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ENGLISH FOR ELECTRONICS
A PRACTICAL COURSE

PERFORMANTICA

CONTENTS

Unit 1
The Structure of the Atom **5**

Unit 2
Conductors and Insulators **19**

Unit 3
School and University **30**

Unit 4
The Educational System **41**

Unit 5
Being a Student **55**

Unit 6
Electronics in the Future **70**

Unit 7
Describing a Graph **88**

Unit 8
Series and Parallel Circuits **103**

Unit 9
Laboratory Reports **121**

Unit 10
Did You Know That…? **137**

Unit 11
Why Is Pollution a Problem? **154**

Unit 12
Preparing a Presentation **171**

Unit 13
Delivering a Presentation **184**

Unit 14
Looking for a Job **198**

Appendix 1
Electronic Symbols **211**

Appendix 2
Techniques for Generating Ideas **214**

Appendix 3
Irregular Verbs **219**

Appendix 4
Transitions (Connectives) and Referring Words **224**

Appendix 5
Presentation Outline **228**

Bibliography **229**

1 THE STRUCTURE OF THE ATOM

Use your background knowledge to answer these questions:

1. Where does the word *atom* come from?
2. Is it possible to see an atom?
3. Is the atom really indivisible?

Now read this text to check your answers:

Experiments have demonstrated that matter is made of extremely small "building blocks", called atoms (from the Greek word meaning *indivisible*). Atoms are, indeed, the smallest units of an element that retain the chemical properties of that element. However, in spite of the name chosen, atoms are not indivisible: they can be further divided into smaller particles.

As you already know, at the centre of the atom is the *nucleus*, made up of *protons*, which have a positive electrical charge, and *neutrons*, which are uncharged. *Electrons*, which possess a negative electrical charge, whirl around the nucleus in energy levels or shells. Therefore, both protons and electrons have the same size of an electrical charge, but protons are positive (+1), while electrons are negative (-1). Neutrons, on the other hand, are neutral. Since the total number of electrons equals the total number of protons in the nucleus, it follows that atoms have no overall electrical charge.

You all heard the phrase "opposites attract". This attraction is apparent, for example, between the north and the south pole of a bar magnet and is called electromagnetic force. It also happens with electrical charges. Like charges repel and unlike charges attract. This explains why the electrons are attracted to the nucleus, which, due to protons, is charged positively. But, if like charges repel, then why are protons held tightly together in the nucleus?

The answer to this question is that there is another force at work, called strong nuclear force. This force is like some kind of glue that holds the particles in the nucleus together. The nuclear force is stronger than the electromagnetic force, so it overcomes the repulsion of the positive charges of the protons. This nuclear force acts only over short distances.

If certain materials are rubbed together, they would attract one another. For example, if we rub a piece of silk against a glass rod, they tend to stick together. This also happens when paraffin wax and wool cloth are rubbed together. How can we explain this phenomenon? Electrons, unlike protons or neutrons have more freedom of movement. When two materials are rubbed together, electrons from one material are dislodged and transfer over the atoms of the other material. This phenomenon is known as *static electricity*. It is called like this because the electrons which have been displaced remain stationary after having been moved.

Vocabulary

Work with a partner. Match these words from the text with their synonyms or definitions:

1. further	a. turn around very quickly
2. cluster	b. electrical force
3. charge	c. additional, more
4. whirl	d. force something out of its position
5. dislodge	e. a group of objects close together

Foreign Plurals

Many technical and scientific words in English have been borrowed from other languages. For example, words such as *criterion*, *electron*, and *phenomenon* come from Greek; others, such as *stimulus* and *data* come from Latin. According to the way they form the plural, we may distinguish 3 categories:

1. **nouns that have preserved their original plural forms:**

-us → -i	bacill**us** → bacill**i** stimul**us** → stimul**i**
-is → -es	analys**is** → analys**es** ax**is** → ax**es** thes**is** → thes**es**
-on → -a	criter**ion** → criteri**a** phenomen**on** → phenomen**a**

2. **nouns of foreign origin that have only the –s plural form:**

-a → as	diploma**a** → diploma**as** encyclopedi**a** → encyclopedi**as**
-um → ums	alb**um** → alb**ums** muse**um** → muse**ums**
-us → uses	camp**us** → camp**uses** circ**us** → circ**uses**
-on → ons	electr**on** → electr**ons** lexic**on** → lexic**ons**

3. **nouns with double plural forms:**

- the original plural form (usually in technical or scientific usage)
- the English plural in **– (e)s** (usually in everyday language)

-a ⇗⇘ **-ae** **-as**	antenn**ae** antenn**a** ⇗⇘ antenn**as**
-um ⇗ **-a** ⇘ **-ums**	medi**a** medi**um** ⇗⇘ medi**ums**

-us → **-i**, **-uses**	fung**i** fung**us** fung**uses**
-on → **-a**, **-ons**	automat**a** automat**on** automat**ons**
-ex/-ix → **-ices**, **-exes/-ixes**	append**ix** → append**ices** (in books), append**ixes**
-eau → **-eaux**, **-eaus**	plat**eaux** plat**eau** plat**eaus**

Complete the sentences with the correct plural form of the nouns in the list.

formula	bacterium	antenna	medium
thesis	phenomenon	appendix	stimulus
criterion	crisis	oasis	datum

1. Earthquakes and tornadoes are _____ of nature.
2. People get news through various mass _____.
3. In the desert you can find places where water is available. Such areas are called _____.
4. In order to communicate properly with other people, we need to obey some rules and use polite _____.
5. The pages at the end of a research report or a thesis that contain additional data and illustrative material are called _____.
6. Before writing a scientific report, researchers gather facts and _____ through various experiments.
7. Vehicles can be classified according to various _____, such as color, size, number of wheels, type of drive.
8. Very small living organisms that can cause diseases are microbes or _____.

9. Any radar system includes among other things transmitting and receiving _____.
10. There are various _____ that help plants grow.
11. In a global society, economic _____ have an impact on more and more countries.
12. After writing your doctoral _____, you need to defend it in public.

Translate into English, using the correct plural form.

1. În ultima vreme au fost formulate multe ipoteze cu privire la formarea universului.
2. Automatele au apărut ca o necesitate de a economisi munca omului.
3. Formulele matematice trebuie învăţate pentru a le putea folosi.
4. Analizele efectuate au dovedit că pacientul era de fapt sănătos.
5. Algele pot constitui o sursă de hrană în viitor.

The Verb
Present Simple and Present Continuous

Present Simple

Electrons, which possess a negative electrical charge, whirl around the nucleus in energy levels or shells.

Many verbs in the text above are in the Present Simple, also known as Timeless Present. In fact technical English uses Present Simple quite a lot, which is why we should start our revision of the verb with this tense.
We shall start with the form and then turn to its uses.

Affirmative

S + V / V(e)s (3rd person sg.)

I We You They	ask
He/she/it	ask**s**

Interrogative (Questions)

Do
+ S + V?
Does (3rd p. sg.)

Do	I we you they	ask?
Does	he/she/it	

Negative
do
S + **+ not + V**
does (3rd p. sg.)

I We You They	**do not (don't)**	ask
He/she/it	**does not (doesn't)**	

Present Simple is used for:

1. **Habitual, repeated actions** - actions that you always or never perform

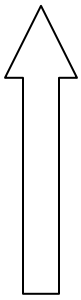
a) He **goes** to school every day.
b) They **go** to the club once a week.
c) She often **visits** her friends in London.

Indicators:
a) every - morning/afternoon/evening/night
- Monday/Tuesday…
- day/ week/month/ year

every other day/week….

b) once
twice
three, four, …n times

c) adverbs of frequency



always
usually
often
sometimes
seldom
rarely
never

2. **General truths or simple facts**

The sun rises in the East.
She lives in Iaşi.

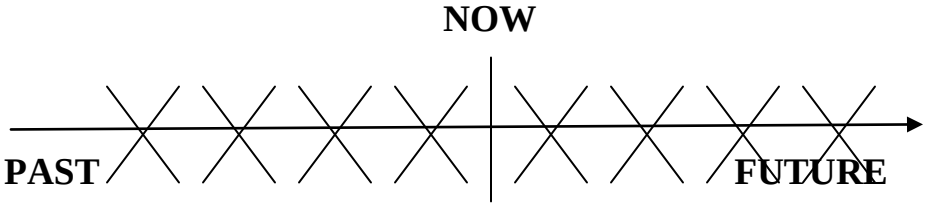
Indicators: 0

3. **A future action officially planned (timetables, schedules)**

I **go** to Bucharest tomorrow. (I'm sent there)
The museum **opens** tomorrow morning.

Indicators:
a) tomorrow (morning/afternoon/evening)
b) next (Sunday/week)

PRESENT SIMPLE



Present Continuous (Progressive)

 *Look at the verbs which are marked in the text below. Which tense are they? What kind of action do they express?*

Pollution is one of the biggest menaces to human race today. The environment as we know it is being threatened by various pollutants that have a negative impact on the soil, the water, the air, on plants and animals. If we consider air pollution, for example, we can say that dirt and smoke that are pouring from vehicles and factories are the most obvious factors that spoil the air we breathe, harming our health. The main pollutant that is warming the earth is carbon dioxide, a greenhouse gas associated with the burning of fossil fuels. Other greenhouse gases include methane, which comes from swamps or is emitted by livestock and chlorofluorocarbons (CFC's), used in refrigerators and aerosols until recently. Governments are fighting against air pollution by taking steps to reduce the emissions of carbon dioxide and other greenhouse gases, so as to improve people's health. On a personal level, we can all contribute to cutting down such emissions if we are driving and flying less and we are recycling more.

Although less used than Present Simple in technical and scientific English, Present Continuous (Progressive) is in fact the "real" present, the form that refers to an action that is taking place *here-and-now*.

Present Continuous (Progressive)

Affirmative

S + am / is / are + V-ing

I	**am**	ask**ing**
He/she/it	**is**	
We You They	**are**	

Interrogative (Questions)

Am / Is / Are + S +V-ing?

Am	I	ask**ing**?
Is	he/she/it	
Are	we you they	

Negative

S + am / is / are + not + V-ing

I	**am**	**not**	ask**ing**
He/she/it	**is**		
We You They	**are**		

Present Continuous (Progressive) is used for:

1. **An action in progress at the moment of speaking**

I **am writing** an e-mail now.

Indicators:
(right) now, at this moment, at present, as we speak, still

2. **A temporary action**

They **are staying** with us this month.

Indicators:

a) today
b) this - Sunday/Monday…
- morning/afternoon…
- spring/summer…
- week/month/year

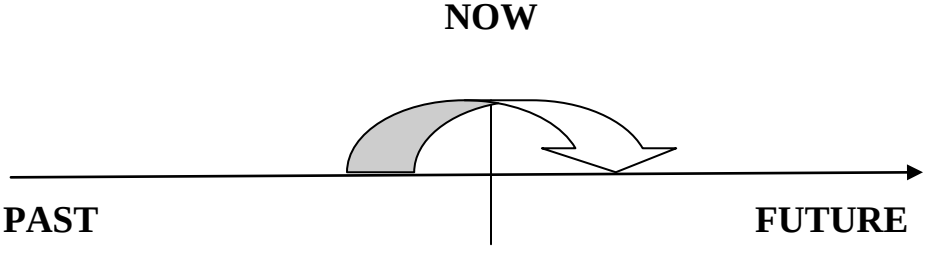
3. **A future action planned by the doer**

I **am going** to Bucharest tomorrow. (because I want to)

Indicators:

a) tomorrow -morning/afternoon…
b) next week

PRESENT CONTINUOUS/ PROGRESSIVE



Non-Progressive Verbs

In English there are verbs that do not take the progressive aspect. These are verbs that express states; they do not describe actions that are in progress. Non-progressive verbs fall into the following categories:

1. Verbs of the Mind

believe	know	realize	think*****
doubt	mean	recognize	understand
feel	need	remember	want
forget	prefer	suppose	

think

Non-Progressive (state)	**Progressive (activity in progress)**
I **think** he is a good person.	I **am thinking** about her.

2. Verbs of Feeling

appreciate	envy	like
care	fear	love
dislike	hate	mind

3. Verbs of the Five Senses

feel*****	see*****	taste*****
hear	smell*****	

Non-Progressive (state)	**Progressive (activity in progress)**
This velvet **feels** soft.	She **is feeling** the cat's fur.
I **see** a swallow in the sky.	Tom **is seeing** (*meeting*) his boss tomorrow. The doctor **is seeing** (*examining*) a patient
The roses **smell** wonderful.	She **is smelling** the roses.
The soup **tastes** good.	The chef **is tasting** the sauce.

4. Verbs of Possession

have*****	own	possess

have

Non-Progressive (state)	Progressive (activity in progress)
They **have** a nice house	He **is having** a good time.

5. Verbs of Existence

be*****	exist

be

Non-Progressive (state, permanent characteristic)	Progressive (temporary characteristic)
I **am** in the classroom He **is** rude.	— What's the matter with him? He **is being** rude today.

6. Verbs of Seeming

appear*****	look*****	seem

Non-Progressive (state)	Progressive (activity in progress)
He **appears** to be asleep.	The actress **is appearing** on the stage.
You **look** tired.	She **is looking** out of the window.

7. Verbs of Inclusion

belong	contain
consist of	include

8. Other Verbs

cost	owe	weigh*****

weigh

Non-Progressive (state)	Progressive (activity in progress)
This piano **weighs** a lot.	He **is weighing** the apples.

Turn into the singular:

1. These men go to work by train. They stay in the train for half an hour and during the journey they read their newspapers. Now they are reading the news about some incredible natural phenomena that are taking place at the tropics.

2. Their children walk to school every day and look for their friends on their way to school. When they see them they run to them and play and enjoy themselves until they hear the bell. Right now the children are playing some new games and they are very happy.

3. Housewives work very hard in and around their house: they cook the meals, lay the table and wash up, clean the house, do the ironing, look after the garden and take care of the children. In modern families, however, husbands and wives share these chores. These husbands are helping their wives right now: they are cooking dinner, washing the dishes or reading stories to their children.

Supply the correct present tense (simple or continuous) of the verbs in brackets:

1. That woman in the blue dress who (walk) _____ past the window (live) _____ in the neighbourhood.
2. These children usually (play) _____ in the garden, but now it (rain) _____, so they (not play) _____ outside; they (watch) _____ cartoons instead.
3. Barbara often (read) _____ before she (go) to bed. Right now she (read) *The Magus* by John Fowles.
4. Shhh. I (hear) _____ a strange noise. (you, hear) _____ it, too?
5. It's 5 p.m. and the Browns are at home. Mrs. Brown (sit) _____ in the living room. She (drink) _____ a cup of tea and (read) _____ the evening paper. She (drink) _____ two cups of tea every afternoon. Mr. Brown (pour) _____ a cup of hot chocolate. He usually (drink)

_____ coffee every afternoon, but today he (prefer) _____ hot chocolate.

6. I (need) _____ to call my parents to tell them I (like) _____ living in the hostel and that now I (know) _____I no longer (prefer) _____ to live in a rented apartment.

7. It's summer and the Millers are at the seaside. In fact, now they (listen) _____ to some music on the beach. They also (hear) _____ the sound of the waves and the seagulls.

8. Tom (be) _____ in the library right now. He (study) _____ for his exam. He (look up) _____ some words in the dictionary because the exam (be) _____ in English. The dictionary (not belong) _____ to him. It (belong) _____ to his friend, Jim.

9. In class today, John (not be) very attentive. While the other students (listen) _____ to the teacher, John (look) out of the window and (think) _____ the summer holidays. Although physically he (look) a lot like his twin brother Tom, John has a completely different personality.

10. A: What (you, think) _____about right now?

B: I (think) _____ about my exams. I (not think) about anything else.

2 CONDUCTORS AND INSULATORS

The electrons of various types of atoms differ from the point of view of their freedom to move around. Thus, some types of materials, such as metals possess so called *free electrons*, which are in fact loosely bound outer layer electrons that can easily move in the space between the atoms of the material. In the case of other materials, the electrons cannot move so easily. However, external forces, such as rubbing can force some of the electrons of these materials to transfer to the atoms of other materials.

This specific mobility of electrons is called *electric conductivity.* Materials that possess many free electrons and are characterized by high electric mobility are called *conductors.* Examples of conductors are silver, gold, copper, aluminum, concrete. Materials with low electron mobility, on the other hand, are called *insulators.* Some common examples of insulators are glass, rubber, ceramic and plastic materials.

Work with a partner. Give at least 3 more examples of conductors and 3 of insulators. Are all conductors similar from the point of view of their conductivity?

Conductors differ from the point of view of their conductivity level. The "best" is silver. Concrete, on the other hand, is less conductive as compared to metals. Physical dimensions can influence the conductivity level.

Consider two strips of the same material similar in all respects, with the exception of their length. Which will be a better conductor? The longer or the shorter strip? Now consider again two strips of the same conductive material, similar in all characteristics with the exception of their thickness. Which will be a better conductor? The thin strip or the thick one?

Heat also influences conductivity. Glass, a good insulator at normal room temperature, becomes a conductor at very high temperatures. This is also true about air. Metals, on the other hand, which are good conductors under normal temperature conditions, become poorer conductors when heated and better conductors when cooled. This characteristic of conductive materials due to which they become perfect conductors at very low temperatures is called *superconductivity.* This continuous movement or flow of electrons through conductive materials, such as wires, is what we call *electricity* or *electric current*.

Vocabulary

The word *conduct* can be a verb or a noun.

- As a verb, it is pronounced /kən'dΛkt/ and represents the base from which other words are derived, e.g. *conductor, conductive, conductivity.*
- As a noun, it is pronounced /kondΛkt/

Fill in the blanks with ***conduct, conducting, conducted, conduction, conductor, conductive, conductivity.*** *State what part of speech the word is and explain the meaning in each case.*

1. All metals are electrically _____.
2. Haven't you heard of the rules of good _____?
3. For their midterm project the students _____ a survey.
4. This _____ is famous in the musical world.
5. The relative mobility of electrons through a material, called _____ depends on the type of atoms that material is made up of.
6. The _____ found out that there were people who did not pay for their tickets.
7. The passage of electrons through wires is called _____.
8. This material is not as good a _____ as copper.
9. They offered us a _____ tour through Greece.
10. _____ an advertising campaign proved to be quite a difficult task.

Classifying

In order to better understand what is around us and organize our knowledge we need to divide things into groups or classes the members of which share some characteristics that are different from the characteristics of other classes.

Classifications are common in science and technology.

What do you think? Are classifications something natural or are they a man-made construct? Discuss with a partner. Give reasons for your choice.

In order to make a classification, certain elements should be present and certain conditions should be fulfilled.

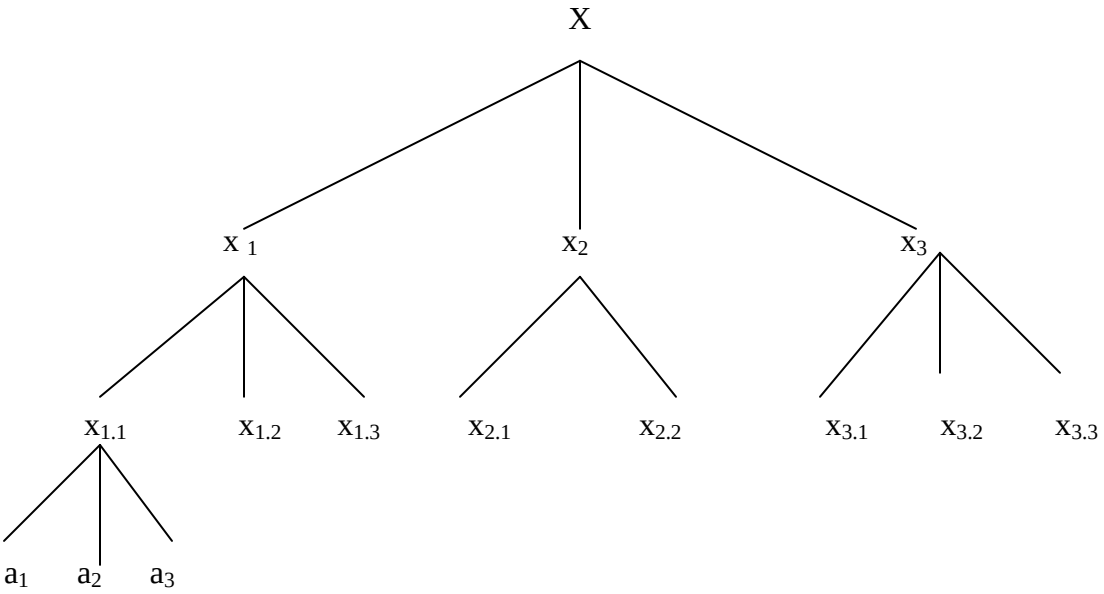
Which in your opinion are the elements of an efficient classification?

Elements

The elements that need to be present in any classification are:

- the topic (X)
- the groups X is divided into (x_1, x_2, x_3, etc.)
- (optional) the subgroups each group is further subdivided ($x_{1.1}$, $x_{1.2}$, $x_{1.3}$)
- examples (a_1, a_2, a_3; b_1,b_2,b_3, etc)
- a criterion (C) or several criteria according to which the classification is made – the criterion does not appear in the graphic form in the classification;
- **NB! A classification is efficient only in case there are no overlaps:**

($x_1 \cap x_2 \cap x_3 = \varnothing$)



Finding a criterion (a principle of classification)

When we divide a certain topic into categories, we do that according to a reason, which is called *criterion* or *principle of classification.* Thus, if you are asked to write about the students in general, it is much easier and logical if you divide them into groups having similar characteristics. In order to do that, you need to think of a criterion or principle of classification. For example, if you take into account the level of education, you can divide students into two main groups: *undergraduate* and *graduate*.

Work with a partner. Find criteria that may be used to classify students.

Students can be classified according to:

1. _____
2. _____
3. _____
4. _____
5. _____

 *Each class below has been divided into several categories. What criterion has been used in each case?*

1. Topic: Vehicles
   Categories: motor-driven, engine-driven
   Criterion: _____

2. Topic: engine-driven vehicles
   Categories: two-wheeled vehicles, four-wheeled vehicles
   Criterion: _____

3. Topic: four-wheeled vehicles
   Categories: commercial, passenger
   Criterion: _____

4. Topic: Media
   Categories: print, non-print
   Criterion: _____

5. Topic: Print media
   Categories: books, magazines, newspapers
   Criterion: _____

6. Topic: Books
   Categories: fiction, nonfiction
   Criterion: _____

 Odd man out

Look at the classifications below. Determine the criterion of classification and cross out the category that does not belong (odd man out).

1. Topic: Students
   Categories: well prepared, intelligent, those with average preparation, unprepared
   Criterion: _____

2. Topic: Textbooks
   Categories: inexpensive, interesting, average, expensive
   Criterion: _____

3. Topic: Teachers
   Categories: those who teach English, those who teach mathematics, those with PhD, those who teach computer science
   Criterion: _____

 *Work with a partner. For each case, determine the principle of classification and add at least 2 more categories that belong to that classification.*

1. Topic: TV programs
   Criterion: _____
   Categories: those that inform
   _____
   _____

2. Topic: Movies
   Criterion: _____
   Categories: those with a lot of violence
   _____
   _____

3. Topic: Radio stations
   Criterion: _____
   Categories: those that present the news
   _____
   _____

Useful language: classifications

According to C, there are { two/three… / many / several / some / a few } { classes / categories / types / groups / kinds } of…….

According to C, X can be { divided / classified / organized / categorized / grouped } into { two/three… / many / several / some / a few } { classes / categories / types / groups / kinds } …

{ We / One / People / Scientists } { can / may } { divide / classify / organize / categorize / group } X into { two/three… / many / several / some / a few } { classes / categories / types / groups / kinds }

according to C…..

Key:
C = criterion
X = big topic

 *Write a thesis statement on each of the following topics, using a variety of the sentence patterns presented above.*

Example:
Topic: Clothes
Thesis statement: According to season, clothes can be divided into spring clothes, summer clothes, autumn clothes and winter clothes.

1. Topic: Successful people
   Thesis statement: _____
   _____

2. Topic: Energy sources
   Thesis statement: _____
   _____

3. Topic: Electronic devices
   Thesis statement: _____
   _____

4. Topic: My friends
   Thesis statement: _____
   _____

5. Topic: Television programs
   Thesis statement: _____
   _____

Draw up a classification diagram and introduce the elements presented in the text below. Add examples for each type.

The Media

The term mass media refers to a medium able to transmit messages to a large number of people simultaneously by means of specific technologies. According to the way in which the message is communicated, the media can be divided into two main types: print media and electronic media.

Print media include publications which, although processed electronically nowadays, are written on paper. They can be grouped further on into books, newspapers and magazines. Books are a set or a collection of written, printed or illustrated sheets of paper or other material usually bound together at one edge. There are two main kinds of books: fiction and nonfiction.

Fiction books are read for entertainment or recreational purposes and, according to the complexity of the plot can be subdivided into novels, short stories, sketches. Nonfiction books are generally meant to inform the readers. They are of several types: technical books, textbooks, dictionaries, encyclopedias, atlases, instruction manuals.

Newspapers are daily or (less often) weekly publications, printed usually on low quality paper that contain local, national and international news, business and sports columns, editorials and classified ads. They generally fall into two main categories according to the kind of information they present. Those in the former group are the serious, reliable papers, while the newspapers in the latter category are the so-called tabloids.

