour  
- 2:3 two to three  
- A<B A is smaller (less) than B  
- A>B A is greater (more) than B
Task 1: Say the following in words:

a) 88÷7  b) 156-5  c) 2,547+18  d) P>A  e) C<B  f) 74 x 17

g) 9/4  h) 73%  i) 23,650  j) 1,200,000  k) 1,000,000,000

Which technical concepts do the following units refer to?

<table>
<thead>
<tr>
<th>Unit</th>
<th>Refers to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>sq cm</td>
<td>surface area</td>
</tr>
<tr>
<td>ml</td>
<td>?</td>
</tr>
<tr>
<td>g</td>
<td>?</td>
</tr>
<tr>
<td>µm</td>
<td>?</td>
</tr>
</tbody>
</table>

Task 2: Read the data from the right column in the table:

Breathing apparatus for long-term operations in toxic environments

<table>
<thead>
<tr>
<th>Technical data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>operating time</td>
<td>4 h according to EN and NIOSH</td>
</tr>
<tr>
<td>Weight, ready to use</td>
<td>12.0 kg</td>
</tr>
<tr>
<td>Weight, including 0.9 kg of ice</td>
<td>12.9 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>595 x 450 x 145 mm</td>
</tr>
<tr>
<td>Oxygen constant dosage</td>
<td>1.5L/min</td>
</tr>
<tr>
<td>Bypass dosage</td>
<td>&gt; 80 L/min</td>
</tr>
<tr>
<td>Oxygen cylinder</td>
<td>2 L/200 bar/400 L</td>
</tr>
<tr>
<td>CO₂ absorber</td>
<td>Disposable cartridge with soda lime or rechargeable cartridge</td>
</tr>
<tr>
<td>Breathing bag volume</td>
<td>5.5 L</td>
</tr>
<tr>
<td>Manual bypass dosage</td>
<td>&gt; 80 L/min</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-15 to + 60°C</td>
</tr>
</tbody>
</table>

Note the following pairs:

Weigh - weight
Long – length
Wide – width
Deep - depth
Task 3: How would you say this?

1. The bridge is 25 m ____________, or it is 25 m in __________.
2. It ________ 30 tons, or the _____ of the bridge is 30 tons.
3. At this point the river is 4 m __________ , or the ________ of the river is 4 m.
4. The river is 20 m ________, or the ________ of the river is 20 m.
5. 

Describing a line graph

Line graphs are made of three important parts: the vertical axis, the horizontal axis and the diagonal line (curve) which shows the relationship between the figures on the vertical axis and those on the horizontal.

In describing the line graph you should:
1. determine the topic of the graph and
2. look at the axes and diagonal line to understand the relationship hat is being illustrated.

( ) trough
( ) erratic movements
( ) a gradual rise
( ) to level off
( ) a dramatic fall
( ) fluctuations
( ) to reach a peak

( ) a gradual fall
( ) a plateau
( ) a steady increase
( ) to leap upwards
( ) a decline
( ) a sharp recovery
Using adjectives you can describe the degree of change. Do you know the corresponding adverbs?

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Adverb</th>
</tr>
</thead>
<tbody>
<tr>
<td>A dramatic fall</td>
<td>to fall</td>
</tr>
<tr>
<td>An abrupt rise</td>
<td>to rise</td>
</tr>
<tr>
<td>A sudden decline</td>
<td>to decline</td>
</tr>
<tr>
<td>A moderate grow</td>
<td>to grow</td>
</tr>
<tr>
<td>A slight increase</td>
<td>to increase</td>
</tr>
<tr>
<td>A rapid drop</td>
<td>to drop</td>
</tr>
<tr>
<td>A gradual decline</td>
<td>to decline</td>
</tr>
<tr>
<td>A steady recover</td>
<td>to recover</td>
</tr>
<tr>
<td>Erratic sales</td>
<td>to sell</td>
</tr>
<tr>
<td>A constant levelling off</td>
<td>to level off</td>
</tr>
</tbody>
</table>

Other useful adjectives for describing changes:
slow, marked, sharp, substantial, significant, considerable

Task 1: How to describe a line graph

Look at the line graph and the text below and complete it with suitable forms of the verbs below.