Unlike newspapers, magazines are periodical publications issued weekly, bimonthly, monthly or quarterly printed in colours on good quality paper that present information on various subjects. Taking into account the targetted audience, they may be divided into three main types: 1) consumer magazines, which target a wide range of readers; 2) trade, technical or professional magazines, which address people working in various industries; 3) company publications, which address stockholders.

Electronic media use electronic or electromagnetic waves to reach their audiences. They fall roughly into two main categories: broadcast media and digital media. Broadcast media include radio, film and television, while digital media are made up of mobile mass communication (mobile phones) and the Internet which provides various services, such as e-mail, blogs, websites.

The media, which have been part of our lives since infanthood, are expanding more and more. New types appear, while the old ones adapt and change their form to meet the requirements of our post-modern society, so that it is quite hard to find valid criteria to classify this heterogeneous, ever expanding topic. This classification, based on the medium through which the message is communicated divides mass media into print and electronic media.

Writing Assignment: Classifying

A. *Choose **one** of the following topics and generate ideas about how to classify it applying one of the methods in **Appendix 2.***

- Types of students
- Kinds of sports
- Types of websites
- Types of vacations
- Kinds of TV programs
- Kinds of movies
- Types of novels
- Kinds of engineers
- Types of energy
- Types of bad habits

B. Use the ideas you generated and decide on a criterion (principle of classification).
C. Divide the topic you have chosen into categories that are separate and distinct.
D. Prepare a plan of your text that includes a thesis statement and supporting ideas for your categories.
E. Write a draft of your classification text of about 200 words.
F. Review your text, using the checklist below.
G. Ask a partner to evaluate your classification.
H. Revise your text, taking into account your partner's suggestions.

Checklist for Classification Essays

	Yes	Not yet
1. Is there a clear thesis statement?		
2. Is the criterion clearly mentioned?		
3. Are the categories listed?		
4. Are the categories distinct and clear?		
5. Is each group described and defined?		
6. Are there examples for each group?		
7. Are there connecting words used to introduce categories, contrast them and give examples?		
8. Is the text factually correct (correct information)?		
9. Is the language used formal and objective?		
10. Is the language used correct (spelling and grammar)?		

Translate into English:

Circuitele liniare includ trei tipuri fundamentale de elemente pasive: rezistenţe, inductoare şi condensatoare. Rezistenţa este o componenetă pasivă care disipează energia, reduce fluxul curentului şi scade tensiunea în circuit. Exemple tipice sunt filamentele becurilor electrice şi firele de cupru care transportă curentul electric. Rezistenţele sunt de două feluri: fixe şi variabile. Potenţiometrele ("pots") sunt rezistenţe variabile cu trei terminale, prezente în controlul volumului receptoarelor radio. Inductorul, cunoscut şi sub denumirea de bobină sau reactor, este o componentă pasivă cu două

terminale care stochează temporar energia în câmpul magnetic al bobinei. Când curentul care trece printr-un inductor se schimbă, câmpul magnetic variabil induce o tensiune în conductor care se opune schimbării în curentul care a creat-o, în conformitate cu legea inducţiei electromagnetice a lui Faraday. Din punctul de vedere al materialului din care este constituit miezul, inductorii se împart în două categorii: cu miez de aer sau cu miez feromagnetic. Condensatorul este o componentă electrică pasivă cu două terminale care stochează energia electrostatic într-un câmp magnetic. Forma condensatorilor diferă mult de la caz la caz, dar toate conţin cel puţin doi conductori electrici separaţi de un dielectric (izolator).

Word study

Complete this table. Some spaces will remain empty.

Verb	**Noun** (component)	**Noun** (property)
	capacitor	
collect		
conduct		
emit		
	inductor	
	insulator	
oscillate		
	recorder	
rectify		
		resistance

3 SCHOOL AND UNIVERSITY

Below are the opinions about school and university of 3 freshmen. Which of the three do you agree/disagree with?Fill in the table.

1. In school I learnt a lot of stuff that I guess isn't very useful in real life. I couldn't see the point of some subjects. And then all the teachers, the math ones especially, thought their subject was the MOST important of all. It's different at the university…

2. I liked school a lot and I also like attending courses at the university, but I found out it's harder. School gave me information on all kinds of things, and I can use this when I speak about all sorts of things.

3. I thought university would be very different from school, but in fact it isn't. Of course, there are specialized subjects, but as a freshman I have to attend classes that have nothing to do with my future profession. On top of that both in school and at the university there's too much theory.

No	I agree	I disagree
1		
2		
3		

Now be prepared to defend and support your choice. You may want to use some of the language patterns below:

Useful language

Expressing opinion

Formal ↓	As far as I am able to judge
	As far as I am concerned
	From my point of view, I think
	In my opinion
	As I see it
Informal	I reckon

Expressing agreement

Formal ↓	I couldn't agree more!
	I definitely/ completely/ agree with...
	That's absolutely true!
	I take his/ her/ your point
	I'd go along with...on that
Informal	I guess ...could be right

Expressing disagreement

Formal ↓	I disagree entirely
	I'm afraid I can't agree with...
	I'm inclined to disagree with that
	That's not how I see it
	I'm not sure you're right here
	You/ He must be joking
Informal	How on earth can you/ he say such a thing?

Work in pairs to complete the following table with differences between school and university. Use the rubric 'others' to add other differences, using the ideas from the previous task:

Differences	High School	University
Students' age		
Students generally live at home/on campus		
No of classes/week		
Subjects (general/specialized)		
Optional courses		
Students' autonomy		
Teaching styles		
Homework/Assignments		
Exams		
Others (please specify)		

Divide into 2 groups, A and B. Read the corresponding text and complete the task that follows:

A.

I passed all the other courses that I took at my university, but I could never pass botany. This was because all botany students had to spend several hours a week in a laboratory looking through a microscope at plant cells, and I could never see through a microscope, I never once saw a cell through a microscope. This used to enrage my instructor. He would wander around the laboratory pleased with the progress all the students were making until he came to me, I would just be standing there...

Another course that I didn't like, but somehow managed to pass, was econiomics. I went to that class straight from the botany class, which didn't help me any in understanding either subject. I used to get them mixed up.

If I went through anguish in botany and economics – for different reasons – gymnasium work was even worse. I don't even like to think about it. They wouldn't let you play games or join in the exercises with your glasses on and I couldn't see with mine off. I bumped into professors, horizontal bars, agricultural students, and swinging iron rings.

James Thurber

B.

Where I want to start telling is the day I left Pencey Prep. Pencey Prep is this school that's in Agerstown, Pennsylvania. You probably heard of it. You've probably seen the ads, anyway. They advertise in about a thousand magazines, always showing some hot-shot guy on a horse jumping over a fence. And underneath it says: ¨Since 1888 we have been moulding boys into splendid, clear-thinking young men." ...I was on my way to say good-by to old Spencer, my history teacher. ...he wrote me this note saying he wanted to see me before I went home. He knew I wasn't coming back to Pencey.

I forgot to tell you about that. They kicked me out. I wasn't supposed to come back after Christmas vacation, on account of I was fluncking four subjects and not applying myself at all. They gave me frequent warning to start applying myself – especially around mid-terms, when my parents came for a conference with old Thurmer – but I didn't do it. So I got the ax. They give guys the ax quite frequently at Pencey. It has a very good academic rating, Pencey. It really does.

J. D. Salinger

*Read the following statements. Next to each one put **T** if the statement is true, **F** if it is false and **NG*** if it doesn't say.

Text A

1. Text A is about the years spent in high school.
2. The narrative is in the 1st person.
3. The character-narrator could not see well through the microscope because he was short-sighted.
4. The character-narrator didn'like botany or economics.
5. In the physical education class, the character-narrator bumped into things because he wasn't allowed to wear his glasses.

Text B

1. Text B is about the last year spent at Pencey Prep.
2. The narrative is in the 1st person.
3. The ad presenting the school had a great impact on everybody.
4. The character-narrator was expelled from school because of his low grades.
5. His parents didn't know about these low grades.

The Verb

Past Simple and Past Continuous

Past Simple

Look at these fragments from texts A and B. What tense are the underlined verbs?

I passed all the other courses that I took at my university, but I could never pass botany. This was because all botany students had to spend several hours a week in a laboratory looking through a microscope at plant cells, and I could never see through a microscope,

They gave me frequent warning to start applying myself – especially around mid-terms, when my parents came for a conference with old Thurmer – but I didn't do it.

Many verbs in the two fragments are in the Past Simple. This is so because they refer to narrated events that happened sometime *before now.*
Let us remember its forms and then its use.

Affirmative

S+ V (2nd form)
(regular verbs: V+ed)

I We You They He/she/it	**sang** ask**ed**

Interrogative (Questions)

Did +S+V (1st form)?

Did	I we you they he/she/it	sing? ask?

Negative

S+ did + not + V (1st form)

I We You They He/she/it	**did not (didn't)**	sing ask

Past Simple is used for:

1. **An action that took place at a specific time in the past.**

Tom **met** his friend last week.

Indicators:

a) yesterday (morning/ afternoon/ evening/ night)
b) last (evening/ night/ week/ month/ year)
c) …ago (e.g. 3 minutes/ hours/ days/ weeks/ years ago)
d) in + past { month (e.g. in July)
season (e.g. in summer)
year (e.g. in 2010)

2. **A completed action in the past**

Bob **wrote** his science report yesterday (implication: he finished writing it).

Indicators: the same as above.

3. A sequence of actions in the past (in narratives)

Jack climbed and he climbed and he climbed till at last he reached the sky and there he found a broad long road and he walked and he walked and he walked until he came to a big house and on the doorstep he saw a big tall woman….

Indicators: the same as for the first situation or none.

4. Habitual, repeated actions in the past

She often *visited* her friends in London.

For this meaning of repeated action in the past you can also use *"used to + infinitive"* or *"would+infinitive":*
This used to enrage my instructor. He would wander around the laboratory...

Indicators: the same as for Present Simple showing habitual, repeated actions.

Look at the verb in italics. What tense is it? Why is it used?
He would wander around the laboratory pleased with the progress all the students *were making.*

Past Continuous (Progressive)

Affirmative

S + was + V-ing
were

I He/she/it	**was**	ask**ing**
We You They	**were**	

Interrogative (Questions)

Was + S +V-ing?
Were

Was	I he/she/it	ask**ing**?
Were	we you they	

Negative

S + was + not + V-ing
were

I He/she/it	**was**	**not**	ask**ing**
We You They	**were**		

Past Continuous is used for:

1. **An action in progress at a particular moment in the past:**

At 2:00 p.m. yesterday Helen **was attending** a physics seminar.

2. **An incomplete action in the past:**

Bob **was writing** his science report yesterday (implication: he didn't finish writing it yesterday).

3. **An action in progress in the past (Past Continuous) interrupted by another, shorter action (Past Simple).**

In this situation we can express the same thing in 4 ways with similar meaning:

a) *While* I **was walking** in the park, I **met** Joan.
(PC) (PS)

b) I **met** Joan *while* I **was walking** in the park.
(PS) (PC)

c) *When* I **met** Joan, I **was walking** in the park.
(PS) (PC)

d) I **was walking** in the park when I **met** Joan.
(PC) (PS)

PC = Past Continuous
PS = Past Simple

Past Continuous is used after ***while*** or ***as***
Past Simple is normally used after ***when***

However, after ***when*** Past continuous can also be used:

Compare the following:

a) I **met** my friend when he **crossed** the street (two successive actions; he crossed the street and *then* I met him).
b) I met him when he **was crossing** the street (I met him as he was in the miidle of the act of crossing the street).

4. Two actions in progress at the same time in the past. In this case, both verbs are in the past continuous.

In this situation we can also express the same thing in 4 ways with similar meaning:

a) *While* I **was studying** for the exam, my roommate **was reading.**
(PC) (PC)

b) My roommate **was reading** *while* I **was studying** for the exam.
(PC) (PC)

c) *While* my roommate **was reading**, I **was studying** for the exam.
(PC) (PC)

d) I **was studying** for the exam while my roommate **was reading.**
(PC) (PC)

Put the verbs in the correct form. Notice where alternatives are possible and explain the difference in meaning.

1. As I (walk) _____ down the street yesterday, I (meet) _____ one of my former schoolmates.
2. We (go) _____ to the bus station when it (begin) _____ to snow.
3. Last week the weather (be) _____ fine: the sun (shine) _____ all day long, a pleasant breeze (blow) _____, the birds (sing) _____ in the trees, and people (look) _____ happy.
4. Father (cook) _____ his famous signature cream and chocolate cake, while Mother (watch) _____ her favourite TV show.
5. When I (finish) _____ studying for maths, I (switch on) _____ the TV and (watch) _____ an interesting movie.
6. The lights (go off) _____ while I (have) _____ supper.
7. It (rain) _____ yesterday morning when I (wake up) _____.
8. Dan (have) _____ dinner when I (go) _____ to see him.
9. She _____her umbrella when it (start) _____ to rain.
10. When the ship (sink) _____, the passengers (jump) _____ into the boats.

Complete with the correct form of the verbs (Past Simple or Past Continuous);

Yesterday I (wake up) _____ at 7:30 a.m. I (go) _____ to the bathroom to wash my face and brush my teeth. While I (brush) _____ my teeth, I (hear) _____ a strange noise coming from the street. When I (open) _____ the window, I (see) _____ a lot of people who (run)

_____ and (shout) _____ something I (not understand). _____ As I (try) _____to make sense of what (happen) _____, my friend Paul (enter) _____ the room in a hurry and (tell) _____ me that two huge humanoid creatures that apparently (come) _____ from nowhere (chase) _____ the crowd. I (look) _____again out of the window and (see) _____the creatures Paul (talk) _____ about. They (be) _____ huge, like giants, with human-like heads, very long necks, and had four long arms, two legs and a long, kangaroo-like tail. They (wear) _____clothes that (change) _____ their color every ten seconds or so and had on their head some weird cone-shaped hats that (make) _____ a strange kind of music. The two (not seem) _____furious or angry: they just (walk) _____down the street and (speak) to each other in an unknown language that (sound) _____ like music. When they (go) _____ past my window, one of them (notice) _____me. I (tremble) _____with fear, but I (manage) _____ to hide in a corner of the room and (keep) _____ my eyes closed. The creature somehow opened the window, (put) _____ two of his big hands on my shoulder, and (say) _____ in perfect English, in a voice that sounded familiar: "Wake up, Tom. Time to go to school". When I opened my eyes, I (see) _____dad, smiling, in front of me.

4 THE EDUCATIONAL SYSTEM

In the chart below you find some information on 'Western' universities. Is your university similar or different?

'Western' Universities	**Your University**	
	Similar	**Different**
Students arrive at the last minute, but **before** the teacher.		
Students seat where they want.		
Nobody stands for the professor.		
The professor may greet the students, but the students don't usually answer.		
There are several types of courses: • *Lectures*, during which the professor talks and a large group of students (150-200) take notes. • *Seminars/Discussion* classes, during which smaller groups of students of about 10-25 discuss assigned topics with a tutor or teaching assistant. • *Lab classes* during which science majors or medical students do experiments.		

During seminars/ discussion groups, students express their ideas, which may sometimes be different from those of the teacher.		
There are also *tutorials*, during which students can consult their tutors regarding different aspects of the course or regarding their assessment work		
For their exams, students need both to attend lectures and study.		
Assessment methods include • Continuous assessment (coursework, seminar participation, projects, assignments, tests) • Midterm exam (in some countries) • Final Exam		
Duration of undergraduate programs • Normally 3 years (EU) • Normally 4 years (USA)		

What do you know about the British schooling system? Do you think it is similar or very different from the Romanian one?
Read this text and compare what it says with your own answers:

The British and Romanian School System

As far as the school system is concerned, there are differences, but also resemblances between Britain and Romania. In fact, even within the UK, there are significant differences between England and Wales, on the one

hand, and Scotland, on the other. Here we shall refer mainly to the schooling system in England.

The British education system can be divided into five main stages according to age and type of education provided: pre-school (from 2½), primary education (ages 5-11), secondary education, (ages 11-16), further education (16-18) and higher education. Similar to the UK, we can also identify five main divisions in the Romanian education system: pre-school, primary school, secondary school, high school and higher education. Primary and secondary schools provide compulsory education both in England and Romania, which means that children have to legally attend these stages.

In Britain, learners are assessed at the end of each stage; however, the most important assessments are two in number: the GCSE or General Certificate for Secondary Education and the so called A level examination. The former one, the GCSE occurs at 16, and marks the end of compulsory education. When British pupils pass this exam, they take their *O* or *ordinary level*. After this, they can continue with further education, or can leave school and start work. Those who want to go to college or university must, however, complete their further education. At the end of two years of further education (known under the name of *sixth form*, consisting of *lower sixth* and *upper sixth*, respectively), British students have to take their *A* or *advanced level* examination, usually in three subjects. On the basis of these results, they can usually be enrolled in a university, although there are universities, such as Oxford and Cambridge or faculties that require an additional test and an interview.

In Romania, the same as in Britain, there are at present two main schooling examinations: the national tests and the baccalaureate examination. Unlike Britain, where the GCSE marks the end of compulsory education, the national examinations do not, because all students have at least two more years of compulsory education. In case they have taken good grades in their national exam, Romanian pupils can continue their studies in a theoretical high school; if they fail in this exam or want more practical activities to prepare them for a future profession, pupils can enroll in a vocational school and have the possibility to complete their high school after that. At the end of high school, Romanian pupils need to take their school leaving or baccalaureate examination, which is the equivalent to the English A level. The same as in Britain, high school graduates can enroll in a university on the basis of the results obtained in school and in their school leaving

examination. Similar to Britain, there are faculties or universities, such as the universities of medical studies that require special entrance examinations. As different from England, however, there are no interviews.

Work with a partner to complete the following table with the similarities and differences between the British and the Romanian educational system:

	Similar	Different
Organization		
School Examinations		
Higher education entry requirements		

In the text above, mark with a single line the words that introduce similarities and with a double line those that show differences.

Useful language: comparison and contrast

When we compare two things, we show what is similar. When we contrast, we show what is different. The items to be compared and/ or contrasted should belong to the same big class. For example, we cannot compare a dog and a book.

Comparison

as…as	Humanities are ***as*** important ***as*** science subjects.
both…and	***Both*** Bucharest ***and*** London are capital cities.
similarly	Harvard and Stanford are two important American Universities. ***Similarly***, in Britain there are two well-known universities: Oxford and Cambridge.
similar to	Great Britain, ***similar to*** USA, has a well developed

	university system.
like	Tokyo, ***like*** London, has an efficient subway system.
alike	Bucharest and Paris are ***alike*** in several ways.
the same	Taipei has ***the same*** kind of weather as Bangkok.
the same as	Romania, ***the same as*** France, is situated in the northern hemisphere.
likewise	Science subjects are important in the formation of an individual. ***Likewise***, humanities are important for any person.
just as	Humanities are ***just as*** important as science subjects in the formation of an individual.

Contrast

but	Alaska has a cold climate, ***but*** Thailand has a warm climate.
different from	Indo–European languages are ***different from*** Chinese.
in contrast	***In contrast*** to Romanian language, which has a different verb form for each person, English has very few different verb forms with respect to persons, if any.
unlike	***Unlike*** Romania, where each semester lasts for 14 weeks, there are countries in which an academic semester lasts for 18 weeks.
while	***While*** deserts are dry, rainforests are wet.
whereas	Primary education is compulsory, ***whereas*** higher education is not.
however	In technical universities, specialized subjects are fundamental. ***However***, humanist subjects are also important and shouldn't be neglected.
although	***Although*** deserts have a dry climate, some crops can be grown there.
even though	***Even though*** summers have become quite dry lately, we can still enjoy the variety of the four seasons.
on the other hand	Alaska has a cold climate. ***On the other hand***, Thailand has a warm climate.

Connect the following sentences in 3 different ways. In each sentence, use one of the words given in order to express comparison or contrast. The sentence may or may not start with the connector given.

1. Romanian schools teach basic subjects. American schools teach basic subjects.

similar to _____
similarly_____
both…and_____

2. In American schools you may find many male teachers. In Romania, most schoolteachers are women.

unlike_____
although_____
while_____

3. In American schools languages are usually learned via pair and group work activities. In Romanian schools languages are usually learned via pair and group work activities.

like_____
the same_____
just as_____

4. In American schools students sometimes eat right in the middle of a lesson. In Romanian schools students do not eat in class.

whereas _____
in contrast_____
but_____

Methods of Organization

There are three basic methods for organizing information in a comparison/ contrast essay: *by subject*, the *point-by point method* and the *block method*.

1. Organizing by subject

If you use this method, you will structure the paragraphs by subject and then discuss the points of comparison for each subject.

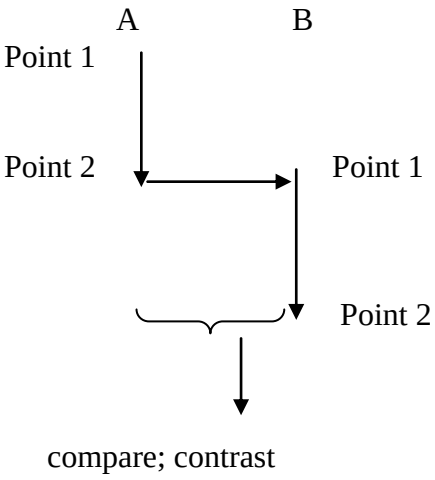
For example, if you compare and contrast two universities, A and B, you will deal first with University A, focusing on various points of comparison (e.g., location, number of students, facilities, tuition fee) and then discuss the same points of comparison with respect to University B.

Subject: University A
- First point of comparison: Location
- Second point of comparison: Enrollment process
- Third point of comparison: Facilities

Subject: University B
- First point of comparison: Location
- Second point of comparison: Enrollment process
- Third point of comparison: Facilities

This pattern of organization can be presented by means of the diagram below:

Arrangement by Subject



2. Organizing by points

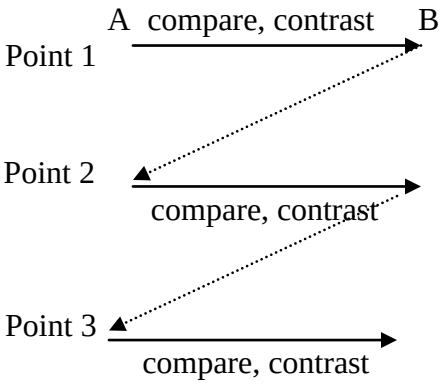
In the point-by-point method, you identify several points to be compared and contrasted. In the first supporting paragraph, you compare and contrast the two elements according to the first point; in the second supporting paragraph, you compare and contrast the two things in conformity with the second point, a.s.o. For example, if you compare two universities, A and B,

in the first supporting paragraph you can show what is similar and/or different as far as location is concerned, in the second you can compare and contrast them according to number of students, a.s.o.

First point of comparison: Location
Subject: University A
Subject: University B
Second point of comparison: Enrollment process
Subject: University A
Subject: University B
Third point of comparison: Facilities
Subject: University A
Subject: University B

This pattern of organization can be presented by means of the diagram below:

Arrangement Point by Point



3, Block method

First supporting paragraph: show similarities
Second supporting paragraph: show differences

If you compare universities A and B using this method, in the first body paragraph you can show all the elements the two universities have in common, while in the second supporting paragraph you will point out all the elements that are different.

This pattern of organization can be presented by means of the diagram below:

first supporting paragraph **A** —similarities→ **B**

second supporting paragraph **A** —differences→ **B**

Read this introductory paragraph. Then read texts A, B and C that may be continuations of the introductory paragraph. Decide what method is used in texts A, B and C. Tick (√) the appropriate answer:

Last summer, after passing my school leaving examination, I had to decide which university to go to. Since I live in Bacău and I have been fond of electronics for quite a long time, two options came to my mind: the Technical University in Iaşi and the one in Bucharest. Although I had talked to friends and relatives who had attended both universities and had visited both campuses, it was only after I compared them that I could finally decide which to attend.

Texts	Arrangement by subject	Arrangement point-by-point	Block method
A			
B			
C			

A. At first glance, the two universities have a lot in common. First of all, both universities are located in Romania, so I don't have to travel across the border in order to attend courses. Next, "Gheorghe Asachi" University, similar to "Politehnica" University trains future electronics engineers, and that is what I would like to become. The enrollment fee is the same for the Electronics and Telecommunications Faculty in both universities. Moreover, both universities have good facilities, large libraries, well-known academic reputation and facilitate attractive internships for undergraduate students.

On the other hand, I also realized that the two universities and faculties had many differences. The first thing is the distance: the Technical University in Iaşi is closer from Bacău than the one in Bucharest. Next, while the Faculty of Electronics in Iaşi can enroll around 280 freshmen, the corresponding Faculty of Electronics in Bucharest enrolls 650 students, which seems to be an advantage. However, the enrollment process in Iaşi is based on the results obtained in high school and in the Baccalaureate examination; in contrast, enrollment at the Faculty of Electronics in Bucharest is based on two written tests – one in mathematics and the other one in physics.

B. The first thing I considered was the location. Both universities are located in Romania, so I don't have to travel across the border in order to attend courses. But this is where the similarity ends, because the Technical University in Iaşi is closer to Bacău than the one in Bucharest.