be, continue, fall, finish, reach, rise, stand

Let us look at the average temperatures in our country in 1995. The horizontal axis stands for months and the vertical axis for temperatures in degrees Centigrade. Overall, the average temperatures were higher than the year before. In January the temperature at 3°C, and was almost 6°C in February, before back to 3°C in March. However, in April the temperatures subsequently and were well over the average temperature of 10°C. In May we can observe a steady rise in temperature until July when the temperatures a peak. After August there a sudden decrease in temperature which was largely due to the general weather pattern in other parts of Europe at that time. The fall in temperatures down to 12°C in October, at 6°C in December.
Task 2: Note the use of prepositions:

The temperature rose by 4°C.
The rise of 4°C.

What is the difference? Complete the exercise below:

1. In 2006 the value of Euro stood (...) 240 SIT.
2. The Euro value rose (...) 3% in 1998.
4. There was an increase (...) 3 SIT (...) 1994 and 1998.

Task 3: Look at the sentences below which describe the movements of the curve in the line graphs and match them with the appropriate picture on the following page.

1. The pressure rose more and more rapidly over the first two hours and then reached a peak. After three hours it sharply dropped.
2. The temperature of the water fell steadily to point B at which it flattened off (became constant). After that it dropped again.
3. The temperature dropped slowly but steadily with time.
4. The concentration rose rapidly during the first two minutes and reached a plateau of about 60 gr/L.
5. The temperature fluctuated with time around an average value of 40 degrees C.
6. The rise of the pressure showed marginal rise during the first three minutes but then dropped sharply.
7. The rise of the pressure showed marginal rise during the first three minutes but then dropped sharply.
Task 4: Describe the line graph showing Laboratory Accident Frequency Rate 1983-95

The _______ graph represents _______. The horizontal _____ stands for ______ and the ______ axis for _______. During the period from 83-84, there was a ____ ______ in the number of accidents which reached the peak in ____. After this period we can observe a ______ ______. However, in the period from 85 to 87 there was again a ____ ______ in the number of accidents. Fortunately, in the following period we can again observe a ______. After 1990 there was again a ______ ______ in the number of accidents and after 1992 a ______ drop.
**Task 5: Sales of Frosty Fish in 2002**

As can be seen on this graph, the sales of Frosted Fish _____ from the start of financial year 2002. They started with a _____ _____ in sales and ______ in September. Sales then _____ ______ to a peak in November. During December sales ________ again, which can be attributed to the Christmas season and a general preference among the population for other food than fish. However, sales _______ ______ during January but then _______ ______ until the end of the financial year.
Unit 8: DESCRIBING A PROCESS

The art of process description can be divided into a number of language functions:

1. Logical sequence of actions
2. Impersonality (use of passive as well as the active)
3. Reason (Why)
4. Purpose (What for)
5. Method (How)

Connectives and useful expressions:

1. Sequence of actions

<table>
<thead>
<tr>
<th>Before</th>
<th>until</th>
<th>Then,</th>
<th>After/later,</th>
</tr>
</thead>
<tbody>
<tr>
<td>First/Firstly, The first stage is</td>
<td>as</td>
<td>Next, Secondly,</td>
<td>Finally/In the end, Eventually,</td>
</tr>
<tr>
<td>The first step is</td>
<td>during</td>
<td></td>
<td>In the last stage, The last step is</td>
</tr>
<tr>
<td>Previously,</td>
<td>while</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Present tense (passive form) is the most frequent tense. Notice also the use of Present perfect forms:

e.g.
After/when the fibres have been separated, they are .....  
After being centrifuged, the sample is subjected to further processing.  
During the staining process  
While the sample is stained.....  
While being stained, the sample is....  
Before the sample is stained....  
Before being stained, the tissue is.....

2. Reason –Why?

<table>
<thead>
<tr>
<th>Because</th>
<th>due to the fact that as</th>
<th>because of on account of due to owing to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Certain animals hibernate because of the extreme cold in winter.  
Metals expand when heated on account of increased molecular activity.  
Leaves may become brown due to the improper storage.  
Three crops are possible owing to the hot climate.  
Rainfall is higher as clouds are forced to rise and cannot hold so much water vapour.  
This figure certainly seems consistent with recent political decisions as they affect the progress of British science.  
Leaves become brown in autumn due to the fact that waste products from the tree are stored in them.  Many fruits become brightly coloured when ripe since this assists in seed dispersal.
3. Purpose – What for?