As far as the number of students and enrollment process are concerned, the Faculty of Electronics in Iaşi can enroll around 280 freshmen, while the corresponding Faculty of Electronics in Bucharest enrolls 650 students, which could mean that in Bucharest there are more chances of becoming an electronics student than in Iaşi. There is a big difference, though: the enrollment process in Iaşi is based on the results obtained in high school and in the Baccalaureate examination; in contrast, enrollment at the Faculty of Electronics in Bucharest is based on two written tests – one in mathematics and the other one in physics.

The quality of education had a great influence on my decision. As far as I noticed, both universities have good facilities, large libraries, well-known academic reputation and facilitate attractive internships for undergraduate students. However, I like more the student campus in Iaşi because it looks friendlier than the one in Bucharest. Moreover, whereas Bucharest is very big and it takes a lot of time to get from one location to another, Iaşi is smaller, so distances are smaller, too.

C. The first university I visited was the Technical University in Iaşi. One element I took into account was location. Iaşi is a beautiful city in the north-east of Romania, quite close to Bacău. As far as the number of

students and enrollment process are concerned, the Faculty of Electronics in Iaşi can enroll around 280 freshmen, At present the enrollment process in the Faculty of Electronics in Iaşi is based on the results obtained in high school and in the Baccalaureate examination, which is a good thing for me, as I had high grades at maths and physics in high school and at the Baccalaureate examination. The university has good facilities, an extremely beautiful library and auditorium, a well-known academic reputation and a friendly student campus.

The other university is located in Bucharest, which is situated in the south of Romania, farther from my hometown than Iaşi. This means that transport will cost me more. The number of freshmen who can be enrolled at the Faculty of Electronics in Bucharest Polytechnic is about 650, much more than in Iaşi. However, enrollment at the Faculty of Electronics in Bucharest is based on two written tests – one in mathematics and the other one in physics, which means more anxiety in comparison to Iaşi. Similar to Iaşi, this university has good facilities, a large and beautiful library (although not so old as the one in Iaşi), a well-known academic reputation and good employment opportunities.

In the texts above, underline with a single line the transitions (connectives) that show comparison and with two lines those that show contrast. Are there any other transitions that guide the reader through the texts? What do they show? You can refer to ***Appendix 4*** for help.

Guidelines for Comparison/ Contrast Essays

Arrangenent by Subject

Introduction

1. Provide background information about the topic.
2. Identify the two elements to be compared and contrasted.
3. State the purpose for the comparison.
4. Identify the points to be compared/ contrasted.
5. Write a thesis statement.

Supporting Paragraphs

1. In the first supporting paragraph, analyze the first element according to each point of comparison in turn.
2. In the second supporting paragraph, analyze the second element, compare and contrast it with the first element, according to each point of comparison.

Conclusion

1. Restate the purpose for the comparison/contrast.
2. Summarize the main similarities and differences.
3. Draw a conclusion.

Point-by-Point Method

Introduction

1. Provide background information about the topic.
2. Identify the two elements to be compared and contrasted.
3. State the purpose for the comparison.
4. Identify the points to be compared/ contrasted.
5. Write a thesis statement.

Supporting Paragraphs

1. In the first supporting paragraph, compare and/ or contrast the two elements according to the first point.
2. In the second paragraph, compare and/or contrast according to the second point.
3. Do the same in the next paragraph(s).

Conclusion

1. Restate the purpose for the comparison/contrast.
2. Summarize the main similarities and differences.
3. Draw a conclusion.

Block Method

Introduction

1. Provide background information about the topic.
2. Identify the two elements to be compared and contrasted.
3. State the purpose for the comparison.
4. Write a thesis statement.

Supporting Paragraphs

1. In the first supporting paragraph, discuss the similarities.
2. In the second supporting paragraph, discuss the differences.

Conclusion

1. Restate the purpose for the comparison/contrast.
2. Summarize the main similarities and differences.
3. Draw a conclusion.

A. *Choose one of the following topics and write a comparison/contrast essay, using the block method.*

1. Compare and contrast some aspects of your culture with the same aspects of another culture (e.g., education, food habits, traditions).
2. Compare and contrast the celebration of a holiday in your country and in another country (e.g. New Year).
3. Compare and contrast the marriage ceremony in your country and in a different country.
4. Compare and contrast school and university.
5. Compare and contrast yourself and your best friend/ another member of your family.
6. Compare and contrast the lifestyle, opinions and sets of values of two different generations (e.g. your generation vs. your parents' generation).
7. Compare and contrast life in the city with life in the countryside.
8. Compare and contrast a book (a play, a story or a novel) with its film version.
9. Compare and contrast life in the hostel with life at home.
10. Compare and contrast your own language with English and show why English is easy or difficult to learn.

B. *Brainstorm a list of similarities and differences.*

C. *Organize all the similarities in one group and the differences on another. Prepare an outline of your essay. Identify the purpose for your comparison (Why do you compare the two elements? For what purpose?)*

D. *Write the first draft of your essay. Use the guidelines above to help you.*

E. *Revise your essay, using the checklist below.*

F. *Exchange your draft with a partner. Use the checklist and tick what is true.*

Checklist for Comparison/Contrast Essays

		Yes	**No**
1	Does the essay contain 4 paragraphs?		
2	Does the introduction specify the 2 elements to be compared?		
3	Is the purpose clearly stated?		
4	Does the introduction draw the reader's attention? If not, how can it be improved? _____ _____		
5	Were the points of comparison (the similarities) well developed in the first supporting paragraph? If not, how can it be improved? _____ _____		
6	Were the points of contrast (the differences) well developed in the first supporting paragraph? If not, how can it be improved? _____ _____		
7	Is the conclusion effective? If not, how can it be improved? _____ _____		
8	Is the essay correct from the point of view of grammar, spelling and punctuation?		

D. *Write the final version of your essay.*

5 BEING A STUDENT

Maria and Dan are both freshmen attending courses at the Faculty of Electronics. Maria comes from Spain and Dan comes from Slovakia. They met at an international electronics competition in Sao Paolo and have become good friends. While Maria is now studying in Iaşi, Dan is attending the courses of the Faculty of Electronics in Bucharest. They have just started classes and are talking on the phone about their Opening Day as students.

Before reading their conversation, choose the suitable beginning of the phone conversation between Maria and Dan.

A.

Hello. 0742009958.

Hello, Maria. This is Dan speaking.. Would you be so kind as to spare me a few minutes? I would really like to ask you…

B.

Hello.

Hi, Maria. It's me, Dan.

Dan! Hi! How are you?

Fine. How's everything with you ?

I'm OK. What's up, Dan?

Read the continuation of the conversation between Maria and Dan. Decide whether the statements below are true (T), false (F) or the information is not given (NG)

D: I'm really in two minds, you know…
M: Why's that, Dan?
D: You know, I've just had my first day as a freshman and…and I am supposed to complete a form, a kind of contract, choosing elective and facultative courses…and I really don't know what to do.
M: What elective disciplines can you choose?
D: There are two groups of such disciplines, and we have to choose one out of each group. In the first group, we can choose from among Software, Graphics and Initiation in the Practical Design of Electronic Circuits. For this group, I have already made up my mind. I'm going to choose Software.
M: Then what's the problem?
D: The problem's with the second group, where there are mostly socio-humanistic disciplines.
M: Why is that a problem, Dan?
D: Because there are too many: Psychology, Sociology, Philosophy, Communication, European Culture and Civilization, European Integration,…
M: OK, you've convinced me. It's hard to choose from among so many.
D: Yeah, they all seem so interesting.
M: So, what have you decided?
D: I guess I'll choose either Communication or European Culture. It's a pity I can't choose both. But…enough about me. What about you, Maria?
M: What about me?
D: How *was* your first day as a student?
M: Quite exhausting…and nice. We first *had* a meeting in the auditorium of the university, and the dean and other professors *wished* us success. At the end of the ceremony our supervisor *told* us lots of important things and *gave* us practical advice on what to do in order to integrate quickly and get good grades. We also *had* a meeting with the representatives from the Electronics Students' League, and we also *completed* the forms you mentioned, the contracts.
D: Seems like you have had a busy day.
M: Yeah, that's true.
D: So, what have you chosen?

M: You mean what electives? Well, our selection is smaller. For the first semester we have to choose from among Applied Informatics and Numerical Methods, while for the second it's Applied Informatics or Physics.
D: So, what will you do?
M: I have already made up my mind. I'm going to study Applied Informatics.
D: I'm glad you've already decided.
M: You will, too, Dan. Look, I've had quite a hectic day and tomorrow I need to get up early, 'cause classes start from 8 a.m., and it's quite late, so…
D: …so we need to finish our conversation. Good night, Maria.
M: Good night, Dan. Call me soon.
D: I will. Bye.

1. Dan is a student in the second year.
2. The first group Dan can choose from includes three disciplines.
3. Dan is afraid he might fail to make the best option.
4. Maria's day has been quite exhausting.
5. Maria has a wider choice of electives as compared to Dan.
6. Dan has to go to bed early because he has classes from 8 in the morning.

Speaking

Work in pairs. Talk to your partner about your first days as a student. How did you feel? The adjectives below might help you:

nervous	happy
afraid	exhausted
glad	anxious

Look again at the telephone conversation above. Some verbs are underlined. What tense are they? Some other verbs are written in italics. What form are these ones? Compare the use of these two tenses. Can we replace one with the other?

The Verb
Present Perfect Simple

Present Perfect is a combination of aspect and tense that links past time to present time.

Form: Present Perfect Simple is made up of the present of the verb *have* and the Past Participle (3rd form) of the main verb.

Affirmative

have
S+ + V (3rd form)
has (regular verbs: V+ed)

I We You They	**have**	**sung** ask**ed**
He/she/it	**has**	

Interrogative (Questions)

Have
+S + V (3rd form)?
Has (regular verbs: V+ed)

Have	I we you they	**sung**? ask**ed**?
Has	he/she/it	

Negative

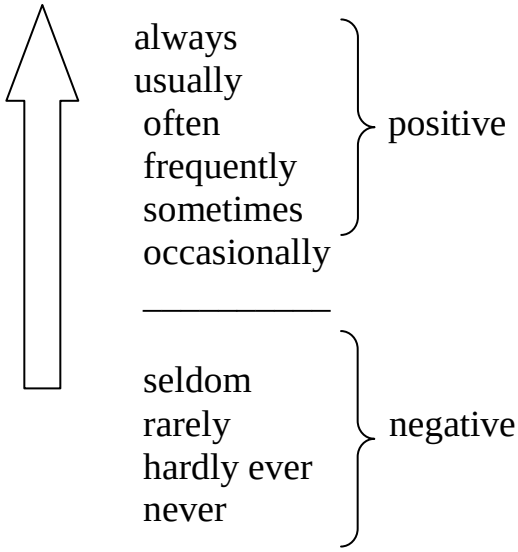
have
S+ + not + V (3rd form)
has (regular verbs: V+ed)

I We You They	**have not (haven't)**	**sung** ask**ed**
He/she/it	**has not hasn't**	

In order to better understand the use of Present Perfect Simple, let us consider its use in contrast with that of Past Tense Simple.

Present Perfect Simple	**Past Tense Simple**
1. unfinished past **- an action that started in the past and continues to the present and possibly in the future** He **has lived** (locuieşte) in Iaşi for four years. He **has lived** in Iaşi since last year. He **has lived** in Iaşi since he became a student. **Indicators:** a) for = period of time for { for 5 minutes/ hours/ days/ months/ years; for a long time; for ages } b)since = moment when the action started since { 2 p.m.; last week/month/year; yesterday } **NB! In the clause introduced by *since* use Past Tense.**	**1. finished past** **- an action that took place and was finished in the past** He **lived** (a locuit) in Iaşi for four years. **Indicators:** a) for = a finished period of time b)yesterday(morning/ afternoon/ evening/ night) c) last (evening/ night/ week/ month/ year) d) …ago (5 minutes/ hours/ days/ weeks/ years ago) e) in + past { month (e.g. in July); season (e.g. in summer); year (e.g. in 2010) }

2. unfinished period of time **- an action that took place in a period of time that is not finished** He **has eaten** toast and butter for breakfast this morning. (now it's 10 a.m., i.e., it's still morning) **Indicators:** a) this morning/afternoon b) today	**2. finished period of time** **- an action that took place in a period of time that is finished** He **ate** bread and butter for breakfast this morning. (now it's 2 p.m., so it's no longer morning) **Indicators:** this morning/afternoon
3. present result **- an action that happened in the past (usually the recent past) whose results are seen at present** Tom **has broken** his leg. (Tom's leg is in plaster now) **Indicators** (if any): a) already b) just c) still d) yet	**3. no present result** - an action that happened in the past and has no present results Tom **broke** his leg. (it's a thing of the past; Tom's leg is OK now) **Indicators** (if any): Similar to 1st use

4. indefinite past **- an action that happened at an unspecified moment in the past (? when); the time is not specified; what is important is the experience** A: **Have** you ever **visited** The British Museum? B: Yes, I **have**. I **have visited** The British Museum many times. **Indicators:** a) adverbs of frequency  b) once twice three, four, …n times (how) many times	**4. definite past** - an action that happened in the past, usually at a definite moment A: When **did** you last **visit** The British Museum? B: I last **visited** the British Museum in 2014. **Indicators:** Similar to 1st use.

Present Perfect should be seen as a bridge that links past time and present time, i.e.

Past Present

 *Work in pairs. Compare the use of these verbs. Which tense is used and why?*

1. a. Have you ever tried Japanese food?
1. b. Did you try *sashimi* when you were in Japan?

2. a. How many times has Laura visited London?
2. b. How many times did Paul visit London?

3. a. She's been to London.
3. b. She's gone to London.

4. a. Oscar Wilde wrote *The Picture of Dorian Gray.*
4. b. My father has written three best sellers.
4. c. My father has been writing a thriller for the past 3 months.

5. a. My father has been writing all morning.
5. b. My father has written five pages.

6. a. I've lived in Iaşi all my life.
6. b. I've been living with relatives while I'm looking for an apartment.

7. a. Ouch! I've cut my finger.
7. b. He's been cutting the grass all morning.

8. a. Who's drunk my coffee?
8. b. Who's been drinking my coffee?

Present Perfect Continuous

Form:
Present Perfect Continuous (Progressive) is made up from the Present Perfect of the verb *to be* and the *–ing* form of the main verb.

Affirmative

S + have/has + been + V-ing

I We You They	**have**	**been**	ask**ing**
He/she/it	**has**		

Interrogative (Questions)

Have/Has + S + been + V-ing?

Have	I we you they	**been**	ask**ing**?
Has	He/she/it		

Negative

S + have/has + not + been + V-ing

I We You They	**have not (haven't)**	**been**	ask**ing**
He/she/it	**has not (hasn't)**		

Present Perfect Continuous (Progressive) is used in the same situations as Present Perfect Simple. There are, however, some differences:

Let us consider compare and contrast the use of Present Perfect Continuous (Progressive) with that of Present Perfect Simple:

<table>
<tr><th>Present Perfect Continuous</th><th>Present Perfect Simple</th></tr>
<tr><td>1. unfinished past
a) an action that started in the past and continues to the present and possibly in the future

He has been living (locuieşte) in Iaşi for four years.

The use of Present Perfect Continuous underlines the continuity of the action.

He has been repairing the car for 5 hours.</td><td>1. unfinished past
a) an action that started in the past and continues to the present and possibly in the future

He has lived (locuieşte) in Iaşi for four years.</td></tr>
<tr><td colspan="2">NB! With verbs such as live, stay, study, work you can use either the simple or the continuous form of Present Perfect with the same meaning (see example above)</td></tr>
<tr><td>b) a temporary action
Tom has been living with a host family for 3 months.

c) with expressions of time
Paul has been reading for 3 hours/since 5 p.m.</td><td>b) a permanent action
This castle in Sighişoara has stood there for hundreds of years.

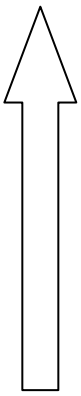
c) with expressions of quantity
Paul has read 150 pages.</td></tr>
<tr><td colspan="2"></td></tr>
</table>

Indicators for = period of time for 5 minutes/hours/days/months/years for a long time for ages since = moment when the action started	
2. unfinished period of time **- an incomplete action that took place in a period of time that is not finished** He **has been writing** a research report this week. (he hasn't finished it) **Indicators:** a) this - morning/ afternoon - week/ month/ year b) today **3. present result** **a) an action that happened in the past (usually the recent past) whose results are seen at present** A: You've changed. What have you done to yourself? B: I'**ve been doing** some exercise. **b) with verbs that suggest a short action, such as** ***break, cut, knock, lose, start, stop*** **the Present Perfect Continuous refers to a repeated activity** He **has been cutting** the grass.	**2. unfinished period of time** **- a complete action that took place in a period of time that is not finished** He **has written** a research report this week. (he has finished it) **Indicators:** a) this - morning/ afternoon - week/ month/ year b) today **3. present result** **a) an action that happened in the past (usually the recent past) whose results are seen at present** A: You've changed. What have you done to yourself? B: I**'ve lost** some weight. **b) with verbs that suggest a short action, such as** ***break, cut, knock, lose, start, stop*** **the Present Perfect Simple refers to an activity that took place once** He **has cut** his finger.

c) an incomplete action in the past whose result is seen at present Someone**'s been eating** my chocolates. (there are some left) **d) the cause that led to a present result** A: Why are you wet? B: I**'ve been swimming**.	**c) a complete action in the past whose result is seen at present** Someone**'s eaten** my chocolates. (there are none left)
Indicators (if any): a) already b) just c) still d) yet	
4. indefinite past **- an action that happened at an unspecified moment in the past (? when); the time is not specified; what is important is the experience** **Have** you **been flying** in a plane when it has hit an air pocket?	**4. indefinite past** **- an action that happened at an unspecified moment in the past (? when); the time is not specified; what is important is the experience** Robert **has** never **been** abroad.

Indicators:

a) adverbs of frequency



always
usually
often
frequently
sometimes
occasionally

positive

seldom
rarely
hardly ever
never

negative

b) once
twice
three, four, …n times
(how) many times

Correct the mistakes:

1. Have you seen the match on Sunday?
2. Tom has been reading 50 pages.
3. Ouch! I've been cutting my finger.
4. How long have you been having this house?
5. A: Why are you tired?
   B: I've cut the grass.
6. I am living in Iaşi for 10 years.
7. I have met my friend yesterday.
8. Shakespeare has written many plays.

9. He studied a lot since he has come here.
10. We have started work at 8 o'clock this morning.

Supply the correct form of the verbs (Present Perfect Simple, Present Perfect Continuous or Past Tense):

1. Peter and I are old friends. I (know) _____ him since I (be) _____ in primary school.
2. You (see) _____ my cell phone? I (lose) _____ it.
3. She never (see) _____ Paris. She (want) _____ to go last year, but she (have) _____ no money.
4. Tom (study) _____ Physics for two years and then (give) _____ it up.
5. I (go) _____ to Spain six years ago. Since then I (not speak) _____ Spanish, so I (forget) _____ nearly all I (learn) _____ there.
6. I (be) _____ very busy lately. This week I (write) _____ an assignment, but I (not finish) _____ it yet.
7. Tom (wait) _____ for Lily for half an hour, but she (not come) _____ yet.
8. What you (do) _____ all morning? I (try) _____ to reach you on the phone, but you (not answer) _____.
9. Since the semester (begin) _____,we (have) _____ 5 tests.
10. I (do) _____ many things and I (meet) _____ many people since I (come) _____ here.

Translate into English Maria's letter, paying attention to the correct verb tenses:

De când am venit în Iaşi la mijlocul lui septembrie, vremea a fost la fel de caldă ca în Spania, aşa că m-am putut adapta uşor. Deşi am avut suficienţi bani pentru a închiria un apartament, am preferat să stau la cămin pentru a-mi face mai mulţi prieteni şi pentru a mă adapta mai bine stilului de viaţă şi

tradiţiilor din România. Împart camera cu o fată pe care o cheamă Andreea, care este ca şi mine studentă în anul I la electronică.

Ieri am asistat la deschiderea anului universitar. Am fost foarte bucuroasă pentru că am înţeles aproape în întregime discursurile rostite de profesori, ceea ce înseamnă că am învăţat româna bine.

Oricum, după cum ştiţi, noi facem toate orele în limba engleză şi cred că îmi va fi foarte uşor să înţeleg prelegerile, dat fiind că am făcut liceul în Manchester. Tocmai am terminat primul curs şi acum merg să iau masa cu prietena şi colega mea de cameră Andreea.

Am cunoscut un băiat pe care îl cheamă Paul şi mai ieşim împreună. Este din Franţa şi studiază medicina aici în Iaşi. Seamănă cu Julio şi îmi aminteşte mult de el. Sunt convinsă că vă va plăcea şi vouă. M-a invitat la balul bobocilor de la medicină.

Sunt foarte obosită, deoarece m-am pregătit pentru seminarul şi laboratorul de mâine. Mi se pare că au trecut ani de cînd am plecat de acasă. S-au petrecut atât de multe lucruri. Promit să trimit un e-mail mai detaliat cât de repede.

6 ELECTRONICS IN THE FUTURE

What will the future hold in store for us? What electronic devices will be available for personal use? Think of at least 3 ways in which electronics will be used in the future. Write them down in the space provided.

1._____
2. _____
3. _____

Now read the following text. Are there any of your predictions mentioned?

Electronic devices have permeated our lives. If 40 years ago we could only dream about video phone calls or read about them in science fiction literature, nowadays such calls represent…a thing of the past. Nobody really cares about them. If not long ago, the only possibilities of communicating with someone at a distance were by fixed telephone or in writing, nowadays we can choose to speak on the mobile phone, or Skype, we can send an SMS or an e-mail or write a message on Facebook or Twitter. What is more surprising is that we can do all these things using a single device, usually our smart phone or tablet.

Not since the Industrial Revolution have the prospects for technology in general and electronics in particular been so benefic for mankind. We live more and more in a man-made world, with all the advantages and disadvantages deriving from it. The devices, artefacts and many of the materials that surround us are the products of engineering creativity and enterprise. Hi-tech and innovative communication systems have spread even in what we consider remote, isolated parts of the world. The next 20-25 years will witness new developments in various areas of science and technology, such as: electronics, information technology, energy, genetics.

As far as the first two areas are concerned, we are going to witness lots of developments in the near future. Experts predict that touch-based tablets and phones will have given way to eye-gaze interaction devices that allow for automatic scrolling. Computers, tablets and all kinds of household devices will be able to interpret our emotions and gestures and respond to them in a rewarding manner. Soon enough, the audio quality of our mobile phones will get improved up to 16 times; as for the video quality, tablets and smartphones could be endowed with ultra-high definition screens that will offer a feast for the eyes.

Continuous growth in computer speed and capacity will surely be accompanied by shrinkage in size. 'Smart' is a keyword for all future electronic devices, as they will incorporate sensors, microprocessors and actuators that will permit such devices to evaluate their own internal and external performance and initiate repair if need be. The next step will probably be to link these smart devices in systems that will ensure more effective and often remote control. Various systems, from an office building to a power plant or waterworks will thus be evaluated, controlled and commanded from a distance (from a few miles to thousands of miles away).

Homes and buildings will be endowed with sensors that will detect air leaks, water leaks and break-ins, will adjust lighting, temperature, humidity and many other things, so that we can feel at ease and relaxed. Buildings will be made of lightweight materials and will become dynamic and dismantleable: they will be capable of being moved away, of being turned into bigger or smaller, taller or shorter buildings in response to our needs and wants.

As far as transportation is concerned, smart cars are already under way. The next logical step is the emergence of smart highways that will be able to take control of an automobile from ignition to reaching a destination and parking.

Future developments in artificial intelligence (AI) and virtual reality (VR) will have a tremendous impact on education. AI systems will take into account each learner's preferred learning style and strategy (acoustic, visual, kinesthetic), thus facilitating and optimizing the learning process to such a degree that students will be able to have 100% mastery of what was taught.

Find the words in the text above that mean:

1. something made or given shape by man (lines 10-15)
2. the ability to think of new ideas and make them work (lines 10-15)
3. the act of becoming smaller or making something smaller (lines 25-30)
4. a servomechanism that supplies and transmits energy for another mechanism (lines 30-35)
5. a building where electricity is produced (lines 30-35)
6. a system of reservoirs, pumps and purifying equipment for supplying water to a city (lines 30-35)
7. capable of being taken apart in separate pieces (lines 35-40)
8. pertaining to the sense that detects bodily position, weight or movement of the muscles (lines 45-50)

Decide whether these statements that refer to the text above are true (T) or false (F):

1. In the mid 1970's the ways in which people communicated with someone at a distance were very limited.
2. We live in an era of technological developments that can be compared to the breakthroughs brought about by the Industrial Revolution.
3. The video quality of future devices will be improved up to 16 times.
4. Future smart devices will be able to detect their own flaws and repair them.
5. Due to developments in AI and VR, future students will be able to acquire everything they are taught in a percentage of 100%.

Match each paragraph of the text above with its summary/ main idea:

Paragraph (§)	Main idea
§	a. Smart systems networking
§	b. Some predictions about transport
§	c. Intelligent buildings
§	d. Electronic devices are parts of our lives
§	e. AI and education
§	f. Future developments in tablets and smartphones
§	g. The next quarter of a century will witness developments in many fields of science and technology

Look at these sentences. What tense are the verbs in italics?

a. Future developments in artificial intelligence (AI) and virtual reality (VR) *will have* a tremendous impact on education.
b. We *are going* to witness lots of developments in the near future.
c. Touch-based tablets and phones *will have given way* to eye-gaze interaction devices.

The Verb
Means of Expressing Future

Future *time* can be expressed in English through a variety of *tenses* and verb forms. This is the best example showing that *time* and *tense* are different concepts.
Thus, *time* refers to chronology, duration ("What's the time?"), while *tense* is a grammar, more precisely, a verb category. Verb tenses are a means of encoding the category of time in language, together with others, for example adverbs of time, such as *today*, *yesterday*, *tomorrow*.

There are various verb forms that can express future time:

1. Future Simple ('will' future)
2. Future Continuous
3. 'Going to' Future
4. Present Simple

5. Present Continuous
6. 'Be to' Future
7. 'Be about to' Future
8. Future-in-the-Past
9. Future Perfect Simple
10. Future Perfect Continuous

1. Future Simple ('will' future)

Form: Future Simple is formed by means of *will* and the short infinitive (base form) of the main verb.

Affirmative

S + will + V

I We You They He/she/it	**will**	ask

Short form affirmative

I'**ll** We'**ll** You'**ll** They'**ll** He'**ll** She'**ll** It'**ll**	ask

Interrogative (Questions)

Will + S + V?

Will	I we you they he/she/it	ask?

Negative

S + will + not + V
(won't)

I We You They He/she/it	**will not** **(won't)**	ask

Future Simple is used to express:

1. a 'neutral' future (future as a matter of course)
He **will be** (he'**ll be**) 21 next month.

2. a future prediction (without evidence)
I think it **will** rain tomorrow.

3. a decision about the future taken at the moment of speaking
I'**ll see** you next Monday then.

Indicators:
a) tomorrow
tomorrow morning/ afternoon/ evening/ night

b) next – morning/ afternoon/ evening
– Sunday
– week/ month/ year

c) in + a future month/ a future season/ a future year (in 2025)

d) on + a future day/ a future date (on December 21st 2025)

2. Future Continuous (Progressive)

Form: Future Continuous is formed by means of the future Simple of the verb *to be* and the *-ing* form of the main verb.

Affirmative

S + will be + V-ing

I We You They He/she/it	**will be**	ask**ing**

Interrogative (Questions)

Will + S + be + V-ing?

Will	I we you they he/she/it	**be**	ask**ing**?

Negative

S + will + not + be + V-ing
(won't)

I We You They He/she/it	**will not (won't)**	**be**	ask**ing**

Future Continuous (Progressive) is used for:

1. An action in progress at a certain time in the future
This time tomorrow he'**ll be driving** to Bucharest.

Indicators:
a) this time – tomorrow/next week
b) at 5 o'clock tomorrow/next week

2. A temporary action in the future
Our grandparents **will be staying** with us next month.

Indicators: similar to those used for future simple that refer to closer moments in the future (it is **not** used with 'next year', for example)

3. An action in progress in the future interrupted by another action:
Tom **will be studying** when his sister comes home.

4. Two actions in progress at the same time in the future (NB! Future Continuous is used only in the main clause)
Tom **will be studying** while his sister is writing her homework.

3. 'Going to' Future

Form: 'Going to' Future is made up of the verb *to be* in the Present Tense and *going to + V (short infinitive)*

Affirmative

am
S + is + going to +V
are

Interrogative (Questions)

Am
Is + S + going to + V?
Are

Negative

am
S + is + not + going to + V
are

'Going to' Future is used to express:
1. A future event for which there is some evidence
Look at the clouds. It**'s going to rain.**

2. A future intention or plan thought about before the moment of speaking
They're **going to** spend their summer vacation in Thailand. (*steps have already been taken to fulfil this intention, i.e., they have already bought plane tickets and have booked hotel rooms*)

3. In spoken English, especially in American English, 'going to' future is used instead of 'will' future.
I**'m going to finish** my assignment next week.

Indicators (for all three cases): similar to those for Future Simple.

4. Present Simple – for this use of Present Simple, see ***The Structure of the Atom.***

5. Present Continuous – for this use of Present Continuous, see ***The Structure of the Atom.***

6. 'Be to' Future
Form: 'Be to' Future is made up of the verb *to be* in the Present Tense, followed by *to + V (short infinitive)*

Affirmative

am
S + is + to + V
are

Interrogative (Questions)

Am
Is + S + to + V?
Are

Negative

am
S + is + not + to + V
are

'Be to' Future expresses

1. An arrangement
They **are to get married** soon.

2. An order pointing to a future moment
You **are to be back** home by midnight.

Indicators: similar to those used for future simple

7. 'Be about to' Future

Form: 'Be about to' Future is made up of the verb *to be* in the Present Tense, followed by *about to + V (short infinitive)*

Affirmative

am
S + is + about to +V
are

Interrogative (Questions)

Am
Is + S + about to + V?
Are

Negative

am
S + is + not + about to + V
are

'Be about to' expresses **an immediate future**

They **are about to leave.**

8. Future-in-the-Past

Form: Future-in-the-Past is made up of *would* and the short infinitive of the main verb.

Affirmative

S + would + V

I We You They He/she/it	**would**	ask

Interrogative (Questions)

Would + S + V?

Would	I we you they he/she/it	ask?

Negative

S + would + not + V
(wouldn't)

I We You They He/she/it	**would not (wouldn't)**	ask

Future-in-the-Past expresses a future action seen from a past perspective (*then*)

He knew that she **would visit** him in a few days.

Indicators:

a) the following day

b) the following – morning/ afternoon/ evening
– Sunday
– week/ month/ year

9. Future Perfect Simple

Form: Future Perfect Simple is made up of the verb *have* in the Future Simple, the verb and the Past Participle (3rd form) of the main verb.

Affirmative

S + will + have + V (3rd form)
(regular verbs: V+ed)

I We You They He/she/it	**will**	**have**	**sung** ask**ed**

Interrogative (Questions)

Will + S + have + V (3rd form)?
(regular verbs: V+ed)

Will	I we you they he/she/it	**have**	**sung**? ask**ed**?

Negative

S+ will + not + have + V (3rd form)
(won't) (regular verbs: V+ed)

I We You They He/she/it	**will not** **(won't)**	**have**	**sung** ask**ed**

Future Perfect Simple expresses

1. A future action that will be completed before a future moment
Tom **will have finished** the book by 2 p.m.

2. A future action that will be completed before another future action
Tom **will have finished** the book by the time Mary comes home.

Indicators:
by + units of time (e.g. by 5p.m.; by tomorrow; by next week, etc.)

10. Future Perfect Continuous

Form: Future Perfect Continuous is made up of the verb *have* in the Future Simple, the verb *be* in the Past Participle (3rd form) and the *–ing form* of the main verb.

Affirmative

S + will + have + been + V-ing

I We You They He/she/it	**will have**	**been**	sing**ing** ask**ing**

Interrogative (Questions)

Will + S + have + been + V-ing?

Will	I we you they he/she/it	**have**	**been**	sing**ing**? ask**ing**?

Negative

S+ will+ not + have + been + V (3rd form)
(won't)

I We You They He/she/it	**will not have (won't)**	**been**	sing**ing** ask**ing**

Future Perfect Continuous expresses

1. A future action in progress before and maybe during and after a future moment:

By 2 p.m. Tom **will have been reading** for 5 hours.

2. A future action in progress before and maybe during and after another future action:

By the time his sister comes home, Tom **will have been reading** for 5 hours.

Indicators:

for 5 minutes/ hours/ days / weeks/ months/ years

NB! Future Simple, Future Continuous, 'Going to' Future, Future-in-the-Past, Future Perfect Simple and Future Perfect Continuous **are not used** in

a) time clauses (clauses that are introduced by *when, while, before, after, as soon as, till until, by*.
I'**ll** tell my friend the news/ when I see him tomorrow.
(Future Simple) (Present Simple)

b) conditional ('if') clauses (clauses that are introduced by *if, unless (if not), in case, provided, on condition.*
I'**ll** tell my friend the news/ if I see him tomorrow.
(Future Simple) (Present Simple)

The table below shows which verb forms replace future tenses in time or conditional clauses:

Future tense form	**Replaced by**
Future Simple	Present Simple
Future Continuous	Present Continuous
will be going to	am/is/are going to
Future-in-the-Past	Past Simple
Future Perfect Simple	Present Perfect Simple
Future Perfect Continuous	Present Perfect Continuous

Put the verbs in brackets in the correct form of the verb expressing a future action (Present Simple/ Continuous, Future Simple/ Continuous/ Perfect), 'Going to' future. Where several forms are possible, explain the differences.

1. My friend (come)_____ soon. I (wait) _____ here until she (come) _____.
2. The taxi (arrive) _____ in a few minutes. As soon as it (arrive) _____, we (be) _____ able to leave to the airport.
3. I (watch) _____ a movie at 10. Before I (watch) _____ the movie, I (write) _____ an e-mail to my parents.
4. A: How long (stay, you) _____ in Iaşi?
   B: I (plan) _____ to be here until I (graduate) from the university. I (hope) _____to graduate a year from this June.

5. Tomorrow I (leave) _____ for home. When I (arrive) _____ at the station, my whole family (wait) _____ for me.
6. Alice and Robert got married on October 1st. Today is October 14th. Alice and Robert (be) _____ married for two weeks. By October 28th, they will (be) _____ married for four weeks.
7. Come to see me by 7:30 a.m. tomorrow morning. I (eat) _____ at 7 a.m., so I (have) _____ breakfast by then. We can go to school together.
8. Tomorrow the tourists (travel) _____ for two hours when they (reach) _____ Bucharest.
9. If we (not get) _____ there before seven this evening, they (eat) _____ everything.
10. Next week the house (stay) _____ empty till we (return) _____ .

 *Translate into English. Pay attention to time and conditional clauses:*

1. Nu mă voi opri până când nu voi rezolva această problemă.
2. O vei recunoaşte când o vei vedea.
3. Dacă voi studia pentru test, voi lua probabil o notă bună.
4. Dacă nu se va întâmpla ceva neprevăzut, vom merge în excursie la munte.
5. Până când te vei întoarce acasă, voi fi terminat de scris referatul la *Dispozitive electronice*.

 *Supply the correct form of the verbs:*

1. As soon as I (get) _____ up every morning, I (brush) _____ my teeth.
2. As soon as I (get) _____ up yesterday morning, I (brush) _____ my teeth.
3. As soon as I (get) _____ up tomorrow morning, I (brush) _____ my teeth.
4. Dan (go) _____ to London quite often. When he (go) _____ there, he usually (see) _____ one of Shakespeare's plays.

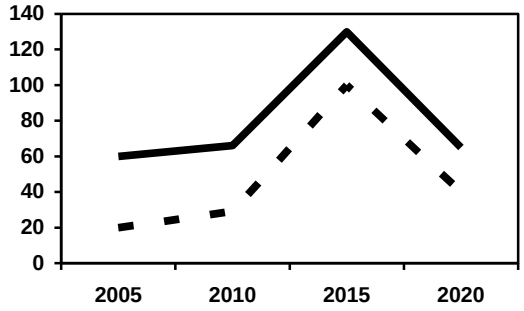
5. When he (go) _____ to London next month, Dan (stay) _____ at a five-star hotel.
6. When he (go) _____ to London two months ago, Tom (catch) _____ a cold, so he (stay) _____ in bed for a couple of days.

7 DESCRIBING A GRAPH

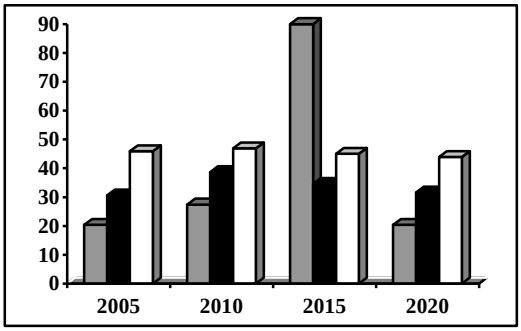
Technical writing is characterized by a great number of data presented in visual form:

Name these types of graphs and charts:

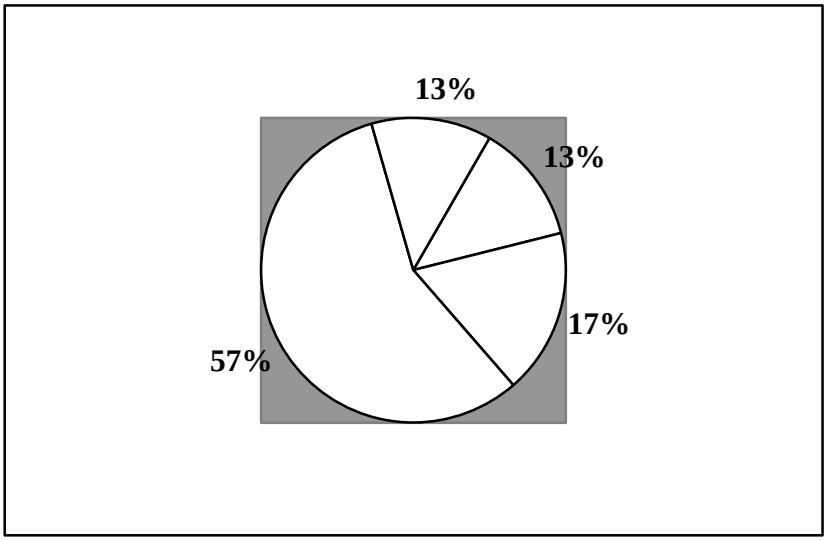
A. _____



B. _____



C. _____



D. _____

Year	Number	Percentage	Characteristics

Look at the graphs, charts and table above and complete the text that follows with the words in the box:

contrast	time	changes	down	similarities
points	elements	axes	displayed	symbols
periods	variations	percentages	compare	unlike
columns	pie	parts	line	vertical

Line graphs are used to show how something (1)_____ over time. They have a horizontal axis (called the x-axis) and a (2) _____ one (y-axis). Usually the horizontal axis displays (3) _____ periods, while the vertical one has numbers or (4) _____. They are used to show movements up and (5) _____ of one and the same element over time, as well as to compare

and (6) _____ various elements at one and the same moment or at different times. By means of (7) _____ graphs, you can see what happens at each and every given moment with each element.

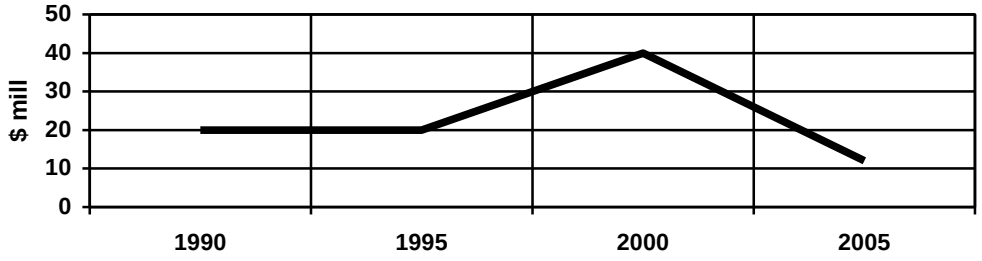
Bar graphs, just like line graphs have two (8) _____: a vertical one and a horizontal one. They show what happens with the (9) _____ investigated at certain given points in time. Therefore, (10) _____ line graphs, they give a discontinuous picture of the changes in the elements presented (we do not know exactly what happens in between the given (11) _____ of time). However, they are useful when you want to (12) _____ and contrast the values or percentages of one and the same element at different (13) _____ in time or if you want to show (14) _____ and differences between various elements.

Pie charts are rather static in that they show (15) _____ of a whole (slices) at a set point in time. They do not show (16) _____ over time. If you want to see what happens to the elements displayed at another point in time, you need to draw another (17) _____ chart.

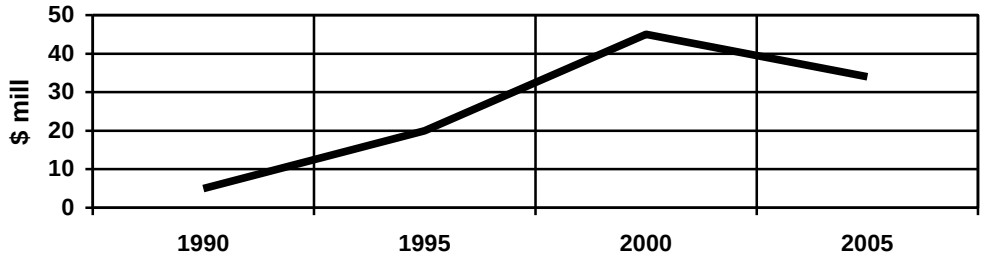
Tables can contain numbers, percentages, words, (18) _____, or a combination of these, which makes them more versatile from this point of view. The elements (19) _____ are presented in (20) _____ and boxes.

Match each sentence to a graph.

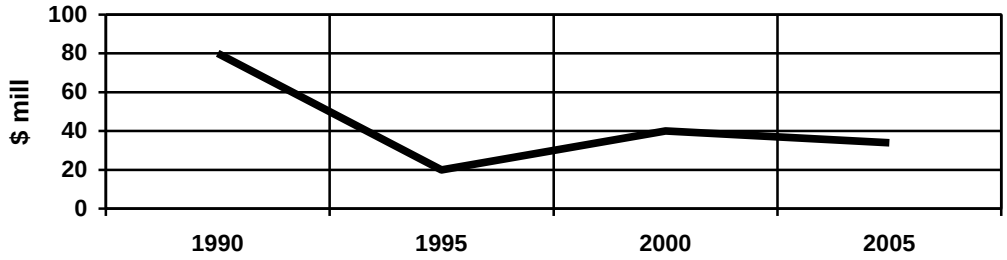
a)



b)



c)



1. Sales started at 5 million in 1990.

…...

2. In 2000 sales reached a peak of 40 million.

…..

3. Between 2000 and 2005 sales dropped from 40 million to 34 million.

…..

4. Between 1990 and 1995 sales stood at 20 million.

…..

5. Sales decreased to 20 million, then doubled their value.

…..

6. In five years, sales fell dramatically from 40 million to 12 million.

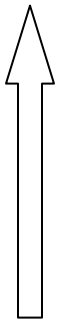
…..

Place the verbs you can find in the previous task under the proper heading. Work with a partner to add other verbs to each list.

Movement up	Movement down	No movement

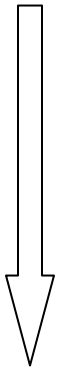
Supply the correct form of the verb(Past Tense) and of the corresponding noun. The first one has been done for you:

Movement up

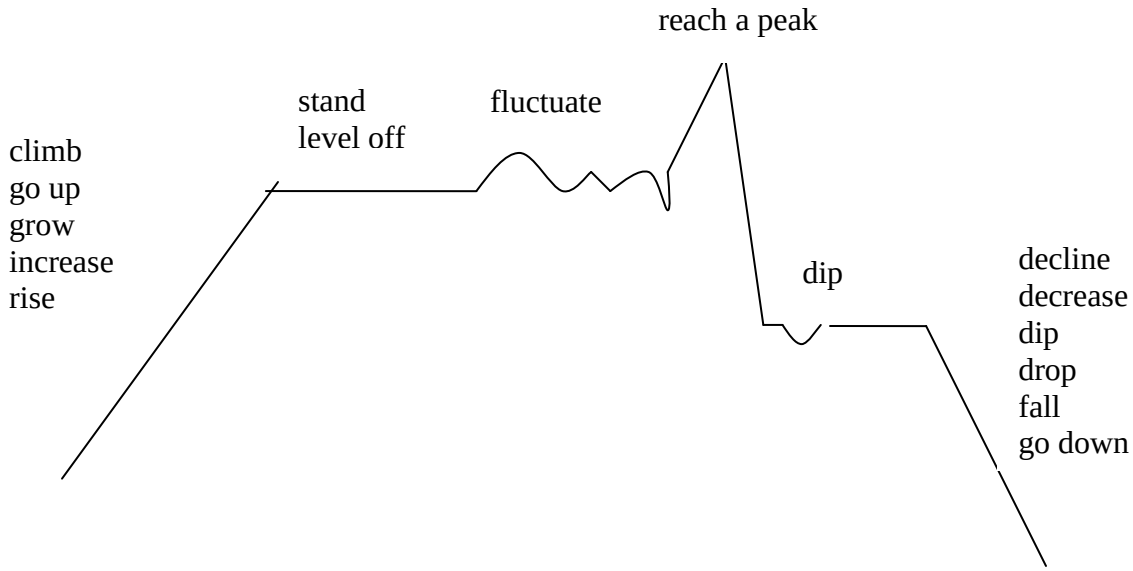


V (base form)	V (Past Tense)	Noun
climb	climbed	
go up		
grow		
increase		
rise		

Movement down



V (base form)	V (Past Tense)	Noun
decline	declined	decline
decrease		
dip		
drop		
fall		



In five years sales fell *dramatically* from 40 million to 12 million.

Intensifiers and Softeners
In order to show the rate of change, we use various adjectives and adverbs that play the part of *intensifiers* or *softeners.*

 *In the following series, write the adverb corresponding to each adjective:*

Rapid, sudden change

Adjective	Adverb
dramatic	
fast	
quick	
rapid	
sharp	
sudden	

Gradual change

Adjective	Adverb
constant	

gradual	
steady	

Slow change

Adjective	Adverb
slight	
slow	

Big change (movement up or down)

Adjective	Adverb
considerable	
dramatic	
—	a great deal
sharp	
steep	
substantial	

Little change (movement up or down)

Adjective	Adverb
—	a barely noticeable
—	a little
slight	

Language Patterns

1. In five years, sales of floppy discs fell dramatically from 40 million to 12 million.

noun + verb + adverb

2. In five years there was a dramatic fall in the sales of floppy discs from 40 million to 12 million.

There + be + adjective + noun + in + noun

Rewrite these sentences, changing one pattern into the other one:

1. The number of undergraduate students has grown considerably.
   There _____

2. There was a brief dip in the sales of electronics at the start of the year.
   The sales _____

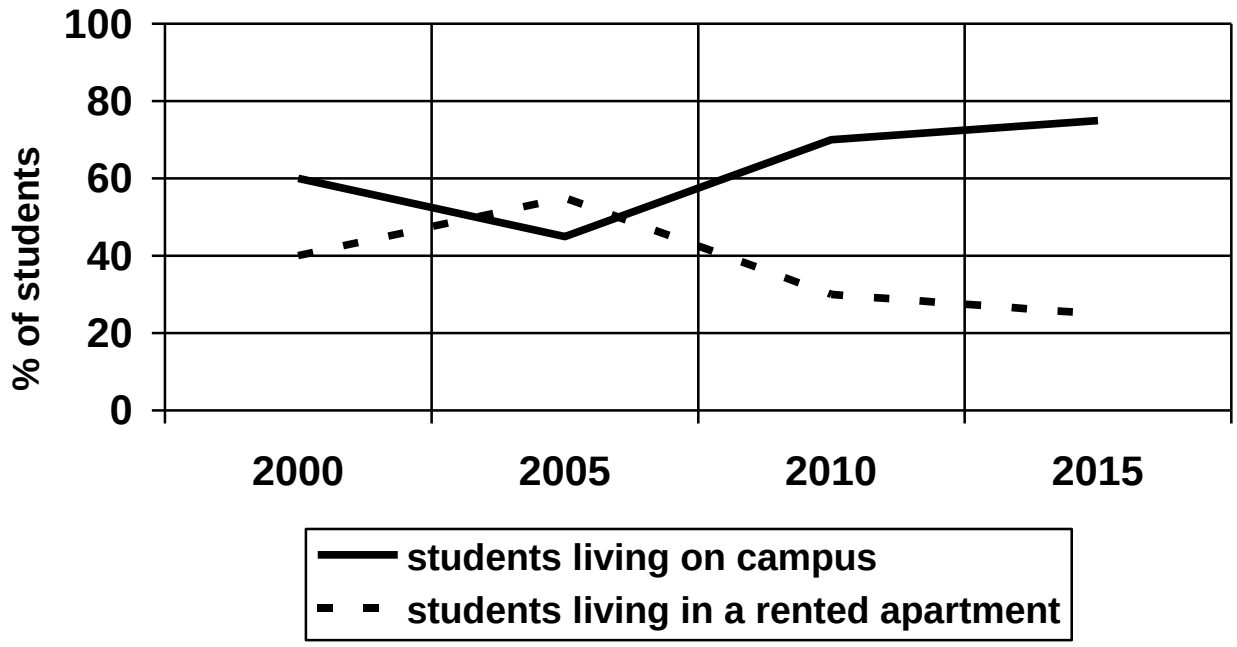
3. There will be a substantial increase in the number of electronic gadgets in the years to come.
   The number _____

4. The consumption of ecological foods has risen steadily.
   There _____

5. The performance of electronic devices has improved constantly.
   There _____

Study this graph which compares the percentage of students who lived in a rented apartment and on the university campus in a period of 20 years. Write two sentences for each period, using each pattern in turn. In each sentence use an intensifier or softener. Try to use a variety of verbs, nouns, adjectives and adverbs. Where needed also give percentages as evidence.

The first one has been done for you.



1. Students living in a rented apartment 2000-2005
  a) Between 2000 and 2005, the percentage of students living in a rented apartment rose sharply from 40 percent to 55 percent.
  b) Between 2000 and 2005 there was a sharp rise in the percentage of students living in a rented apartment, from 40 percent to 55 percent.