<table>
<thead>
<tr>
<th>for + ing form of the verb</th>
<th>in order to</th>
</tr>
</thead>
<tbody>
<tr>
<td>so that</td>
<td></td>
</tr>
<tr>
<td>so as to</td>
<td></td>
</tr>
</tbody>
</table>

The temperature is decreased **in order to** allow settling.
The temperature is decreased **so that** the substance can slowly start cooling.
The temperature is decreased **in order to** allow the substance start cooling.

4. Method – How?

| for + ing form of the verb | e.g. **by mixing the substance**...
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>by + noun/noun phrase</td>
<td><strong>by filtration</strong>/ <strong>by magnetic separation</strong>..</td>
</tr>
<tr>
<td>with + noun</td>
<td><strong>with a stirrer</strong>..</td>
</tr>
<tr>
<td>using + noun</td>
<td><strong>using a stirrer</strong>..</td>
</tr>
<tr>
<td>with the help of</td>
<td></td>
</tr>
</tbody>
</table>

Task 1: Use the information below to describe how blood is taken:

- Preparing the vials, needles and tampons
- Choosing a proper vein.
- Disinfecting the puncture.
- Applying the esmarch on the arm.
- Piercing the needle in the vein.
- Pushing the vial forward to collect blood
- Releasing the esmarch and filling the vial with blood
- Pressing the tampon on the piercing point.
- Discarding the used materials into a container
- Putting the sample on ice.
Task 2: Describing a laboratory procedure

Look at the steps which are used in histology for preparing the specimen for microscopic examination and write the whole procedure:

I. Biopsy – removing the tissue for histological diagnosis

II. Tissue preparation:
   1. Fixation
   2. Dehydration
   3. Clearing with solvents (e.g. xylene)
   4. Infiltration with paraffin and embedding in paraffin
   5. Paraffin block obtained

III. Treatment of an unstained histological slide
   • Sectioning by microtome

IV. Preparation of histological slide for staining
   1. Deparaffinization with organic solvents
   2. Hydration by alcohols with decreasing concentration, finally in water

V. Staining procedure
   • Applying a suitable staining method

VI. Preparation of the slide for microscopic examination
   1. Dehydration with alcohols
   2. Clearing with organic solvents
   3. Mounting with a mounting medium (e.g. resins)
   4. Covering with a coverslip glass to preserve the stained section

VII. Microscopic observation
UNIT 9: Speaking of illness

Fill in the prepositions
in for by out to off from under at

1. his life is hanging ___ a thread
2. he is fighting ___ his life
3. he is ___ a coma
4. she is not responding ___ treatment
5. he has come ___ of the coma
6. she is a bit ___ colour
7. he is still ___ the stress
8. she is suffering ___ pneumonia
9. he is allergic ___ dust
10. you are ___ perfect health
11. I am sickening ___ something
12. he is showing signs ___ coming round
13. he could go ___ any second

Infectious diseases

Task 1: Below are some common children and other infectious diseases and their descriptions. Find a corresponding Slovene term for each disease.

1. Whooping cough
   The disease evolves over a period of 2 weeks. It usually starts as a sore throat with a mild feeling of tiredness and being unwell, that within 2 or 3 days turns into a (usually) dry, intermittent "ordinary" cough. This persists, but may wax and wane over the next 7 to 10 days by which time the cough may become a little productive of small amounts of sticky clear phlegm, and occasional intense bouts of choking coughing start to occur. Fever is usually limited to the first week and is only mild. There may be a runny nose like a cold in the early stages. After the first 2 weeks, the characteristics described below are predominant.

2. Chicken pox
   is a highly contagious viral disease that is spread by direct contact or breathing in germs from someone's cough or sneeze. Two weeks after exposure, spots appear on the body. The following symptoms will occur 10-21 days after exposure to the virus: low grade fever, runny nose, slight cough, decrease in appetite, headache, tired, rundown feeling.
These symptoms usually occur 24-48 hours before the spots appear on the body. When the spots first appear they will start on the chest, back, or face, and eventually are seen over the entire body. The spots may occur in the mouth as white ulcers, and as ulcers in the ears and eyes.