2. Students living in a rented apartment 2005-2010
a)_____
_____

b)_____
_____

3. Students living in a rented apartment 2010-2015
a)_____
_____

b)_____
_____

4. Students living on campus 2000-2005
a)_____

_____

b)_____
_____

5. Students living on campus 2005-2010
a)_____
_____

b)_____
_____

6. Students living on campus 2010-2015
a)_____
_____

b)_____
_____

Writing about each element of the graph in turn is not enough. We also need to compare and contrast the changes in different elements. In order to do this, we need to remember the language of comparison and contrast

Comparison	**Contrast**
as…as	but
both…and	different from
similarly	in contrast
similar to	unlike
like	while
alike	whereas
the same	however
the same as	although
likewise	even though
just as	on the other hand

Study once again the line graph above in order to compare and contrast the percentage of students who lived in a rented apartment and on the university campus in a period of 20 years. Write one sentence for each period of time, choosing out of the transitions above. In each sentence use an intensifier or softener. Try to use a variety of verbs, nouns, adjectives and adverbs. Where needed also give percentages as evidence.

1. 2000-2005

Between 2000 and 2005, the percentage of students living in a rented apartment rose sharply from 40 percent to 55 percent, while the rate of students living on campus dropped constantly from 60 to 45 percent.

2. 2005-2010

_____

_____

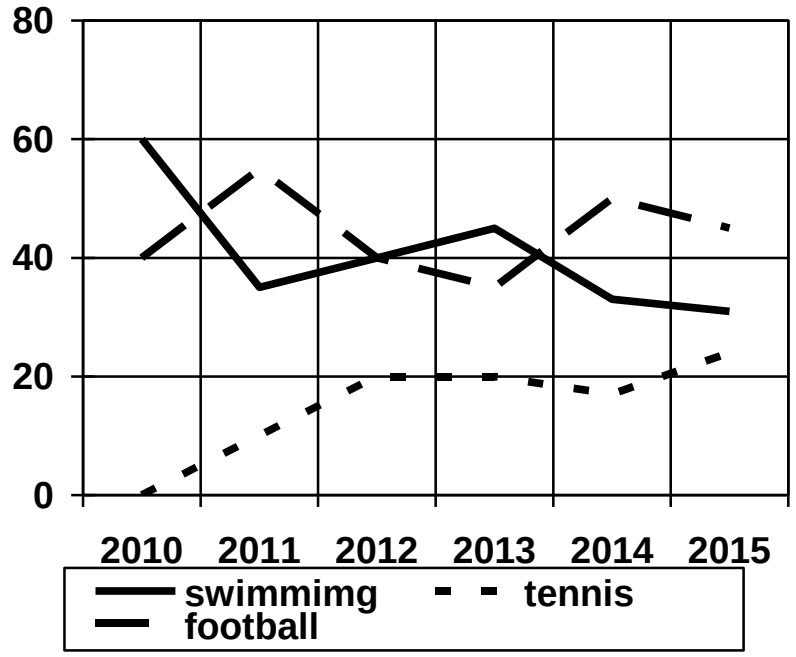
3. 2010-2015

_____

_____

The graph below illustrates the rates of student participation in different sports activities in a student club between 2010 (when the club was set up) and 2015. Look at the graph and answer the questions below:

1. What does the horizontal axis represent?
2. What information does the vertical line show?
3. What does each of the three lines represent?
4. What tense should be used?



Read this sample description of the graph and choose the right words from among each pair written in italic sand underlined

The graph shows the popularity of three different sports activities during a five-year period.

In 2010, 60% of the students chose swimming, making it the most popular activity. However, in 2011, the percentage (1) *dipped/ dropped* steadily to 35%; this was followed by a gradual (2) *rise/ fall*, to 45%, during which this figure (3) *overtook/ levelled off* the rate of those who played football. In 2014-2015, this percentage (4) *fluctuated/ declined* to 32%.

Only 40% of student members chose football in 2010. This rate (5) *stood at/ reached a peak* of 55% before (6) *going down/ dipping* in 2013. In 2014 this figure (7) *grew/ decreased* dramatically, and eventually it (8) *leveledl off/ declined* to 45%.

Finally, participation in tennis (9) *stood at/ grew* constantly up to 20% in 2012, then (10) *levelled off/ increased* for a while, eventually (11) *levelling off/ reaching a peak* of around 24%.

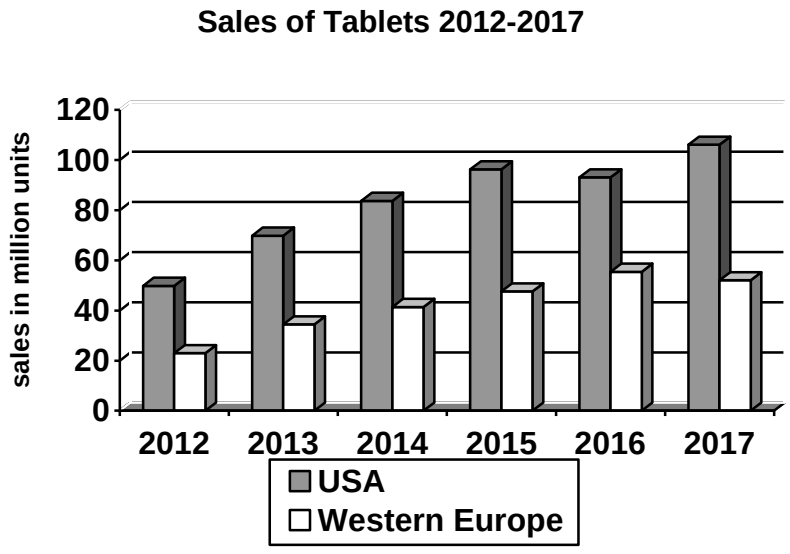
Overall, participation in swimming (12) *dropped/ grew* considerably; football (13) *grew/ declined* in popularity, while the tennis participation rate (14) *fell/ rose significantly* over the period.

Look at the text above and answer the following questions:

1. How many paragraphs are there?
2. What information does each paragraph give?

Paragraph 1: Introduction _____
Paragraph 2: _____
Paragraph 3: _____
Paragraph 4: _____
Paragraph 5: Conclusion _____

This graph shows the sales of tablets in the USA and in Western Europe between 2012-2017. Use the steps below as a guide to describe the information presented in the graph in about 150 words.



Steps in describing a graph/diagram

A. Before writing:

1. Look at the horizontal and vertical axes and make sure you know what each of them represents;
2. Look at the lines/ bars of the graph and make sure you know what each of them represents (look at the legend/ key);
3. Make sure you know what tense(s) you need to use – if the horizontal line represents a period of time, it will tell you whether the tense should be past, present perfect, present or future);
4. Mark the main changes illustrated in the graph. If the graph presents changes over a period of time, you can divide this period into 2-3 relevant chunks or slices, i.e., periods of time in which relevant changes occur.

B. While writing:

1. In the first paragraph (introduction), specify what the graph/ chart represents. Make sure you **do not** copy the information from the instructions! Always use **your own words** to formulate the introductory sentence.

Useful patterns:

This { graph / chart / diagram / table } { shows / presents / illustrates }

2. In the body paragraphs present data/ percentages in an objective manner, comparing and contrasting elements. Use both language patterns and a variety of verbs, nouns, adjectives and adverbs and relevant figures/ percentages to support your statements.

3. In the last paragraph (conclusion) write one or two sentences in which you summarize the changes occurring in all the elements presented over the whole period of time.

4. Use a formal, objective style.

5. Use transitions to link your sentences and paragraphs.

C. *Swap your text with a partner. Use the chcklist below to evaluate your partner's text:*

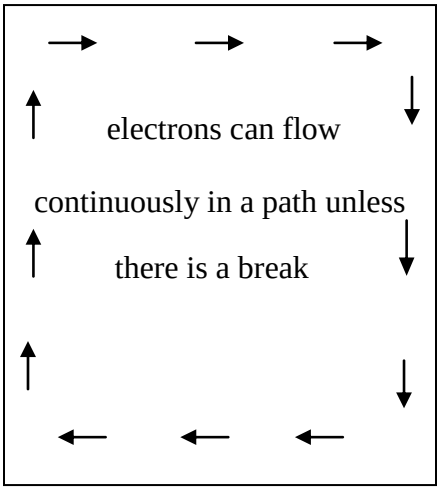
Checklist for graph/ chart/ diagram description

		Yes	**No**
1.	Does the text include an introduction?		
2.	Does the introduction specify what the graph/ chart/ diagram/ table represents?		
3.	Do the body paragraphs present information in an objective manner?		
4.	Are the elements in the diagram compared and contrasted?		
5.	Are both language patterns used?		
6.	Has the author used a variety of verbs, nouns and intensifiers/ softeners to express change?		
7.	Are relevant figures/ percentages given?		
8.	Does the last paragraph (conclusion) summarize the changes in all elements over the whole period?		
9.	Is the text correct from the point of view of grammar, spelling and punctuation?		

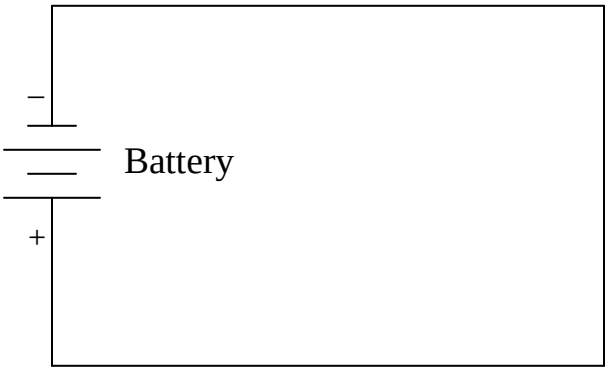
D. *Write the final version of your text.*

8 SERIES AND PARALLEL CIRCUITS

A *circuit* is an unbroken loop of conductive material that allows electrons to flow through continuously without beginning or end.



We can provide such a path for the current by connecting a piece of wire from one end of the battery to the other. Forming a circuit with a loop of wire, we will initiate a continuous flow of electrons in a clockwise direction:

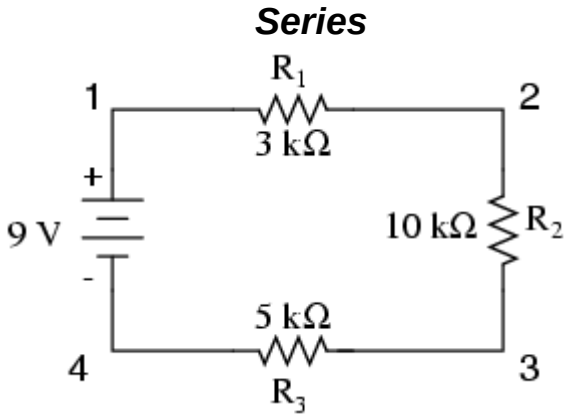


So long as the battery continues to produce voltage and the continuity of the electrical path isn't broken, electrons will continue to flow in the circuit. This continuous, uniform flow of electrons through the circuit is called a *current*.

There are two basic ways in which to connect circuit components: series and parallel.

Series circuit

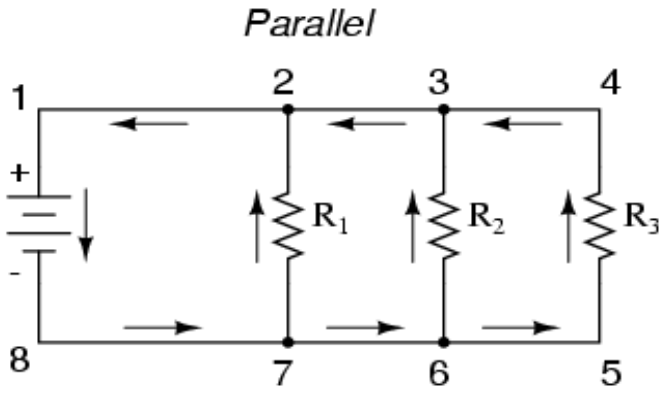
Study the series diagram below and complete the sentences that follow. The first one has been done for you.



The series circuit above is made up of *a three-kilohm fixed resistor* (R_1), *a*_____ (R_2) and *a* _____ (R_3), which are connected in a long chain (in series) from one terminal of *a* _____ to the other. The main characteristic is that there is only one path for the current to flow. The current will flow in a counter-clockwise direction: from point 4 to point 3 to point 2 to point 1 and back around to 4. Since there is only one path for the current, the amount of current will be the same in the whole circuit.

The basic idea of a *series* connection is that components are connected end-to-end in a line to form a single path for electrons to flow.

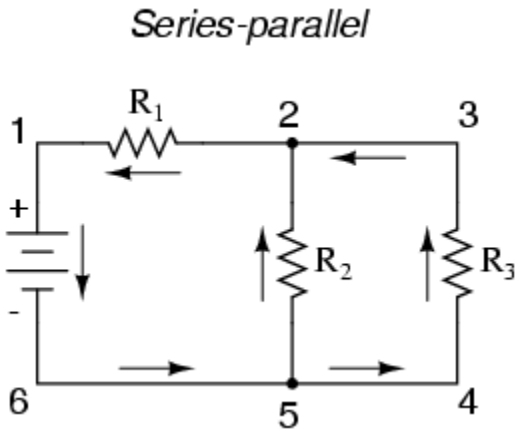
Parallel circuit



This circuit is also made up of three resistors, but this time they form more than one continuous path for electrons to flow. There's one path from 8 to 7 to 2 to 1 and back to 8 again. There's another from 8 to 7 to 6 to 3 to 2 to 1 and back to 8 again. And then there's a third path from 8 to 7 to 6 to 5 to 4 to 3 to 2 to 1 and back to 8 again. Each individual path (through R_1, R_2, and R_3) is called a *branch*. The defining characteristic of a parallel circuit is that all components are connected between the same set of electrically common points. Looking at the schematic diagram, we see that points 1, 2, 3, and 4 are all electrically common. So are points 8, 7, 6, and 5. All resistors, as well as the battery are connected between these two sets of points.
The voltage is equal across all components in the circuit. Therefore, in the above circuit, the voltage across R_1 is equal to the voltage across R_2, which is equal to the voltage across R_3, which is equal to the voltage across the battery.

The basic idea of a *parallel* connection is that all components are connected across each other's leads. In a purely parallel circuit, there are never more than two sets of electrically common points, no matter how many components are connected. There are many paths for electrons to flow, but **only one voltage** across all components:

Series parallel circuit



In a series-parallel circuit, there exist two loops for electrons to flow through: one from 6 to 5 to 2 to 1 and back to 6 again, and another from 6 to 5 to 4 to 3 to 2 to 1 and back to 6 again. Both current paths go through R_1 (from point 2 to point 1). In this configuration, R_2 and R_3 are in parallel with each other, while R_1 is in series with the parallel combination of R_2 and R_3.

This circuit is neither simple series nor simple parallel. Rather, it contains elements of both. There exists more than one path for current to travel (not series), yet there are more than two sets of electrically common points in the circuit (not parallel).

Read these statements and fill in the blanks with one of the words or phrases below. You may use the same word more than once.
Then for each pair of statements decide which refers to series circuits (SC) and which refers to parallel circuits (PC).

voltage
resistances
resistance
branch
currents
current

1.a._____ add to equal total _____ SC/PC
1.b. All components share the same (equal) _____SC/PC

2.a. _____drops add to equal total _____ SC/PC
2.b. All components share the same (equal)_____ SC/PC

3.a. _____ add to equal total _____SC/PC
3.b. _____ diminish to equal total _____ SC/PC

Component values

Let us consider that the parallel circuit components above have the following values.

B = 9V
R_1 =10 kΩ
R_2 = 2 kΩ
R_3 = 1 kΩ
Express these values and the type of each component in words. The first one has been done for you.

B = a nine-volt battery
R_1 = ...
R_2 = ...
R_3 = ...

As can be seen from the previous activities, the formula that can be used to describe component values is the following:

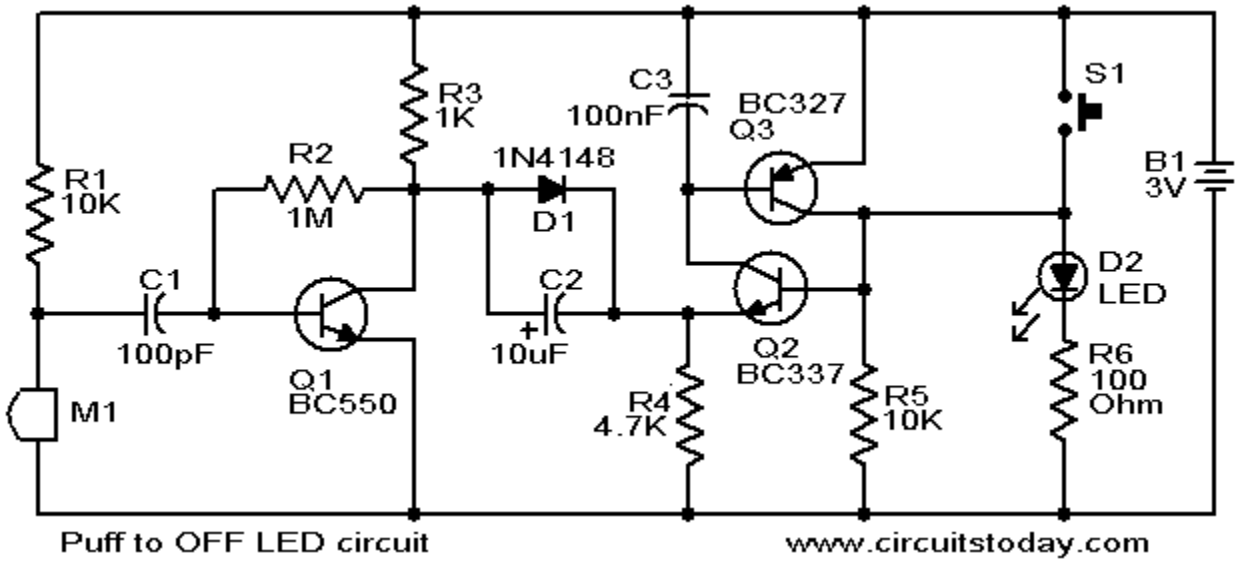
a + value + measurement unit (in the singular) + type (fixed, variable, etc.) + component

 Some symbols used in electronics

Prefix	Symbol	Multiple	Example
tera	T	10^{12}	Tb terabits
giga	G	10^{9}	GHz gigahertz
mega	M	10^{6}	MW megawatts
kilo	k	10^{3}	kΩ kilohms
deci	d	10^{-1}	db decibels
milli	m	10^{-3}	mV millivolts
micro	μ	10^{-6}	μH microhenries
nano	n	10^{-9}	nF nanofarads
pico	p	10^{-12}	pF picofarads (puffs)

 *Study the diagram below and describe the values of the components according to the formula presented above. Use the table above and* ***Appendix 1.***

1. R_1
2. M_1
3. C_1
4. R_2
5. Q_1
6. R_3
7. D_1
8. C_2
9. C_3
10. R_4
11. Q_2
12. Q_3
13. R_5
14. S_1
15. D_2
16. R_6
17. B_1



Describing components

In order to describe a component, we need to answer several questions:
1. What is it called?
2. What value does it have?
3. What does it do?

If we speak about R_1, the answers to these questions might be:

1. **It is called/ It is known as** a fixed resistor.
2. It is **a ten-kilohm** fixed resistor.
3. It **adds resistance** to a circuit.

Below are some circuit symbols.
A. Label these symbols.

1._____

2. _____

3. _____

4. _____

5. _____

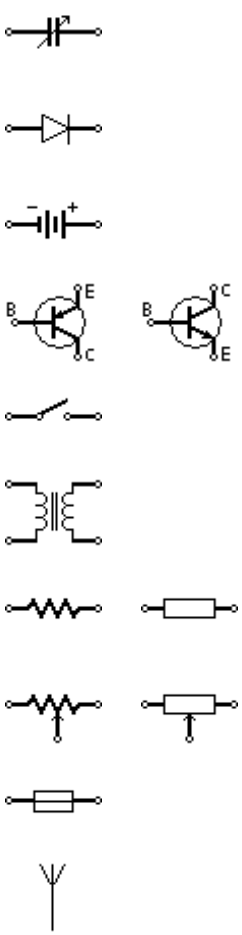
6. _____

7. _____

8. _____

9. _____

10_____



B. Now match each component above (1-10) to its function (a-j):

a. it rectifies alternating current
b. it adds resistance to a circuit
c. it steps AC voltages up and down
d. it receives RF signals
e. it varies capacitance in a circuit
f. it switches or amplifies an electronic signal
g. it protects a circuit
h. it breaks a circuit
i. it varies the current in a circuit
j. it provides electrical energy out of another form of energy (usually chemical)

Word Study

Acronyms

Acronyms are new words made up of the first letter of several other words, e.g. NATO (North Atlantic Treaty Organization)

Since scientific style is characterized by conciseness, and acronyms contribute to the conciseness of a language, it follows that the language of science and technology includes many such acronyms. From among the different fields of study, those of electronics and computers probably include the greatest number of acronyms.

Work with a partner. Find out the meaning of these acronyms:

1. IC
2. AF
3. CAD
4. RAM
5. ROM
6. VR
7. AM
8. FM
9. LED
10 LDR
11 radar
12 laser

Word families

Words that have the same root are part of the same word family.

e.g. *attenuate attenuator attenuation*

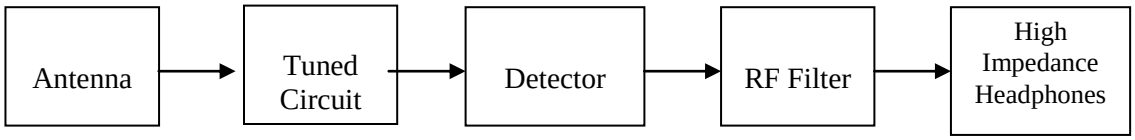
Complete the following table with the missing words:

Verb	**Noun (component)**	**Noun (Property)**
	oscillator	oscillation
amplify		amplification
detect	detector	
conduct	conductor	
transmit		transmission
reflect	reflector	
modulate		modulation
resist	resistor	
	inductor	inductance induction
	—	communication

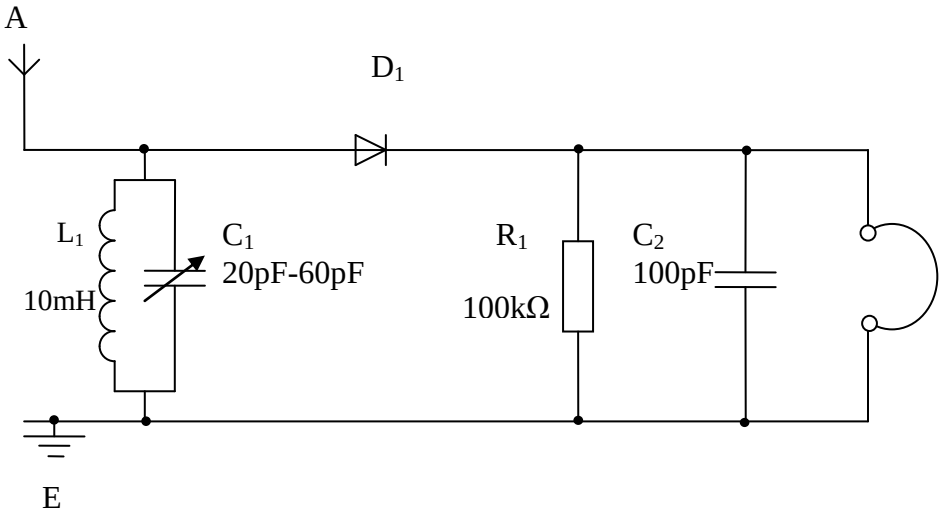
Describing Electronic Diagrams

Electronic diagrams are of two types:
1. *block diagrams* and
2. *circuit diagrams*.

1. *Block diagrams* present the basic units or building blocks connected together. They show the function of the units and the path of the signals between them. Below you can see the block diagram of a simple radio receiver.



2. *Circuit diagrams* present the components which are inside these blocks together with their values. The figure below shows the circuit diagram of a simple radio receiver:



Read this model description of a radio receiver circuit diagram.

The diagram illustrates a simple radio receiver circuit.

The first element of a radio receiver is the aerial (antenna), which is connected to the top end of the tuner and to the positive terminal of the detector. All radio receivers require an antenna as an input, in order to convert the radio waves received into alternating currents. While the transmitting aerial transmits only one frequency from a certain radio station, the radio receiver aerial picks up different radio broadcasts at different carrier frequencies within range. As a result, the first thing the receiver has to do is to select one broadcast from among the many received and extract its audio information.

The tuning circuit consists of a 10 mH inductor (L_1), which is designed to pick up frequencies that are situated in the range 300 kHz to 3MHz, connected in parallel to a 20 to 60 pF variable capacitor (C_1) that can alter the frequency range (i.e. the frequency band it passes). The tuning circuit pass band is centred on the desired carrier frequency; the very small currents from this particular station are converted into very small voltages. The bottom end of the tuner is connected to earth via the zero voltage supply rail.

The next block is the detector, which extracts (detects) the audio signal. What it does is to rectify the AM carrier with a diode circuit, so that the average value of the AM signal is no longer zero. The received signals are very small, so special diodes with a very low turn-on voltage are used for this purpose.

The half wave rectified pulses are then smoothed with a low pass filter, so that the remaining carrier frequency is lost and the audio signal is obtained as output.

The main component of this block is a transducer that converts the audio signal into small displacements of a diaphragm, so that the original audio information is recreated. The minor fluctuations in the audio signal tend to be ignored by most headphones.

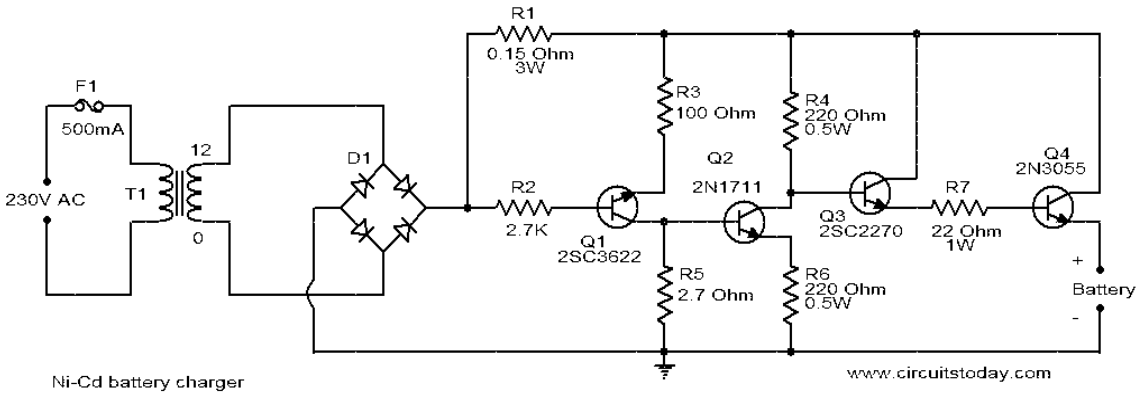
The paragraphs above describe an electronic diagram. There are two main ways of doing this:

1. writing a complete text (see above) in which you name the components, specify their values, function and the way in which they are connected;

2. a. making a list with all the components, describing their values
e.g. A_1 = aerial
E = earth
L_1 = a 10 mH inductor
C_1 = a twenty-to-sixty picofarad (puff) variable capacitor
a.s.o.

b. writing a short text in which you specify the function of the components and show how they are connected
e.g. L_1 is designed to pick up frequencies that are situated in the range 300 kHz to 3MHz. It is connected in parallel to C_1, which can alter the frequency range…..

1. Form pairs with a partner. One of you is student A, the other is student B. Students A will describe the diagram below in the first manner, while students B will describe it according to the second manner.



2. Each student A will swap the description with his/ her partner, student B. Evaluate your partner's description with the help of the checklist below:

Checklist for Electronic Diagram Description

		Yes	No
1.	Does the text include an introduction?		
2.	Does the introduction specify what the electronic diagram represents?		
3.	Are all the components and their values specified?		
4.	Is the function of each element specified?		
5.	Are the connections between components specified?		
6.	Is information presented in an objective style?		
7.	Is the proper manner of description used?		
8.	Is the description correct from the point of view of the information presented?		
9.	Is the text correct from the point of view of grammar, spelling and punctuation?		

Passive Voice

Look again at the description of a simple radio receiver circuit diagram presented above. Make a list of the underlined verbs (the first one appears below). What do all these verbs have in common?

1. is connected

In English there are two main voices: active voice and passive voice.
The active voice shows that the subject performs the action.
The passive voice, on the other hand, shows that the subject suffers the action denoted by the verb.
The passive voice is used a lot in technical and scientific English because

- It highlights the action, not the subject
- It is impersonal, objective

As in Romanian, the Passive Voice in English is formed by means of the verb *"a fi"* ("to be") and the Past Participle of the main verb:

Be + V (3rd form)

Active Voice	Passive Voice
The scientist **made** an experiment.	An experiment **was made** by the scientist.
The scientist **has made** an experiment	An experiment **has been made** by the scientist.
The scientist **makes** an experiment.	An experiment **is made** by the scientist.
The scientist **will make** an experiment.	An experiment **will be made** by the scientist.

Let us remember the forms of verbs in the Active and Passive Voice:

Active Voice

Aspect / Tense	Simple	Continuous	Perfect	Perfect Continuous
Present	S + V / V(e)s	S + am / is / are + V-ing	S + have /has + V(3rd form)	S + have/ has + been + V-ing
Past	S + V (2nd form)	S+ was/were + V-ing	S + had + V (3rd form)	S + had + been + V-ing
Future	S + will + V	S+ will + be + V-ing	S + will + have + V(3rd form)	S + will + have + + been + V-ing

Aspect / Tense	Simple	Continuous	Perfect	Perfect Continuous
Present	I ask he ask**s**	I **am** you **are** ask**ing** he **is**	I **have** ask**ed** he **has**	I **have** **been** ask**ing** he **has**
Past	I ask**ed**	I **was** ask**ing** you **were**	I **had** ask**ed**	I **had been** ask**ing**
Future	I **will** ask	I **will be** ask**ing**	I **will have** ask**ed**	I **will have been** ask**ing**

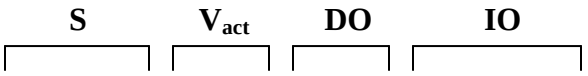
Passive Voice

Aspect / Tense	Simple	Continuous	Perfect
Present	am S + is + V (3rd form) are	am S+ is + being +V(3rd form) are	S + have + been +V(3rd form) has
Past	S + was + V(3rd form) were	S+ was + being +V(3rd form) were	S + had + been + V (3rd form)
Future	S + will + be + V(3rd form)		S + will + have + been + + V (3rd form)

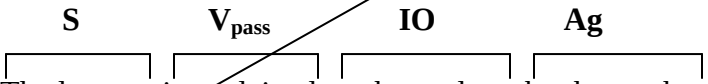
Aspect / Tense	Simple	Continuous	Perfect
Present	I **am** he **is** ask**ed** you **are**	I **am** he **is** **being** ask**ed** you **are**	I **have** **been** ask**ed** he **has**
Past	I **was** **asked** you **were**	I **was** **being** ask**ed** you **were**	I **had been** ask**ed**
Future	I **will be** ask**ed**		I **will have been** ask**ed**

Changing from Active to Passive

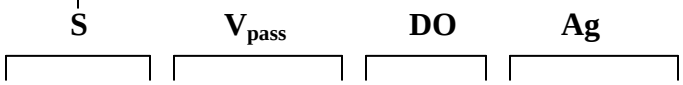
Let us take a simple sentence in the active voice and change it to the passive:



Active Voice: The teacher explains the lesson to the students.



Passive Voice 1: The lesson is explained to the students by the teacher.



Passive Voice 2: The students are explained the lesson by the teacher.

where
S = subject
V_{act} = verb in the active voice
V_{pass} = verb in the passive voice
DO = direct object
IO = indirect object
Ag = agent (*by phrase*)

As it can be seen from the example above, in English, unlike Romanian, two passive transformations are possible:

- one in which the direct object becomes subject;
- one in which the indirect object becomes subject

Active Voice		Passive Voice
Subject	⟷	Agent (by phrase)
Verb (active voice)	⟷	Verb (passive voice)
Direct object or Indirect object	⟷	Subject

By phrase
The agent (*by phrase*) is only rarely mentioned in the passive voice (when it is very important) e.g. This poem was written by Eminescu.

It is omitted when:

1. The real subject is not known
A doctor has been sent for.

2. The real subject is not important or the speaker does not want to mention it
This issue will be fully dealt with in the rest of the paper.

3. The real subject can be inferred from the context
They elected him President.

4. When the active subject is expressed by:
a) a generic pronoun: *you, they, one*
b) an indefinite pronoun: *all, everybody, everyone, somebody, someone, anybody, anyone, nobody, no one*
c) *people*

Active: Somebody has already answered this question.
Passive: This question has already been answered.

Complete these sentences with the correct form of the verb in the passive voice:

1. Mind the floor. It ……..just ……. (wash) and is slippery.
2. Tom told us that he ……. (educate) in England.
3. Dinner ……..(be) ready in a few minutes; the chicken ……. (fry) now.
4. Tomorrow's party will be very classy; evening dresses ……. (wear).
5. She remembered I ……. (introduce) to her some years before.
6. How many books ……. (write) by the famous scientist we're going to meet tonight?

7. You ……. (not allow) to go out and play until your homework ……. (finish).
8. This experimental study……. (carry out) until relevant results ……. (obtain).
9. This book about electronic devices must……. (read) by all the students.
10. I ……. (tell) that this museum …….. already ……. (visit) by billions of tourists.

Change these sentences from active to passive in two ways where possible. Omit the agent ('by phrase') where necessary.

1. The guide showed the exhibition to the tourists.
2. My parents promised me a beautiful birthday present
3. Somebody has just given me this interesting book.
4. They recommended her another dentist.
5. Somebody will read the children another story.

Change these sentences into the passive:

1. They say he is a great scientist.
2. He doesn't like people to laugh at him.
3. What have people done about this?
4. They have put forward his proposal.
5. One expects you to interest yourself in the scholarship they have offered you.
6. It surprises me to hear somebody has deceived you so much.
7. Nobody has ever told me that they put off the meeting.
8. They ought to tell us how much they have taken care of us.
9. Somebody will meet the tourists at the airport.
10. Has anybody ever taught you this?

9 LABORATORY REPORTS

As engineering students you need to write laboratory reports. Carrying out experimental or laboratory work and writing reports on it are part of the standard assessment requirements for various specialized subjects. They are specific for academic settings. The 'writers' are in this case students and the readers are their teachers. This unit will show you the basics of technical laboratory report writing in English.

Lab reports are part of technical writing. As such, they need to be

- clear
- concise
- precise
- objective
- accurate from the point of view of the information presented and of the language.

Layout

Below you are presented the main sections of a lab report. Match each section with its function:

Section	Function
1. Title	a) states in one sentence the reason for conducting the experiment
2. Abstract (not always required)	b) includes tables, graphs, equations with related information
3. Aim (objective)	c) - presents experimental results with relevant calculations - usually includes tables or graphs - comments on results obtained - explains unexpected results - usually uses chronological order for results and cause-to-effect order for discussion

4. Introduction	d) - summarizes main results and findings - states whether aims have been achieved
5. Materials and Method/ Methodology/ Procedures	e) indicates - what the report is about - what was measured in the experiment - how the measurement was carried out
6. Results and Discussion	f) - describes and/ or lists materials or instruments used - is usually accompanied by a diagram - describes the steps followed in carrying out the experiment - uses chronological order
7. Conclusions	g) summarizes - the aim - the method used - the main result(s)
8. References	h) list of sources referred to
9. Appendices (where necessary)	i) - tells the purpose of the lab - presents theoretical background

There can be certain variations in the structure of a laboratory report:
- the 'Abstract' and the 'Appendices' are not always necessary;
- the 'Aim' can be included in the 'Introduction'.

Read the model report below and answer these questions:

1) Which are the headings in the report below? Do they stand out in any way?
2) Compare the sections of this report with those in the standard layout. Are there any differences?
3) Look at the verbs in the various sections of the report presented above and complete the table below:

4) A lab report should be written in a formal style. How is formality achieved in this report? Give examples of

Section	Verb Tense
Introduction	
Materials and Method	
Discussion of Results	
Conclusion	

Verification of the Zener Diode Volt-Ampere Breakdown Characteristic

Aim: To verify that in the reverse breakdown region, a Zener diode maintains a constant voltage, even though the current may change drastically.

Introduction

The Zener diode is used for voltage regulation and is important in power-supply applications. The Zener diode is a silicon pn junction device which is optimised for operation in the reverse breakdown region. When a diode reaches reverse breakdown, its voltage remains almost constant, even though the current may change drastically.

As the reverse voltage (V_R) is increased, the reverse current (I_R) remains extremely small up to the 'knee' of the curve. At this point, the breakdown effect begins; the Zener resistance (r_z) begins to decrease as the current (I_Z) increases rapidly. From the bottom of the knee, the breakdown voltage (Vz) remains essentially constant. This regulating ability is the key feature of the Zener diode. It maintains an essentially constant voltage across its terminals over a specific range of reverse current values [1], [2].

This report describes an experiment to verify the Zener diode breakdown characteristic for reverse current.

Materials and Method

The electronic circuit used is shown in Fig.1. It includes the following:

- a cell (E)
- a Zener diode D210
- a resistor (R) of 680 Ω
- a voltmeter

- a milliammeter

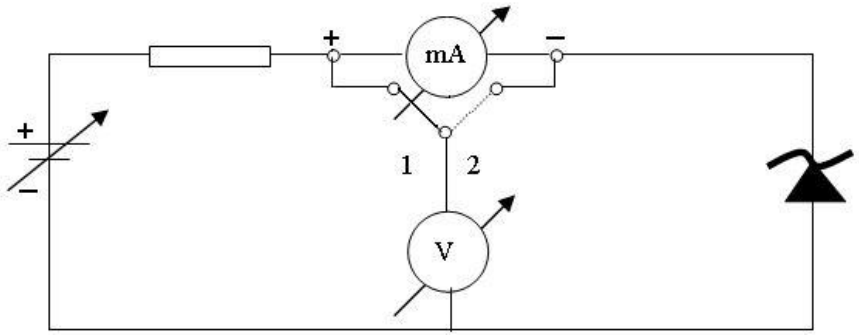


Fig.1 Electronic circuit with Zener diode

First the circuit was connected as in Fig. 1. An external reverse-biased voltage was applied to the Zener diode. Then reverse voltage was increased and its values were measured and noted down in Table 1, together with the corresponding values of the current. When the diode reached its reverse breakdown, the volt-ampere characteristic of Zener diodes was checked, by measuring the current and the voltage. A range of values of I_Z was used, so that the value of V_Z (breakdown voltage) could be checked over a number of currents.

Results and Discussion

Table 1

Values of current and voltage

Iz (mA)	-0.1	-1	-2	-5	-8	-10
Vz (V)	-2	-2.8	-2.9	-3.4	-3.4	-3.4

The values in the table show that, up to the breakdown point, although the reverse voltage is increased, the reverse current remains extremely small. When the breakdown region is reached, the current (I_Z) increases rapidly, while the voltage remains practically constant across the diode terminals, its value being equal to that of the breakdown voltage.

Conclusions

From the results obtained in the experiment, it is clear that, once the reverse breakdown is reached, for any reverse current values over a specified minimum-maximum range, the voltage remains almost constant. Thus, the experimental data confirmed the volt-ampere characteristic of Zener diodes.

References

[1] Floyd, Th. L., *Electronic Devices* (2nd edition), New York**:** Macmillan, 1988.

[2] Maxim, Gh., Maxim, A., *Dispozitive şi circuite electronice* – Lucrări practice, Univ. Tehnică "Gh. Asachi" Iaşi: Rotaprint, 1998.

These sentences are from the report below. Turn them into the Active voice. How would these changes affect the report?

1. An external reverse-biased voltage was applied to the Zener diode.
2. Then reverse voltage was increased and its values were measured and noted down.
3. The volt-ampere characteristic of Zener diodes was checked.
4. A range of values of I_Z was used.
5. The value of V_Z (breakdown voltage) could be checked over a number of currents.

Lab Report Sections: Function and Specific Language

Title

The title is written in bigger sized letters than the rest of the report. It is either centered or aligned to the left. The important words (nouns, verbs, adjectives and adverbs) are capitalized. As pointed out, the title shows

- what the report is about
- what was measured in the experiment
- how the measurement was carried out

Read the following lab report titles and complete the table below:

1. Verification of the Law of Reflection using a Plane Mirror
2. The Measurement of Capacitor Parameters by Means of AC Bridges
3. The Determination of Currents and Voltages by Means of the Compensation Method

Title no	The report is about	The experiment measured	The way in which the measurement was done
1. 2. 3.			

Depending on the type of experiment, certain words are likely to appear in the title.

Below are certain words that are likely to appear in lab report titles. Match each word to the proper definition:

1. Verification	a) finding the value of a property by comparison with a standard
2. Study	b) a careful study by means of observations and tests
3. Investigation	c) a careful observation of a phenomenon
4. Measurement or determination	d) carrying out an experiment to show that a scientific law is true

Abstract

The abstract may be completely absent from a lab report, or may be included in the *Introduction*.

When it appears, the lab report abstract has the function of summarizing

- the aim
- the method used
- the main result(s):

Read the following lab report abstract. Which sentences describe
- the aim
- the method used
- the main result(s)

The aim of this experiment was to verify the proportional relationship between the period of a simple pendulum and its length. This verification was carried out by measuring for each length the corresponding period. The results obtained confirmed the relationship between the two parameters.

Aim	Method	Result(s)

Verb forms in the *Abstract*

Look again at the abstract above. Which verb tense is used? Which voice is dominant – active or passive?

Aim (Objective)
The 'aim' consists of one sentence describing the reasons for carrying out the experiment.

Specific Language Patterns
The aim of a lab report is expressed by means of certain specific language patterns.

Study these examples and the language patterns that may be associated with them:
1. The aim of the experiment was to verify Archimedes' Principle.
2. The aim of the experiment was to demonstrate that air has weight.

3. The aim of the experiment was to show that the amount of electric current through a metal conductor in a circuit is directly proportional to the voltage impressed across it, for any given temperature.
4. The aim of the experiment was to measure the resistivity of a uniform iron wire.
5. The aim of the experiment was to compare different methods of calculating velocity.

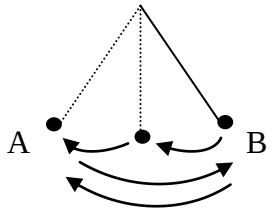
The aim of the experiment	was	to verify to demonstrate to show
		to measure to determine to calculate
		to compare

Introduction

The introduction of a lab report has three main aims:
- stating the aim;
- establishing the field;
- presenting theoretical background

Read this lab report introduction and complete the table below. Which sentences state the aim, which establish the field and which ones give some theoretical background?

When a simple pendulum is in motion, the brass bob swings from point A to point B, as shown in the diagram below. This motion is called oscillatory action, and the time taken for one complete oscillation is called the period or periodic time of the pendulum (T).



For an ideal pendulum, the assumptions made are as follows:
1) The period of a pendulum is independent of the mass or material of the pendulum.
2) The period of a pendulum is independent of the amplitude if the amplitude is small.
Mathematical analysis shows that the period of the pendulum is proportional to the square root of its length. The aim of this experiment was to verify this statement.

Stating the aim	**Establishing field**	**Presenting theoretical background**

Verb tenses in the *Introduction*

Look again at the lab report introduction above. Which verb tense is used? Why is it used? Which voice is dominant-active or passive?

Materials and Method

The presentation of the materials/apparatus and method/procedure can appear under one single heading, or can form two separate sections of the lab report.
The ***Materials*** part of the section describes and/or lists materials or instruments used. This subsection is usually accompanied by a diagram.
The materials/instruments used can appear:

1. as a list accompanied by a diagram

e.g. As it can be seen in the diagram, this electronic circuit includes the following:
- a cell (E)
- a Zener diode D210
- a resistor (R) of 680 Ω

- a voltmeter
- a milliammeter

2. a text describing the materials/instruments/components used, also accompanied by a diagram
e.g. As it can be seen in the diagram, this electronic circuit is made up of a cell connected in series with a 680 ohm resistor, a milliammeter, a Zener diode D210 and a voltmeter.

In case you use the latter manner, the verbs will be in the present tense; the and passive voice will be the dominant one.

The ***Method/Procedure*** subsection describes in chronological order the steps taken in order to carry out the experiment. When you carry out an experiment, you usually follow a set of instructions set by the teacher. In the ***Method*** part of the report, you need to transform these instructions into dynamic descriptions.

 *Change these instructions into step-by-step descriptions. The first one has been done for you. What conclusion can you draw about the tense and voice of the verbs used in the* ***Method/Procedure*** subsection?

Instructions	**Dynamic descriptions**
1. First close the switch.	1. First the switch was closed.
2. Measure the voltages across the terminals of the two loads and across the terminals of the generator.	
3. Then open the switch.	
4. Measure again the voltages across the terminals of the two loads and across the terminals of the generator.	

 *Below are some useful tips on what you should/shouldn't do when describing procedure starting from your teacher's instructions:*

Do	Don' t
- include the most important steps in the experiment - briefly summarize precautions - explain why certain steps were taken - include sequencing words (words that show chronological order)	- include unnecessary detail - include all the precautions - include observations (e.g. the mass may be + or –) -report instructions about calculations

Specific Language Patterns

In describing procedure, certain verbs showing process are frequently used, mainly in the passive voice.

The table below gives examples of patterns frequently used when describing method. Match the former part of each sentence (1-13) with the suitable verb. Sometimes more than one answer is possible:

1. The apparatus 2. All the data 3. The initial reading of the position 4. The lens of the microscope 5. A graph of resistance against length in a wire of constant cross - sectional area 6. A survey of students' favourite spare time activities 7. To ensure that there were no leaks, all the valves 8. Variations in temperature 9. A test of the strength of various materials 10. The exact force needed to overcome friction 11. The safety precautions outlined in the manual 12. The accuracy of the measurements 13.At the beginning of the experiment, the temperature	was/ were	a) adjusted b) carried out c) checked d) conducted e) determined f) followed g) noted h) observed i) plotted j) recorded k) set at l) set up m) tested

Results and Discussion

This section is probably the most important for a lab report as for any experimental study, in fact.
Results are given in two main forms: graphs and/ or tables.
In the ***Discussion of Results*** subsection that follows, you will comment on the results obtained, while doing several of the following:
- compare your experimental results with accepted values
- compare your experimental results with each other
- explain errors and/ or unexpected results
- describe a linear relationship as shown in a graph
- comment on the suitability of the method used

Comparison of results with standard value

Look at the following table presenting results from an experiment meant to determine the melting point of various substances. Read the discussion that follows and answer these questions:
1. Which sentence acts as an introduction to the discussion?
2. Which sentence presents results that agree with standard values?
3. Which sentence describes results that do not agree with standard values?
4. Which sentence explains differences between the experimental results and the standard values?
5. Which tense is used in the discussion? Are there any verbs which are not in that tense? Why is that?

Substance	**Experimental Melting Point** (mean value in °C)	**Standard Value** (°C)
Ice	0.5	0.00
Phosphorus	43.8	44.00
Glucose	136.0	142.00
Lead	324.0	327.30
Zinc	408.0	419.45

The table shows the average of the results obtained for five substances melted the same day under the same atmospheric conditions. Comparison of the experimentally determined values with standard values shows good agreement in the case of ice, phosphorus and lead. However, the values

obtained for glucose and zinc, 136 °C and 408 °C respectively, are significantly different from the standard values. These discrepancies may be due to lack of purity in the substance.

Specific Language Patterns

Below are some language patterns that may help you when discussing results that agree/do not agree to standard values:

The	results figures findings values	are consistent with agree with	the standard value the published value
		are significantly different from do not agree with	

Comparison between Results
Specific Language

Sometimes you need to compare two or more sets of results.

Look at this table that compares the production of car components at different temperatures in two different factories and read the discussion that follows. Find in the text words that show comparison and contrast and write them in the table below:

Comparing	Contrasting

	10 -12 °C	13-15 °C	16-18 °C	19-21 °C	22-24 °C
Factory A	81	92	96	101	93
Factory B	85	89	102	93	87

The table presents the number of car components produced at different temperatures in the two factories under study, labelled A and B.

The results show that in both factories there is a correlation between the number of car components produced and the working temperature. Thus, in factory A, as well as in factory B, the number of car components produced is relatively small for low working temperatures (81 and 85 respectively). This number is, up to a certain optimum point, directly proportional to the working temperature: the higher the temperature, the greater the number of car components produced. However, as the figures show, the optimum working temperature for factory A is of 19-21°C, whereas for factory B it has lower values, ranging from 16°C to 18°C. Therefore, we can notice that the optimum working temperature in factory A is different from the optimum working temperature in factory B. Under the optimum temperature conditions, the number of car components produced by factories A and B was the highest (101 and 102 respectively). However, we can also notice that when the temperature increased above 19-21°C in the case of factory A and above 16-18 °C in the case of factory B, the number of car components produced started to decrease gradually. Therefore, the results show that for temperatures above the optimum point, productivity becomes inversely proportional to temperature values.

Unexpected Results
Language Patterns

Whenever the results are different from those expected, you need to give reasons. Some patterns that may be used are given below:

The	difference discrepancy error	may be could be	the result of due to

In the ***Results and Discussion*** **section,** two main verb tenses are used: Present for describing the table or graph and Past when we give details about the experiment.

Conclusion

Function

Most reports of laboratory experiments include a ***Conclusion*** that

- summarizes main results and findings
- states whether aims have been achieved

The ***Conclusion*** can also

- comment on the method used
- give recommendations about future work

Give the function of each sentence in this lab report conclusive paragraph. Which verb tenses are used and why?

Sentence	Function
The results obtained are sufficiently accurate to verify the principle that the period of a simple pendulum is proportional to the square root of its length.	
Two results which were inconsistent with the rest were probably due to mistakes in the experimental procedure.	