3. **Measles**

is an acute, highly communicable viral disease with prodromal fever, conjunctivitis, cough, and Koplik spots on the buccal mucosa. A characteristic red blotchy rash appears around the third day of illness, beginning on the face and becoming generalized. Frequently complicated by middle ear infection or diarrhea. The disease can be severe, with bronchopneumonia or brain inflammation leading to death in about 2 of every 1,000 cases.

4. **Mumps**

is an acute viral disease characterized by fever, swelling and tenderness of one or more of the salivary glands.

Although older people may contract the disease, it usually occurs in children between the ages of five and 15. The disease occurs less regularly than other common childhood communicable diseases. The greatest risk of infection occurs among older children. It is more common during winter and spring.

It is transmitted by direct contact with saliva and discharges from the nose and throat of infected individuals.

**Symptoms:** fever, swelling and tenderness of one or more of the salivary glands, usually the parotid gland (located just below the front of the ear). Approximately one-third of infected people do not exhibit symptoms.

5. **Smallpox**

...is a disease caused by the Orthopoxvirus, Variola virus. It is infectious only for humans; there is no known animal reservoir or insect vector. Historically, 1 out of 3 people who contracted the disease died.

Currently the virus has been eliminated from the human population, although some virus remains for laboratory use.

6. **Polio (myelitis)**

Poliomyelitis (polio) is a highly infectious disease caused by a virus. It invades the nervous system, and can cause total paralysis in a matter of hours. The virus enters the body through the mouth and multiplies in the intestine. Initial symptoms are fever, fatigue, headache, vomiting, stiffness in the neck and pain in the limbs. One in 200 infections leads to irreversible paralysis (usually in the legs). Amongst those paralysed, 5%-10% die when their breathing muscles become immobilised.

7. **Diphtheria**

is an acute bacterial disease that usually affects the tonsils, throat, nose and/or skin. It is passed from person to person by droplet transmission, usually by breathing in diphtheria bacteria after an infected person has coughed, sneezed or even laughed. It can also be spread by handling used tissues or by drinking from a glass used by an infected person.

Diphtheria can lead to breathing problems, heart failure, paralysis and sometimes death.

**Symptoms:** In its early stages, diphtheria may be mistaken for a severe sore throat. Other symptoms include a low-grade fever and enlarged lymph nodes (swollen glands) located in the neck. Another presentation of diphtheria can be skin lesions that may be painful, red and swollen. Symptoms usually appear 2 to 4 days after infection, with a range of 1 to 6 days. People carrying diphtheria germs are contagious for up to 4 weeks even if they themselves do not develop symptoms.

8. **Plague**

Plague is an infectious disease of animals and humans caused by a bacterium named *Yersinia pestis*. People usually get plague from being bitten by a rodent, or flea that is carrying the plague bacterium or by handling an infected animal.

Millions of people in Europe died from plague in the Middle Ages, when human homes and places of work were inhabited by flea-infested rats. Today, modern antibiotics are effective against plague, but if an infected person is not treated promptly, the disease is likely to cause illness or death.
Task 2: Word study: Refer to the text above and find words with the same meaning as:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fatigue</td>
</tr>
<tr>
<td>1</td>
<td>become stronger and weaker</td>
</tr>
<tr>
<td>1</td>
<td>a thick mucus</td>
</tr>
<tr>
<td>1</td>
<td>a brief period of illness</td>
</tr>
<tr>
<td>2</td>
<td>small organisms</td>
</tr>
<tr>
<td>3</td>
<td>transmittable</td>
</tr>
<tr>
<td>3</td>
<td>spots on skin</td>
</tr>
<tr>
<td>4</td>
<td>catch a disease</td>
</tr>
<tr>
<td>4</td>
<td>watery liquid in your mouth</td>
</tr>
<tr>
<td>4</td>
<td>an organ of the body which secretes</td>
</tr>
<tr>
<td>7</td>
<td>small organs at the back of the throat</td>
</tr>
<tr>
<td>8</td>
<td>a small mammal with large sharp front teeth</td>
</tr>
</tbody>
</table>

Task 3: Use the words from the box above and complete the exercise below:

1. She had a ______ of flu over Christmas.
2. Increasing numbers of people in high-powered jobs are suffering from ______ and stress-related illnesses.
3. It’s in the nature of love that it ______ and ______.
4. I’m coughing up a lot of ______.
5. ______ can be spread by rats.
6. He ___________ an awful stomach complaint while he was travelling.
7. In this period, there were 974 outbreaks of _________ disease attributed to the consumption of raw milk.
8. He came up in a ______ after he fell in a patch of nettles.
9. The salivary glands in your mouth produce ______.
10. Mice, rats, squirrels and rabbits are all ______.
11. The _________ in my neck are swollen - I must have got some sort of infection.
12. He had bad infection as a child, and had to have his ________ out.
Task 4: Word study - technical vocabulary

Translate into English:

1. mikroorganizmi
2. biti okužen z
3. razviti odpornost
4. izbruh (bolezn)
5. razviti simptome
6. cepivo

Life and Death Idioms

Task 5: Insert the word “life” or “death” to get an idiom:

a) for the ________ of me.
b) frighten the ________ out of me
c) sick to ________
d) bored to _________.
e) at ________ door
f) dice with ________
g) like ________ warmed up.

Task 6: Use these idioms in sentences:

1. All Mark talked about the whole evening was football. I was ..............................
2. Are you ill? You look ..........................
3. Please, be quiet. I’m .............................. of your constant complaining
4. Who’s there? Is someone there? Oh, it’s you, Joe. You .............................. I thought you were a burglar.
5. I can’t remember his name for ..............................
6. I’m pleased your mother’s out of hospital. That’s good news. Yes, considering she was at .............................. last month, she made a remarkable recovery.
7. You should get you brakes fixed. You’re .............................. every time you go out on the road.
# Unit 10: Professional Skills

## Letters of Complaint

Complaints may arise from poor quality of the product or service, defective product or company error. In letters of complaint you need to express your disappointment but do not get insulting. You should not sound angry or threatening, in your letter. Remember, the person reading your letter may not be directly responsible for your problem, and can possibly help resolve it.

### Stages in writing a letter of complaint

**Paragraph 1:** Describe the problem/situation  
- Tell what has happened and what you have done so far  
- Include product brand and model number, if necessary  
- Give as much detail as possible about the problem/situation

**Useful language:** Stating the purpose of writing:
- I am writing you concerning the purchase …
- My complaint concerns …
- The purpose of this letter is to inform you of my problem with …
- I purchased the …
- On September 20, I ordered (by phone) a pair ...

**Paragraph 2:** Explain the situation. Tell the company what you want to be done and by when

**Useful language:** Explaining the situation
- As you may recall we ordered a....
- As you may be aware we placed a large order with you.
- Possibly you may know that ...
- I would in particular like to...
- I should like to stress in particular...
- In addition to....
- Apart from that .... Furthermore I should also like to draw your attention to...

**Paragraph 3** State your vow. Tell them what you will do if they do not meet your demands

**Useful language:**
- To solve my problem, I would like ...
- I would like the original amount of SIT 30,000 to be refunded.
- I would appreciate your inquiry into this matter, and I expect the prompt delivery of ....... to the address listed above.
- Based on considerable years of mutual co-operation I trust that ....
- With regard to the above...
- Considering all this.... could you rectify/send another/issue a new...
**Paragraph 3**: Conclude the letter

*Useful language:*

- Thank you for understanding...
- Thank you for your consideration.
- Thank you for your attention to this matter.
- Your prompt attention and response would be greatly appreciated
- I look forward to your reply and a resolution of my complaint.
- Please do not hesitate to contact me if you need any clarification on the above matter.

**Example 1: Analyse the letter and see if it contains all elements of a letter of complaint.**

*Which tenses have been used and why?*

Dear Sirs,

On April 1 2000 I received a book entitled, "How To Write A Complaint Letter" by the author XXX. I believe I was shipped this book in error as I had ordered the book "How To Write A Love Letter" by the author YYY on March 15 2000 and to date I have not received the book. I am returning this book and including my postage receipt. Please credit my account the amount of the postage and send me the book I had originally ordered entitled "How To Write A Love Letter" by YYY, product-number 011011.