Review of Tenses Used in a Lab Report

Section/Subsection	Verb Tense(s)
Abstract	Past Tense(mainly passive)
Aim	Past Tense
Introduction	Present Tense (active and passive)
Materials	Present Tense (mainly passive)
Method/Procedure	Past Tense (passive)
Results	Present
Discussion of Results	Present and Past Tense
Conclusions	Present, Present Perfect and Past

1. *Write a lab report on the consumption of electricity in your home in a two-week period of time. Make sure to be consistent, i.e. record the electricity consumption index at the same time every day.*

2. *Exchange drafts with a partner. Use the checklist below as a guide for suggesting improvements to your partner's lab report.*

Checklist for Electronic Diagram Description

		Yes	**No**
1.	Does the lab report include all the elements specified in this unit (title, abstract, aim, introduction, materials and method, results and discussion, conclusion)?		
2**.**	Does each section perform the function(s) attributed to it?		
3.	Do the verb tenses and voice in each section match the standard requirements?		
4.	Is information presented in a formal and objective style?		
5.	Are visuals (graphs, tables, diagrams) used?		
6.	Is the report correct from the point of view of the information presented?		
7.	Is the text correct from the point of view of grammar, spelling and punctuation?		

3. *Rewrite your lab report, taking into account your partner's suggestions.*

10 DID YOU KNOW THAT...?

1. *Answer these questions making use of your background culture:*
a) Who discovered penicillin?
b) Who wrote the science fiction novel *The War of the Worlds*?
c) What is the name of the first man who reached Everest?
d) Who is regarded as the inventor of the telephone?

2. *Read these texts and complete with the missing names of famous people:*

On August 4, 1922, all phone services in the US and Canada were turned off for a minute to mark the death of _____, credited throughout the world for the invention of the telephone. This claim was disputed by Antonio Meucci, who said that _____ had stolen his work. In 1860 Meucci publicly demonstrated the 'teletofrono', the new device he had created in New York. As he was too poor to pay the $250 for a patent, Meucci filled a form for a pending patent, which he could not renew for lack of money. He sent a model of his design to the Western Union telegraph company, hoping that the company would accept his invention and finance its large-scale production. To his great surprise and disappointment, not only did the company executives refuse to meet him, but they also refused to return his invention, declaring that it had gone missing. A couple of years later, _____ patented his telephone and signed a contract with Western Union.

_____ discovered penicillin by accident, thought it would be of no use and forgot about it for about a decade. It was only when another team of scientists developed penicillin for medical use that _____ claimed he had discovered it before, and he has remained in the history of medicine as the discoverer of penicillin. However, the medical properties of this mold had been signalled and used before by Ernest Duchesne, who would use his research in the field as the basis of his doctoral thesis. Duchesne sent his research to Institut Pasteur, hoping he would be given credit for his work. As Duchesne was an unknown figure, the prestigious institute refused to acknowledge his research.

Was _____ the first to have reached the peak of Everest? Maybe, but there are two other alpinists, George Mallory and Andrew "Sandy" Irwine who may have reached the peak before him never to return. There were various items found on Mallory's body suggesting that he had reached the 'roof of the world' and died on his way back down. Mallory's companion, Irwine, was carrying a camera and it was believed he would take pictures of the whole expedition. Unfortunately, neither the camera nor Irwine's body has ever been found.

On October 30, 1938, the Mercury Theater company started to broadcast a radio adaptation of _____' science fiction novel War of the Worlds, airing it on Columbia Broadcasting System radio network. Directed and narrated by actor and future film maker Orson Welles, this radio broadcast became famous for allegedly causing mass panic although the episode producers, Welles included, had little idea of the havoc it would cause.

The show started at 8:00 pm, on Halloween night, with a voice that announced "The Columbia Broadcasting System and its affiliated stations present Orson Welles and the Mercury Theater on the air in War of the Worlds by _____." Most of the radio programme was presented as a series of news bulletins about a simulated invasion of Martians on the Earth. The radio play was very realistic, employing suggestive sound effects and good actors who portrayed terrified announcers. An announcer reported that people in the vicinity of the alleged Martian landing sites in America had panicked and were trying to flee. Millions of listeners believed that the Martians had really invaded the earth and left their homes in a hurry. Remember that it was Sunday evening in 1938, which meant prime time in the golden age of radio and millions of Americans had their radios on. Orson Welles thought that the controversy generated by this radio programme would ruin his future career, but in fact it helped him. When Citizen Cane the film Welles produced, directed and starred in was released, it was welcomed as one of the greatest (if not 'the greatest') American film that had ever been made.

Match these words to their definition/synonym. Which definitions/ synonyms were not used?

1. patent	a) certain, proved
2. mold	b) the peak viewing for radio or television
3.acknowledge	c) to run away from
4. air	d) to admit that something exists
5. havoc	j) a situation in which there is a lot of confusion
5. alleged	e) to know something
6. flee	f) broadcast a programme on TV or radio
7. prime time	g) obtain exclusive rights to an invention
	h)filamentous fungi that grow on and contribute to the decay of organic matter.
	i) presumed, supposed

1. _ 5. _
2. _ 6. _
3. _ 7. _
4. _

Check the internet or other sources. Find two interesting facts about science or scientific discoveries. Be prepared to report them to your classmates. When you prepare your speech, make sure you can answer the so-called 'journalist's questions': who?/ what?/ when?/ where?/ why?

The Sequence of Tenses

Look at these sentences. What tense are the underlined verbs? Label each column in the table below:

1. Meucci claimed that Graham Bell had stolen his work.
2. When he discovered penicillin, Fleming thought it would be of no use.
3. It was believed Irwine would take pictures of the whole expedition.

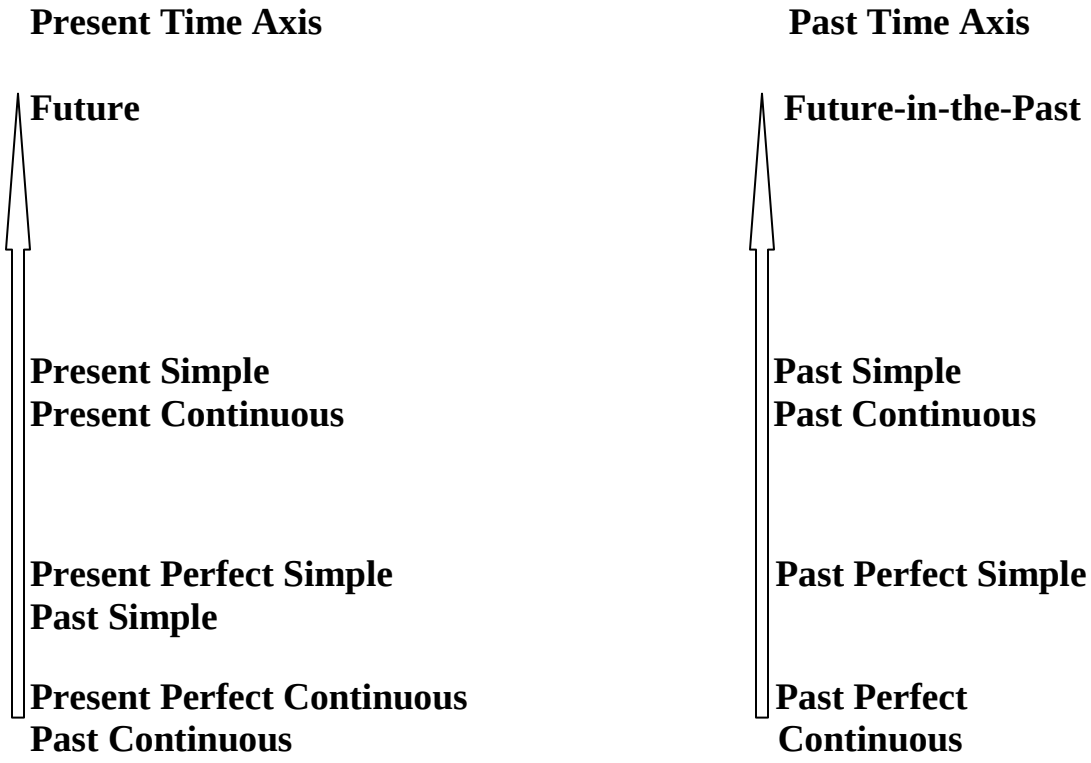
4. Millions of listeners believed that the Martians had really invaded the earth and left their homes in a hurry.
5. Welles thought that the controversy generated by this radio programme would ruin his future career.

would be would take would ruin	claimed thought was believed believed left	had stolen had invaded

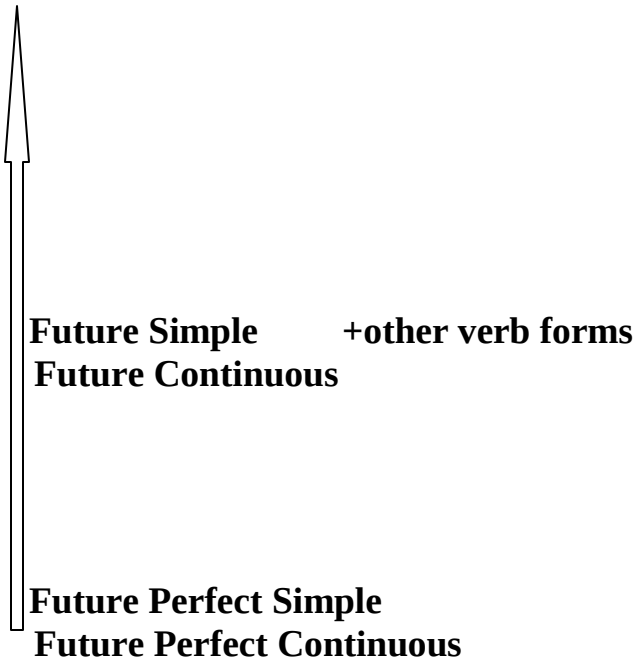
Time and Tense

As already shown, in English *time* and *tense* are two words referring to two different notions:

- *time* refers to chronology, duration ("What's the time?");
- *tense* is s grammar, more precisely, a verb category. Verb tenses are just a means of encoding the category of time in language.



Future Time Axis



As it can be seen, there is a clear symmetry as far as the verb tenses on the three axes are concerned:

- Present Simple/Continuous – Past Simple/Continuous/ – Future Simple/Continuous
- Present Perfect Simple/Continuous/ – Past Perfect Simple/Continuous/ – Future Perfect Simple/Continuous

On the Past Time Axis there are restrictions as to the tenses that can be used in English. All the tenses that can be used have in their name the word 'past': Past Simple, Past Continuous, Future-in-the-Past, Past Perfect Simple, Past Perfect Continuous. This is what is called *the sequence of tenses* in direct object clauses.

Main Clause	Direct Object Clause	Action in Direct Object Clause as Compared to That in the Main Clause
He believed	she would carry out the experiment.	posterior action
	she carried out the experiment.	simultaneous action
	she had carried out the experiment	anterior action

If we replace the sentences with the verb tenses we obtain:

Main Clause	Direct Object Clause	Action in Direct Object Clause as Compared to That in the Main Clause
Past Tense	**Future-in-the-Past**	posterior action
	Past Tense	simultaneous action
	Past Perfect	anterior action

The time axes above also show clearly the verb transformations when we turn a sentence from direct speech (dialogue) to reported speech.

Put the verbs in the correct form:

1. He was sure Mary already (come) _____ the day before, but as she (not telephone) _____ him, he (think) _____ she (not visit) _____ him until the end of the week.
2. Carina hoped they (find) _____ what (be) _____ wrong with her car because she just (buy) _____ it and she never (imagine) _____ it (can) break so easily.

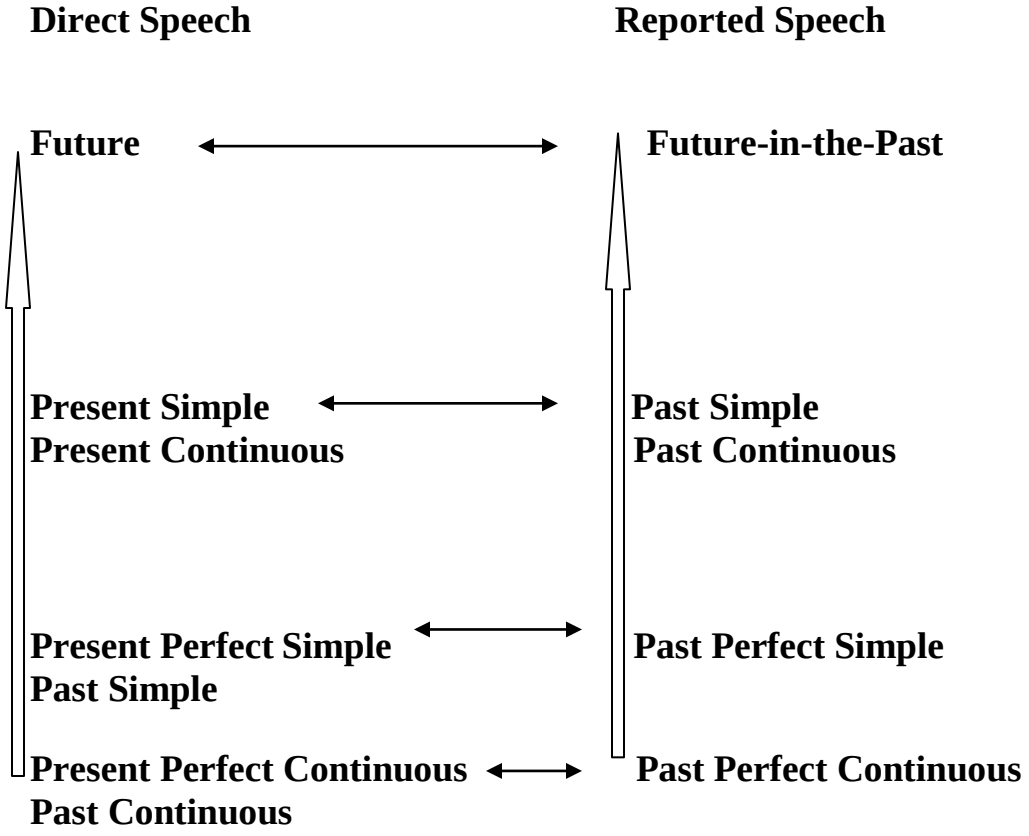
3. The scientist didn't know whether his study (be received) _____ well by the research community, but he (know) _____ for sure that his experiment (be) _____ a real success.
4. The girl remembered she (hide) _____ the key somewhere, but she (cannot) _____ remember where she (put) _____ it and she (be) _____desperate because she (think) _____ she (be obliged) _____ to sleep in the open.
5. Why didn't you tell me you (not be able) to finish the report in time because you (have) _____ to go home at your sister's wedding?
6. My best friend wrote to me an e-mail in which he (tell) _____ me that her newly born daughter (be) _____ the nicest baby on earth and that she (become) one day a well known film star.
7. Tom knew I already (tell) _____ you the news and that you (ask) _____ him as soon as possible details of the conversation we (have) _____.
8. Kathy told me that before she (leave) _____ town she (visit) _____ all her friends and she (hope) _____ we (can) _____ go once again to the monasteries in Bukovina.
9. He was aware that he (work) _____ very hard for the past years and that all the results he (obtain) _____ (bring) _____ him celebrity in this field of study.
10. Although Peter (try) _____ hard to make his sister understand mathematics, he (realize) _____ she (may) _____ become a poor mathematician, but she surely (become) _____ in the next few years one of the best writers of the young generation.

Translate into English, paying attention to the form of the verbs:

1. Betty mi-a scris că va sosi cu avionul împreună cu logodnicul ei lunea viitoare şi că abia aşteaptă să ne revedem.
2. Am auzit că fratele tău a organizat spectacolul pe care îl vom vedea săptămâna viitoare, dar nu ştiam că toţi participanţii au făcut atât de multe repetiţii în ultimele luni.

3. Bănuiam că au plecat de la teatru înaintea noastră şi credeam că noi nu vom mai ajunge acolo la timp.
4. Vânzătorul ne-a spus că ne va servi de îndată ce va termina de servit clientul din faţa noastră.
5. Nimeni nu şi-a închipuit că el reuşise să ducă la bun sfârşit acest experiment dificil şi că va ajunge unul dintre cei mai tineri cercetători din acest institut renumit pe plan mondial.
6. Când ne-am întâlnit i-am spus că voi analiza propunerea de colaborare pe care mi-a făcut-o şi că îi voi da un răspuns de îndată ce va începe anul universitar.
7. Ştiam că ea aflase deja de cele discutate la întâlnirea Ligii Studenţilor şi că va fi foarte bucuroasă să contribuie la realizarea acestui proiect.

Direct and Reported Speech



Direct Speech refers to face-to-face communication, dialogue. It is introduced by:
- colon or comma
- (simple or double) inverted commas.

Tom said: 'I **studied** hard for the exam tomorrow.'
In **Reported Speech**, a third person renders someone's words indirectly. There will be **no** colon or comma and no inverted commas, because there is no dialogue.
Tom said (that) he **had studied** hard for the exam the next day.

Declarative Sentences
Reporting verbs: *say*, *tell.*

Verb changes
The two axes of time (present and past) show you what happens to the verbs when passing from direct to reported speech and the reporting verb is in the past. There is a so-called *back shift*, i.e. the verbs move from the Present Time Axes to the corresponding form on the Past Time Axes:

Direct Speech	Reported Speech
Future	**Future-in-the-Past**
Present Simple	**Past Simple.**
Present Continuous	**Past Continuous**
Present Perfect Simple **Past Simple**	**Past Perfect Simple**
Present Perfect Continuous **Past Continuous**	**Past Perfect Continuous**

As you can see, the **sequence of tenses** in the past is respected when the reporting verb is in the past:

Direct Speech	Reported Speech
Tom said: "I **will go** the party on Sunday."	Tom said (that) he **would go** to the party on Sunday.
Tom said: "I **enjo**y this party."	Tom said (that) he **enjoyed** that party.
Tom said: "I'**m** reading a newspaper."	Tom said (that) he **was reading** a newspaper.
Tom said: "I **have** already **seen** this movie." Tom said: "I **saw** this movie on Sunday."	Tom said (that) he **had** already **seen** that movie. Tom said (that) he **had seen** that movie on Sunday.
Tom said: "I **have been studying**	Tom said (that) he **had been**

since yesterday." Tom said: "I **was studying** for the maths exam."	**studying** since the day before. Tom said he **had been studying** for the maths exam.

Other changes

As can be seen from the examples above, other parts of speech also suffer changes. Generally speaking, there is a shift from

I – here- now

to

he/she – there- then

Direct Speech	Reported Speech
I	he/she
you (2nd person sg.)	he/she
we	they
you (2nd person pl.)	they
me	him/her
you (2nd person sg.)	him/her
us	them
you (2nd person pl.)	them
my	his/her
your (2nd person sg.)	his/her
our	their
your (2nd person pl.)	their

Direct Speech	Reported Speech
this	that
these	those
here	there
now	then
today	that day
yesterday	the day before
the day before yesterday	two days before
tomorrow	the next day/ the following day
the day after tomorrow	in two days' time
next week	the next week/ the following week
last week	a/ the week before
a year ago	a/ the year before/ the previous year

Sometimes you cannot change from direct to reported speech word for word. Instead you need to paraphrase:

Direct Speech	Reported Speech
Tom said: "I'm sorry I'm late."	Tom apologized for being late.
The doctor told Tom: "You should stay in bed."	The doctor advised Tom to stay in bed.
Tom said: "Yes."	Tom agreed. / accepted. / answered in the affirmative.
Tom said: "No."	Tom disagreed. / denied. / refused. / answered in the negative.

Interrogative Sentences

The changes in the verb tenses and in the forms of the other words (pronouns, demonstrative and possessive adjectives, adverbs, etc.) are similar to those presented for declarative sentences.

Reporting verbs: *ask, wonder, want to know, inquire*.

a) Yes/No Questions

Turn these yes/no questions into reported speech. The first one has been done for you:

Direct Speech	Reported Speech
Tom asked Paul: "**Will** Mary **come** tomorrow?"	Tom asked Paul whether/if Mary **would come** the following day.
Tom asked Paul: "**Do** you often **study** at night?"	
Tom asked Mary: "**Are you going** to the theatre or to the cinema?	
Tom asked Mary: "**Have** you **seen** this documentary?" Tom asked Paul: "**Did** you **visit** your parents last week?"	

Tom asked Mary: "**Have** you **been learning** English for a long time?" Tom asked Paul: "**Were** you **studying** for maths yesterday night?"	

As can be seen from the table above, when changing *yes/no questions* into reported speech, we change the word order of interrogative sentences into the word order of statements. They are introduced by *whether* or *if*; *whether* becomes compulsory if the question is alternative (see example 3 above *Tom asked Mary **whether** she was going to the theatre **or** to the cinema.*

	Reported Speech
whether	Subject + Verb

b) Wh- Questions

These are questions that start with a wh- word : *who, what, which, where, when, why, how.*

Turn these wh- questions into reported speech. The first one has been done for you.

Direct Speech	**Reported Speech**
Tom asked Paul: "Who **will come** to the party?"	Tom asked Paul who **would come** to the party.
Tom asked Paul: "Why **do** you **study** at night?"	
Tom asked Mary: "Where **are** you **going** in such a hurry?"	
Tom asked Mary: 'How many times **have** you **seen** this movie?" Tom asked Paul: "When **did** you **visit** London?"	
Tom asked Mary: "How long **have** you **been learning** English?" Tom asked Paul: "Why **were** you **studying** until late yesterday night ?"	

As in the case of *yes/no questions*, when turning *wh- questions* into reported speech, the order becomes the one specific to declarative sentences. The *wh-word* introducing reported speech is similar to the one in the corresponding direct speech version:

Reported Speech	
wh-word	Subject + Verb

Exclamatory Sentences
Such sentences become declarative when changed into reported speech.
Reporting verbs: *exclaim, give an exclamation, complain, observe, remark, say, shout.* Sometimes adverbs of manner are being added.
The sequence of tenses in the past is being observed:

Direct Speech	Reported Speech
Tom said, 'What a wonderful trip we**'ll have**!'	Tom said that they **would have** a wonderful trip.
'How brave you **are**!' Mary told him.	Mary told him { that he **was** brave. / how brave he **was.**
'How beautifully she **is singing**!' he said admiringly.	He said admiringly that she **was singing** beautifully.
'What a delicious meal you **have prepared**!' the guest said. 'How tired I **was** yesterday!' the old woman said.	The guest said admiringly that they **had prepared** a delicious meal. The old woman complained that she **had been** very tired the previous day.
'What a delightful book I **have been reading**!' Tom said. He said admiringly, 'How beautifully my daughter **was singing** yesterday!'	Tom exclaimed that he **had been reading** a delightful book. He said admiringly that his daughter **had been singing** beautifully the day before.

Depending on meaning, other transformations are possible:

She said, 'Happy Christmas!'	She wished me a happy Christmas.
Tom said to Paul, 'Thank you!'	Tom thanked Paul.
She said, 'Good work!'	She congratulated me.

Imperative Sentences

Reporting verbs may express:

- an order: *command, order, tell*
- a request: *ask, beg, request, urge*
- advice: *advise, recommend, warn*

In reported speech, the imperative sentence becomes an infinitive sentence:

Direct Speech	Reported Speech
Teacher to Tom: '**Sit down**!'	The teacher told Tom **to sit down.**
Teacher to Tom: 'You **should study** harder.	The teacher advised Tom **to study** harder.
Teacher to students: '**Do not be late.**'	The teacher asked the students **not to be late.**
Teacher to students: '**Do not skip** classes.'	The teacher warned the students **not to skip** classes.

The imperative for the 1st person plural is usually expressed in reported speech by means of the verb *suggest.*

Direct Speech	Reported Speech
Tom said, 'Let's watch a movie.'	Tom suggested { that they should watch a movie. / that they watch a movie. / watching a movie.

Rewrite these sentences into reported speech. Put the reporting verb in the Past Tense:

1. Mary to Tom: 'When you come to see me tomorrow, I will show you photos from my trip to Paris'.
2. Teacher to students: 'If you study hard, you will get good grades in your exams.'
3. Researcher to colleagues: 'I won't start any new experiment until I have finished this one.'
4. Mary to Peter: 'I don't believe a word you are saying. This is not the first time you have deceived me, and I hope it won't happen again.'

5. Tom to girlfriend: ‘I waited for you yesterday till 9 o’clock, but you didn’t come. I thought you would come later, so I left a message with your roommate.’
6. Mother to Father: ‘The computer will never work again if you try to mend it.’
7. Guide to tourists: ‘I have made arrangements so that all of you have the chance to visit the museums you are interested in.’
8. Lucy to Bob: ‘If Ann arrives late tonight, wait for her at the station and bring her here.’
9. Mary to Tom: ‘I have been studying all night, but I feel I will forget everything when I’m in front of the blank piece of paper.
10. Peter to Tom: ‘Last night I went to the cinema and saw Tom Cruise’s latest film. I enjoyed myself a lot, and I am going to take my girlfriend Betty tonight.’

Rewrite these sentences into reported speech. Vary the reporting verb and use it in the Past Tense:

1. Tom to passer-by: ‘Can you tell me how far is the railway station?’
2. Mother to Father: ‘Have you any idea when our son is coming home?’
3. Teacher to student: ‘Who do you think will believe this story?’
4. Betty to Irene: ‘How can you tell if Bob is speaking the truth?’
5. Editor-in-chief to journalist: ‘Can you tell me why you haven’t finished your article?’
6. Receptionist to tourist: ‘Will you please tell me when you expect to come?’
7. Tourist to passer-by: ‘Could you tell me where I can find the British Museum?’
8. Students to Tom: ‘Must we be here at six or can we come a little later because we have classes?’
9. Customs officer to man: ‘Are you American or do you come from Europe?’
10. Tom to Ann: ‘Have you any idea when you’ll come here again?’