Yours sincerely,

Your Name

**Task 1: Complete the letter with prepositions:**

Customer Relations/Claims Company
John Duke Manufacturing Company
1104 Sutton Drive Suite #112
Cairo, MI 45006

Dear Representative:

I am writing _____ regards to a Digital Multimeter (DMM) that I recently purchased _____ mail-order from your company. Because the DMM only functions partially, I am requesting repairs, another DMM with comparable features, or a refund equal to the purchase price + C.O.D. charges, and shipping and handling.

I purchased the meter for $250.00 _____ calling the 1-800 number listed in an advertisement. My phone order occurred _____ August 20th. The meter was delivered two weeks later. The total purchase price was $282.50. The following items were included with the DMM: one set of meter leads, one power supply cord, and one black nylon-fiber carrying case.

The DMM (Duke Model 8012A) will not register an accurate voltage or current reading. When I received the DMM, I inspected the packaging in which the meter was shipped, and there was no evidence of damage. Styrofoam inserts were used to protect the meter from any shock during the shipping process.

Your prompt attention and response would be greatly appreciated as I intend to use the meter _____ conjunction with my job.

Sincerely,

Terry Ward
Task 2: Write two letters of complaint with the following content:

Situation A
You purchased a stereo system complete with amplifier, speakers, tape deck, and CD player (Sony #79432). You spent 400 EUR on your new system. You owned your system for 3 months when the CD player quit working. You called Big Bang, where you purchased the system, and they did not return your call. You visited the store and the person who sold you the system no longer worked there. He told you the store is not responsible for items sold by previous employees. The product warranty guarantees the stereo system to be free from defects for one year.
Write a letter to the manager of Bib Bang to complain about your CD player.

Situation B
You had your computer repaired at Anni Computers because the modem was not working. Within one week after bringing your computer home, the same problem with the modem occurs again. You have a Laptop computer, Model #358. You paid 120 EUR to have your modem repaired. Write a letter to Anni Computers to complain about the quality of their service.
Telephoning

**Step 1: Say who is speaking**

Mark the phrase by a corresponding character: a caller (C), a secretary (S), a receiver (R)

1. I’d like to speak to someone about...
2. Could I have the name of the company, please?
3. Hello, is that accounts?
4. My name is Peter Adams. I'm calling about the bill.
5. The line's busy. Please, hold on.
6. I’ll put you through.
7. I’ll pass this information on.
8. I’ll get him to do that.
9. Can he ring you back?
10. May I have your name, please?
11. Thank you for your call.
12. How are things?
13. I'm afraid this is a bad line.
14. Hello, this is Rafael. I'm returning your call.
15. Twelve o'clock suits me. Look forward to seeing you then.
16. It's Mr. Sanchez.
17. Speaking.
18. Is this Mrs. King?
19. There's no reply.
20. She's on a visit to a supplier.
21. Glaxo. Can I help you?
22. She's on another line.
23. Yes, I’ll hold on.
24. He's not in the office at the moment.
25. He'll be out all day.
26. I can't reach him.
27. The line is engaged. Will you hold?
28. The number is ringing for you now.
29. Could you spell that for me, please?
30. If it's interesting, give me a ring.

31. This is Robert Webster speaking. I'm not in the office at the moment but I expect to be back shortly. Please leave your name, number and a message when you hear the signal. Thank you for your call.
Step 2.

Study the following phrases which are used in telephoning:

**Operator/secretary**

<table>
<thead>
<tr>
<th>English</th>
<th>Slovenian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer the phone (Prevzemite) (ime podjetja) Good morning. Can I help you?</td>
<td>Answer the phone (Prevzemite) (ime podjetja) Good morning. Can I help you?</td>
</tr>
<tr>
<td>Asking to repeat (Preverite ime sogovornika). Sorry, cull you repeat that? What was your name again? Could I have your name again?</td>
<td>Asking to repeat (Preverite ime sogovornika). Sorry, cull you repeat that? What was your name again? Could I have your name again?</td>
</tr>
<tr>
<td>Asking to spell words (prosite, da črkuje) Could you spell your name? Could I read that back to you?</td>
<td>Asking to spell words (prosite, da črkuje) Could you spell your name? Could I read that back to you?</td>
</tr>
<tr>
<td>Connecting (Vežem) One moment. I´ll connect you. I´ll put you through. Hold the line, please.</td>
<td>Connecting (Vežem) One moment. I´ll connect you. I´ll put you through. Hold the line, please.</td>
</tr>
<tr>
<td>The person is not there (Oseba ni dosegljiva). Sorry, he(she) is not in at the moment. I’m afraid she’s at lunch right now. I´m afraid there is no reply (he is out of the office)</td>
<td>The person is not there (Oseba ni dosegljiva). Sorry, he(she) is not in at the moment. I’m afraid she’s at lunch right now. I´m afraid there is no reply (he is out of the office)</td>
</tr>
<tr>
<td>Line is busy (Linija je zasedena.). I´m sorry, the line’s busy. Will you hold? The extension is engaged. Would you care to hold?</td>
<td>Line is busy (Linija je zasedena.). I´m sorry, the line’s busy. Will you hold? The extension is engaged. Would you care to hold?</td>
</tr>
<tr>
<td>Line is free again (Linija je zopet prosta). I can put you through now. Putting you through. Go ahead. You’re connected.</td>
<td>Line is free again (Linija je zopet prosta). I can put you through now. Putting you through. Go ahead. You’re connected.</td>
</tr>
<tr>
<td>Leaving a message (Vprašajte, če želi pustiti sporočilo). Would you care to leave a message? Can I give him a message? Will you leave a message? What message shall I give to Mr./Mrs... I´ll pass this information on. I´ll get him to do that.</td>
<td>Leaving a message (Vprašajte, če želi pustiti sporočilo). Would you care to leave a message? Can I give him a message? Will you leave a message? What message shall I give to Mr./Mrs... I´ll pass this information on. I´ll get him to do that.</td>
</tr>
<tr>
<td>Calling again (Recite, naj spet pokliče). He should be free later. She will be free in an hour. He won’t be available until 5 p.m.</td>
<td>Calling again (Recite, naj spet pokliče). He should be free later. She will be free in an hour. He won’t be available until 5 p.m.</td>
</tr>
<tr>
<td>Checking the number (Preverite številko) What number are you on? What’s your number? What’s the code?</td>
<td>Checking the number (Preverite številko) What number are you on? What’s your number? What’s the code?</td>
</tr>
<tr>
<td>End of a phone call (Pozdrav in zahvala) My pleasure. Thank you for calling.</td>
<td>End of a phone call (Pozdrav in zahvala) My pleasure. Thank you for calling.</td>
</tr>
</tbody>
</table>
### Caller

| Ask to speak to Mr. XY. (Zahtevajte sogovornika). | Could I speak to Mr. XY, please?  
Is Mr. XY there, please?  
Is Mr. XY in? |
|---|---|
| Ask for the extension number (Zahtevajte interno številko). | Could I have extension 401, please?  
Extension 401, please.  
Could you give me extension 401, please? |
| Ask when the person will be back again (Vprašajte, kdaj bo dosegljiv). | When do you expect him to be back?  
Do you know when she will be back in the office?  
What time will he be back? |
| Leaving a message (Pustite sporočilo) | Could you take a message?  
Can (could) you ask him/her to... |
| Checking the person has understood (Vprašajte, da je razumel) | Shall I repeat that?  
Have you got that? |
| Calling back later (Recite, da boste klicali kasneje). | Can I call you back in an hour?.  
I´ll call later.  
I´ll call again around six o’clock. |
| Giving your telephone number: ++386-61-113-23-26 | country code is three, eight, six  
area code is six, one  
technical number is double one, three two  
three, two, six |
| Saying good bye | Thank you very much. Good bye. |

### Receiver

<table>
<thead>
<tr>
<th>Odgovorite na telefon (Answering the phone):</th>
<th>Yes, speaking.</th>
</tr>
</thead>
</table>
| Dogovor glede sestanka (Making arrangements) | When would be convenient for you?  
How about Monday morning?  
What about Tuesday afternoon? |
| Poslovite se. | Please, call me back.  
I’ll call back later.  
Thanks for calling. |
Step 3:

**Which phrase would you use to:**

1. Ask someone to wait?
2. To say someone is busy?
3. When you don’t hear something?
4. To check someone has written the message correctly?
5. To reply to *Thank you*?
6. When you connect a caller?
7. At the end of a phone call?

Step 4:

**How would you complete the following conversations?**

<table>
<thead>
<tr>
<th>Conversation 1</th>
<th>Conversation 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
</tr>
<tr>
<td>Could I speak to Mr. Brown, please?</td>
<td>B</td>
</tr>
<tr>
<td>Oh, dear. ...........................................?</td>
<td>It’s Bojan Kovač</td>
</tr>
<tr>
<td>........................................................message?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>..........................................................</td>
<td>Yes, B O J A N K O V A Č</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conversation 3**

<table>
<thead>
<tr>
<th><strong>A</strong></th>
<th><strong>B</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s the address?</td>
<td>Bill Ross, please.</td>
</tr>
<tr>
<td>I’ll spell it for you: ................</td>
<td>B</td>
</tr>
<tr>
<td>Could I read that back to you? Peričeva 72.</td>
<td>I’m calling to ask you if I could meet you to discuss....</td>
</tr>
<tr>
<td>When ....</td>
<td></td>
</tr>
<tr>
<td>I’m looking forward to seeing you, too.</td>
<td>Would Monday 10,00 a.m. suit you?</td>
</tr>
<tr>
<td></td>
<td>Fine. .........................</td>
</tr>
</tbody>
</table>

55
Step 5: Role play
Work with your partner. Act out a telephone conversation, using the flowchart below:

Receiver
- Answer the phone
- Say she is not available (lunch)
- Say you don't know
- Write down, ask if can call back (telephone number)
- Check if you understood numbers
- Reply, say good bye
- Say thank you

Caller
- Ask to speak with the general manager
- Ask when she will be back
- Ask if you can leave a message (you are calling from abroad)
- Give your telephone number + all codes
- Confirm the date
- Reply, say good bye

Receiver
- Ask for Jim, ext., number 106
- Say the line is busy
- Ask for another ext. number 107
- Say you don't hear (bad line)
- Repeat

Caller
- Introduce yourself, say you are calling to apologize (forgot the time of your meeting)

Receiver
- Say thank you and good bye
**UREASE TEST**

Urease is an enzyme that breaks the carbon-nitrogen bond of amides to form carbon dioxide, ammonia, and water. Members of genus Proteus are known to produce urease. Urease can be detected by plating bacteria onto an amide containing medium, specifically urea. When urea is broken down, ammonia is released and the pH of the medium increases (becomes more basic). This pH change is detected by a pH indicator that turns pink in a basic environment. A pink medium indicates a positive test for urease.

**OXIDASE TEST**

Cytochrome oxidase is an enzyme found in some bacteria that transfers electrons to oxygen, the final electron acceptor in some electron transport chains. Thus, the enzyme oxidizes reduced cytochrome c to make this transfer of energy. Presence of cytochrome oxidase can be detected through the use of an Oxidase Disk which acts as an electron donator to cytochrome oxidase. If the bacteria oxidize the disk (remove electrons) the disk will turn purple, indicating a positive test. No color change indicates a negative test.

**BILE ESCULIN AGAR**

Bile esculin agar is a medium used to identify group D streptococci. This group of bacteria have the ability to grow in the presence of bile, an emulsifying agent produced in the liver. Group D streptococci also have the ability to hydrolyze esculin. This hydrolysis of esculin turns the medium black and denotes a positive test. Other bacteria capable of growing in the presence of bile do not turn the medium black. A variation of this medium uses sodium azide to inhibit the growth of all other Gram-positive bacteria and Gram-negative bacteria.
**LISTERIA**

Listeria is a Gram-positive rod which is not capable of forming endospores. Although several species of this bacterium exist, our discussion will focus only on the two species of human pathogenic significance: L. monocytogenes and L. ivanovii. In particular, L. monocytogene has been implicated in several food poisoning epidemics. This normal inhabitant of the gastrointestinal tract and of animal faeces led to a 1986 outbreak in Massachusetts hospital patients. Those infected suffered from vomiting, nausea, and diarrhea. Apparently, the hospital patients contracted the microbe from the infected hospital food and were at high risk of infection. Those at high risk include newborns, pregnant women and their fetuses, the elderly, and persons lacking a healthy immune system. The bacterium usually causes septicemia and meningitis in patients with suppressed immune function. It also causes listeriosis which is an inflammation of the brain. Antibiotics are recommended for treatment of infection because most strains of Listeria are sensitive to ampicillin and gentamicin.