Rewrite these sentences into reported speech. Use different reporting verbs in the Past Tense:

1. Dan to his sister: ‘Have you got anything to eat? I’m very hungry because I have driven without interruption for 8 hours.’
2. Bob and Lucy: ‘Are you going away for the week end?’ ‘Yes.’
3. Mother to daughter: Look out! There’s a big truck coming!’
4. Dan to Mary: ‘What a forgetful person I am! I’m sorry I have forgotten to buy you the book you wanted.’
5. Tom to his brother: ‘Hi! Why didn’t you tell me you have already come? What a pity you didn’t ring me up yesterday, we had a wonderful day in the mountains. But never mind, you must come with us down by the lake where we can swim and row our boat.
6. Boss to secretary: ‘Will you come here, Miss Miller? I want you to post these letters for me.’
7. Neighbour to boy: ‘Come here, boy. Do you know who has broken this window?’
8. Mother to son: ‘Do as you are told! Don’t be a naughty boy! Go write your homework and then you can go out and play!’
9. Mother to child ‘How many slices of cake have you eaten? What! Five already?!! What an appetite you have!’
10. Carla to John: ‘I have already answered the e-mail in which you asked me to collaborate with you in this project. My answer is yes. Thanks, John, for thinking about me and I can assure you this project will be a success.’

11 WHY IS POLLUTION A PROBLEM?

Cause and Effect

Match part of a sentence on the left with its other half on the right:

1.There has been an increase in greenhouse gases	a. because a large meteor hit the earth.
2. When nuclear fusion stops or starts	b. I was late for school.
3. Some believe dinosaurs died out	c. consequently the oceans have tides.
4. Since he had a flue	d. we had to go to the store to buy some food.
5. The moon has gravitational pool	e. so he bought an island in Greece.
6. He won at the lottery	f. the sail boat moves faster.
7. Since the refrigerator was empty	g. therefore global warming is happening.
8. Because the alarm was not set	h. therefore he got a good grade.
9. Tom completed each task perfectly	i. a star explodes.
10. As the wind speed increases	j. Tom couldn't go to classes yesterday.

The sentences above show:

- why something happened (causes, reasons)
- what happened (effects, results)

Write down at least 3 more sentences describing cause and effect.

Useful Language: Cause and Effect

because	***Because*** he studied hard, the student got high grades in his exams.
because of	***Because of*** his studying hard, the student got high grades in his exams.
consequently	He studied hard. ***Consequently***, he got high grades in his exams.
as a consequence	***As a consequence*** of his studying hard, the student got high grades in his exams.
as a result of	***As a result of*** his studying hard, the student got high grades in his exams.
and that is why	He studied hard ***and that is why*** he got high grades in his exams.
due to	***Due to*** his studying hard, the student got high grades in his exams.
owing to	***Owing to*** his studying hard, the student got high grades in his exams.
since	***Since*** he had studied had, the student got high grades in his exams.
so	He studied hard, ***so*** he got high grades in his exams.
therefore	He studied hard; ***therefore*** he got high grades in his exams.
thus	He studied hard; ***thus*** he got high grades in his exams.
for this reason	He studied hard. ***For this reason,*** he got high grades in his exams.

Connect the following sentences in 3 different ways. In each sentence, use one of the words given in order to express comparison or contrast. The sentence may or may not start with the connector given.

1. Helium rises. A helium balloon floats.

consequently _____
since _____
as a result _____

2. The meal we ordered was cheaper than expected. We ordered dessert.

because _____
and that is why _____
so _____

3. The streets were icy. Cars needed more time to stop.

due to _____
therefore _____
for this reason _____

4. It was raining. We cancelled our football game.

so _____
thus _____
because of _____

5. Tom broke his arm. The doctor put it in a cast.

owing to _____
because _____
thus _____

Language patterns

1. There are { three/four / several / many } { reasons why/of… / causes of… / effects of… }

There are ***several causes of*** global warming.
There are three main reasons why I chose this faculty.

2. ..... has had { several / many / a few } important effects on ...

My success in tennis has had ***several important effects*** on my life.

Write a statement for each of the following topics, using a variety of the language patterns presented above:

1. Topic: The causes of the depletion of the ozone layer.
Thesis statement: _____
_____

2. Topic: The effects of deforestation.
Thesis statement: _____
_____

3. The effects of globalization.
Thesis statement _____
_____

4. The causes of water pollution.
Thesis statement _____
_____

5. The effects of wide-scale robotization.
Thesis statement _____
_____

You are going to read a text entitled "Why Is Pollution a Problem?" Try to answer the question in the title before reading the text. Enumerate at least three causes and three effects of various types of pollution on the environment. Start like this:

I think pollution is a real problem. It may be caused by
1. _____
2. _____
3. _____

Its main effects are
1. _____
2. _____
3. _____

Now read the text Are any of the causes and/or effects you enlisted mentioned in the text below?

Why Is Pollution a Problem?

Pollution is one of the biggest problems we are confronted with nowadays because humans, in an increasingly populated and industrialized world, have not taken into account the impact of industrial development on the environment. The world's growing population makes demands on the supply of air, water and land. At the same time, the rise in population is accompanied by greater living standards, which involve greater consumption of water, electricity and goods, resulting in a greater amount of waste materials and packaging.

There are several types of pollution: air pollution, water pollution, land pollution, noise pollution. The most prominent of these is air pollution, which may be caused by natural or human actions. Natural air polluting factors do not occur very often. They include forest fires, volcanic eruptions, pollen dissipation, and natural radioactivity. Human activities that generate air pollution are: emissions from plants and factories; toxic emissions from vehicles; chemicals resulting from household and farming activities. Some of the pollutants that may affect our life, as well as our planet are: carbon monoxide (CO), carbon dioxide (CO_2), nitrogen dioxide (NO_2), sulphur dioxide (SO_2), lead (Pb).

The most important effects of air pollution are: environment degradation, global warming, the depletion of the ozone layer and negative effects on our health.

The degradation of the environment is the most important effect of increase in air pollution. Due to the growth of the amount of carbon dioxide in the atmosphere smog appears. Because of smog sunlight can be restricted from reaching the earth and as a result the photosynthesis process in plants is hindered. Another effect on the environment is that gases, such as sulphur dioxide and nitrogen dioxide can create acidic compounds that harm vegetation, buildings and water when they combine with the water droplets and fall onto the earth as acid rain. Global warming, another harmful effect of air pollution, appears as a consequence of the emission of greenhouse gases (carbon monoxide and dioxide, hydrocarbons, sulphuretted hydrogen)

into the atmosphere. The setting up of new industries, the increasing number of fossil-fuelled vehicles, the cutting down of trees are factors that contribute, either directly or indirectly to the growth in the amount of greenhouse gases that have as effect the melting down of the polar ice caps and the rise in the sea level with unpredictable long-term effects.

Another important effect of air pollution is the depletion of the ozone layer. The ozone layer is the thin shield in the sky that stops ultraviolet rays from reaching the earth. As a result of industrial and household activities, certain chemicals, such as chlorofluorocarbons (CFCs) have been released into the atmosphere, contributing to the depletion of the ozone layer.

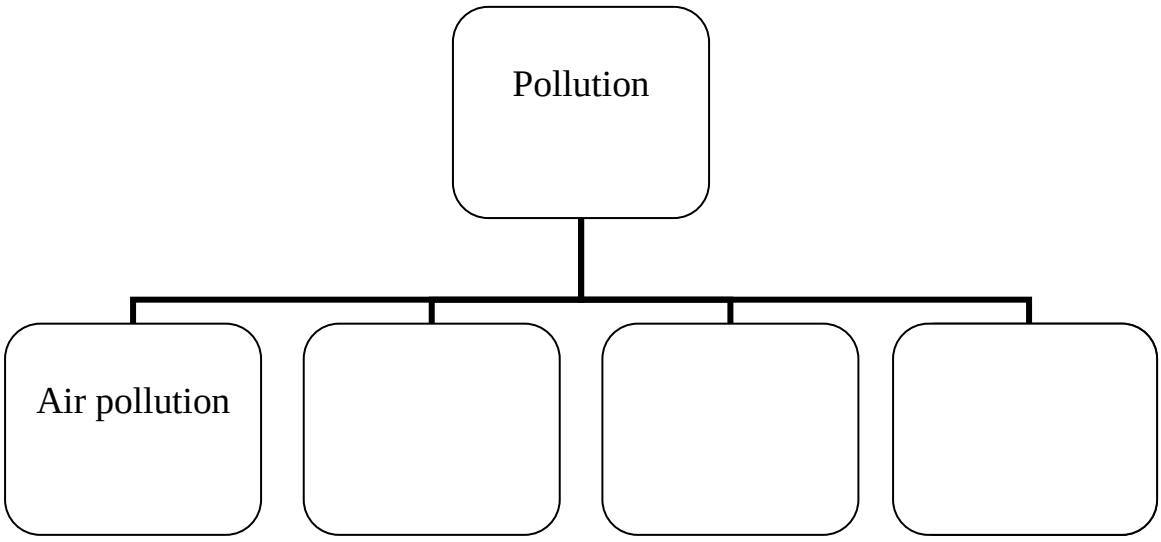
Finally, air pollutants can be very harmful for living organisms, humans included. The effect depends on the length of time the organism is exposed to such pollutants, as well as on the type of pollutant we are exposed to. Generally speaking, short-term health effects due to air pollutants include headache, nausea, irritation to the eyes, nose, throat and respiratory infections. Long-term effects refer to chronic respiratory disease, lung cancer (nitrogen dioxide), heart disease (carbon monoxide), or even brain damage (lead).

Overall, air pollution is one of the most harmful forms of pollution both for us, humans, and for the environment. Produced most of the times as a result of human actions, this type of pollution has a negative impact on our health, leading to heart, lung, kidney disease and even brain damage. Air pollution contributes to the degradation of the environment due to the toxic emissions from cars or from industries. The main environmental issues caused by air pollution have to do with acid rain and global warming, which may lead in the long run to climate change. If we do our best to cut down on pollution, we will breathe a purer air and will live in a better world.

Text diagramming

Complete these diagrams that summarize the text above:

1.



2. **Causes of air pollution**

A.

natural actions

forest fires
……
……
natural radioactivity

B.

……
toxic emissions from vehicles
……
chemicals

3. **Some important effects are:**

a. environment degradation → smog
…… damages – vegetation
……
water

b. ……, caused by ……

carbon dioxide

……

……

c. ……

d. effects on our health

- headache
- ……
- ……
- ……
- lung cancer
- ……
- heart disease
- ……

Did you know?

Match one half of each sentence (1-7) with the other half (a-g) in order to find out some facts about climate change.

1. Between 1901 and up to the present the earth's temperature	a. lost 150 to 250 cubic km of ice per year.
2. Sea levels	b. produce more air pollution than any other human activity.
3. Less forest cover throughout the world	c. has risen by 0.89°C.
4. Between 2002 and 2006 Greenland	d. contributes up to 95% of all carbon monoxide emissions.
5. In American cities, vehicle exhaust	e. is a health condition related to pesticides, insecticides and chemicals used at home and in the office.
6. Motor vehicles	f. have risen to up to about 19 cm globally, with lots of glaciers melting.

7. Sick Building Syndrome	g. has resulted in less carbon absorption.

*Go back to the text **Why Is Pollution a Problem?** Answer the following questions:*

1. What information does the first paragraph (introduction) present?
2. What is the function of the second paragraph?
3. What is the function of the following paragraphs?
4. What is the function of the last paragraph?
5. Does this text focus mostly on causes or on effects?

Guidelines for Cause/Effect Essays

Introduction

1. Provide background information about the topic.
2. Describe the situation.
3. Write a thesis statement.

Supporting Paragraphs (Cause)

1. State the first (second, third) cause in the first (second, third) paragraph.
2. Support the first (second, third) cause with examples, statistics, quotations.

Supporting Paragraphs (Effect)

1. State the first (second, third) effect in the next paragraph(s).
2. Support the first (second, third) effect with examples, statistics, quotations.

Conclusion

1. Summarize the main causes/effects.
2. Draw a conclusion/make a prediction.

Writing an Essay about Causes/Analyzing Reasons
Writing an Essay about Effects.

Divide into two groups, A and B. Students A will write an essay focused on causes/reasons, while students B will write an essay focused on effects.

Student A: Analyzing causes/reasons
1. Prepare to write

A. *Think about an aspect you would like to write about. You may choose one of the topics below.*

Causes/Reasons for a Decision in Your Life
Why did you choose this university/ college/ faculty?
Why did you choose this major?
Why did you choose to live in the hostel/ to rent an apartment?
Why do you admire _____?
Why is _____ your hobby?

B. *After having decided on your topic, try to generate ideas using one of the techniques in* ***Appendix 2.***
C. *Write the topic sentence.*
D. *Select supporting points.*
E. *Add details and examples to support your points.*
F. *Organize your points in a logical manner (from the least important to the most important; from past to present; from the most familiar to the least familiar).*
G. *Think about an interesting way to introduce your topic, taking into account your audience.*

2. ***Write your essay.***

3. ***Revise your essay. Take into account the checklist below.***
A. *Ask your partner to evaluate your essay.*
B. *Revise your essay.*

Student B: Evaluating effects

1. Prepare to write

A. *Think about an aspect you would like to write about. You may choose one of the topics below.*

The Effects of an Invention/Innovation in Modern Life
- Robots
- Computers
- Virtual reality
- Lasers
- Cellphones
- Digital cameras
- Credit cards

B. *After having decided on your topic, try to generate ideas using one of the techniques in* ***Appendix 2.***

C. *Write the topic sentence.*

D. *Select supporting points.*

E. *Add details and examples to support your points.*

F. *Organize your points in a logical manner (from the least important to the most important; from past to present; from the most familiar to the least familiar).*

G. *Think about an interesting way to introduce your topic, taking into account your audience.*

2. ***Write your essay.***

3. ***Revise your essay. Take into account the checklist below.***

A. *Ask your partner to evaluate your essay.*

B. *Revise your essay.*

Checklist for Cause/Effect Essays

		Yes	No
1.	Does the introduction provide enough background information? If not, how can it be improved? _____ _____		
2.	Does the introduction draw the reader's attention? If not, how can it be improved? _____ _____		
3.	Are the body paragraphs arranged in a logical order in the essay? If not, how can the order be improved? _____ _____		
4.	Does each body paragraph provide enough support? If not, how can it be improved? _____ _____		
5.	Is the conclusion effective? If not, how can it be improved? _____ _____		
8.	Is the essay correct from the point of view of grammar, spelling and punctuation?		

Conditional Clauses

If we **do** our best to cut down on pollution, we **will breathe** a purer air.

How many clauses are there in this sentence? Divide this sentence into clauses and state the tense of the verbs.

Conditional sentences are generally formed of two clauses: the conditional ("if") clause that specifies the condition and the main clause that expresses the result or effect of the condition.

The conditional clause may be introduced by the following words:

- *if*
- *provided (that)*
- *on condition that*
- *in case*
- *suppose*

The negative condition is introduced by

- *unless (if…not)*

There are 3 types of conditional sentences:

1. **The First Conditional**

Form:

Condition	Result
If + Present Simple	**Future (Will + V)**
If + Present Perfect	**Present**
	Imperative

Condition	Result
If the weather **is** fine,	we**'ll go** in the mountains.
If you **have finished** studying,	we **are** all happy.
	go on that trip.

Never use future in the conditional ('if") clause

Use:
The first conditional expresses *a possible condition* and *a probable result.*

Function:
an offer: I'll **give** you a glass of water if you'**re** thirsty.
a warning: If you **touch** the hot pan, you**'ll burn** yourself.
a threat: If you **do** that, you**'ll suffer** the consequences!

2. The Second Conditional

Form:

Condition	Result
If + Past Simple	**Present Conditional (would + V)**

Condition	Result
If Tom **worked** harder,	he **would get** better results.

Use:

The second conditional expresses *a hypothetical condition* and its *probable result.*

Unlike the first conditional, which refers to a real or possible situation, the second conditional refers to a situation that is *improbable* or *impossible*.

Improbable: If Bob **needed** some money, I **would give** him. (Improbable: he has enough).
Impossible: If Mary **were** a bird, she **would fly** all day long. (Impossible: Mary is a girl, not a bird).
Imaginary: If the weather **were** fine, they could **go** on that trip.
Advice: If I **were** you, I **would study** harder.

3. The Third Conditional

Form:

Condition	Result
If + Past Perfect	**Past Conditional (would + have + +V (3rd form)**

Condition	Result
If Lucy **had seen** Peter,	she **would have told** him the truth.

Use:

The third conditional expresses *an unreal condition* that refers to a situation *contrary to reality* in the past. The unreality is shown by the shift from past to past perfect:

If Peter **had studied** harder, he **would have passed** the exam (but he didn't).

Word Order
In literary English, the order *subject-auxiliary verb* may be reversed, and *if* can be omitted. This usually happens when the verb in the conditional clause is *be, have, could, should.*

1. If I **were** in your position, I **would** phone her.
   Were I in your position, I **would** phone her.

2. If she **had known** the truth, she **would have forgiven** him.
   Had she **known** the truth, she **would have forgiven** him.

3. If he **could** help somebody, he **would do** it.
   Could he help somebody, he **would do** it.

4. If you **should** meet her, you **could** go to the theater together.
   Should you meet her, you **could** go to the theatre together.

4. Mixed conditionals
There also exist mixed, combined types of conditionals:

a. Type 1 (real condition) + type 2 (imaginary, unreal situation)
   If you **have** time, I **would invite** you for dinner.

b. Type 2 (hypothetical condition) + type 3 (contrary to reality situation)
   If he **were** a better researcher, his scientific work **would have been known** in the whole world.

c. Type 3 (unreal condition in the past) + type 2 (probable result)
   If Tom **hadn't failed** the exam, he **wouldn't study** all day long.

Expressing wishes
I wish, I'd rather, if only
The tense usage is similar to that of ***the second conditional*** - wish about a present situation

I wish	- you **didn't spend** so much time playing computer games. (*but you do*)
I'd rather	
If only	

	- you **were** more attentive in class (*but you aren't*)

and ***the third conditional*** – wish about a past situation

I wish I'd rather If only	- you **hadn't spent** so much time playing computer games. (*but you had*) - you **had been** more attentive in class (*but you weren't*)

Expressing a Wish	**True Situation**
1. I wish I **knew** how to play table tennis.	1. I don't know how to play table tennis.
2. We wish our summers **weren't** so hot.	2. Our summers are very hot.
3. Ron wishes he **could speak** Chinese.	3. Ron can't speak Chinese.
4. Tom wishes he **had passed** the exam.	4. Tom didn't pass the exam.
5. I wish Bob **had helped** me.	5. Bob didn't help me.

Place the following sentences in the proper column, then change into the other two forms:

1. You will be able to speak English better if you studied harder.
2. Had he been here, he would have told us what to do.
3. Unless you go to the meeting, you won't find out the latest news about our company.
4. I'll give you a call if I have any news.
5. Should you come late at night, we would be very happy to meet you at the station.
6. If you read that book, you would understand it.
7. Were you at home, I would pay you a visit.
8. Had the experiment succeeded, he would have become famous in the scientific world.
9. We'll catch a cold unless you shut that window.
10. I would have met you if I had had time.

First Conditional	Second Conditional	Third Conditional

Supply the correct tense of the verbs in brackets. If several forms are possible, explain the difference in meaning:

1. If Lucy (not have) _____ a terrible headache, she would have come to see you.
2. I'd rather you (give) _____me a new cellphone instead of having it repaired as you did.
3. If money (grow) _____on trees, all of us (be) _____ rich.
4. In summer airplane tickets are more expensive. If they (be) _____ cheaper, I (fly) _____ to London for the weekend.
5. I wish I (have) _____ a driving license. If I (have) _____ a driving license, I (drive) _____ to school every day.
6. If only Tom (not eat) _____ so much garlic last night!
7. If you (be) _____ more attentive during the test yesterday, your (obtain) _____ a higher grade.
8. You look as if you (see) _____ a ghost.
9. You look very tired today. I wish you (not stay up) _____ so late last night.
10. If I (can) _____ do something to protect the environment, I surely (do) _____.

12 PREPARING A PRESENTATION

Doing a project means creating something – making a model, demonstrating how to do something or how something works, dramatizing a scene or making a survey about a certain issue. Presentations are the means by which you share this project with your classmates or some other audience.

An oral presentation is a formal or informal talk on a certain topic delivered in front of a group of people in a clear, logical, well organized form.

In school, university, business, industry, research there are many opportunities in which you may have been asked, are asked or will be asked to speak before a group of people (classmates, colleagues, business partners, etc.) There may be times when your career success depends on the delivery of effective presentations.

We make oral presentations on various occasions. Complete the list below with at least 3 new situations:

Students and professionals can make an oral presentation in order to:

- *present papers at conferences*
- *describe the most important tourist sites in a certain region or country*
- *show how a certain device works*
- *try to persuade clients to buy a specific product*
- *describe developments in a certain field*
- *analyze results of a survey on a certain topic*
- _____
- _____
- _____

Have you ever made an oral presentation? Work in groups of 4. In your groups, make a list of the speaking situations in which the group

members made an oral presentation in your native language and/or in English:

Name	Situation	Language used	
		Native language	English

Preparing a Presentation

Before delivering a presentation, you need to prepare it carefully. In order to prepare it, consider the following elements: subject, purpose, audience (SPA).

- select and limit your subject
- determine your purpose
- analyze your audience

Subject

One of the first questions you need to ask when you make an oral presentation is "*What am I going to speak about?"* If your teacher or tutor assigns you the topic, you don't need to worry about this. But if **you** are to choose the topic you want to speak about, you need to consider this question carefully taking into account your own knowledge and interests, as well as the interests of your listeners.

Therefore, choose a subject that

- you know well
- you like
- is of potential interest to your audience

In order to do this, you can use brainstorming or another technique for generating ideas (see **Appendix 2**).

Once you have chosen a subject, narrow it down so as to cover all the important aspects in the given amount of time.

The 'narrowing down' can be done in several steps:

TECHNOLOGY
Electronics
Developments
Television
Smart TV

It's your turn now. Work in pairs. Narrow down the following subjects:

TELEPHONES

_____

_____

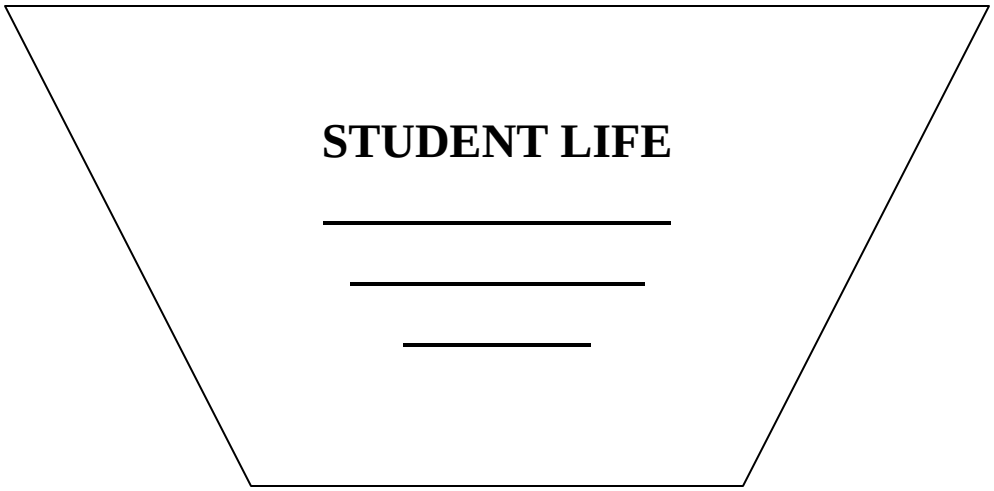
_____

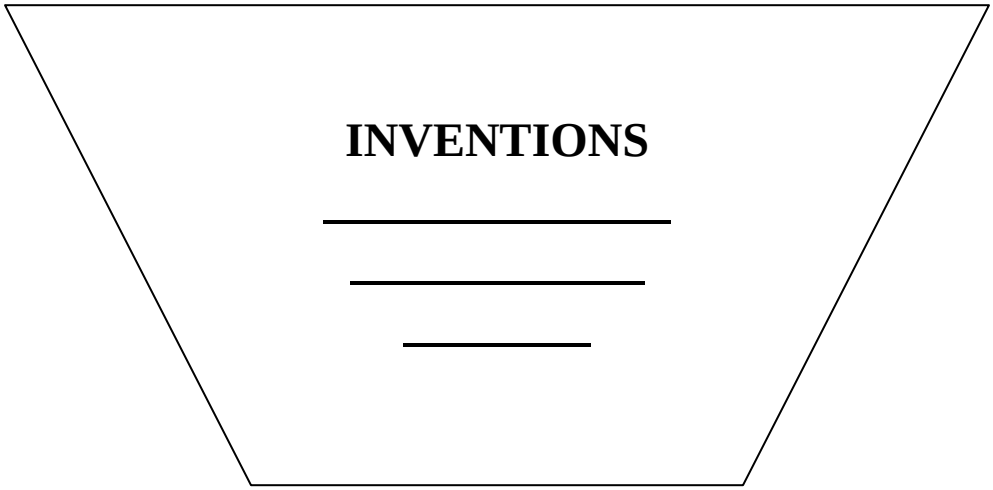
CITY OF THE FUTURE

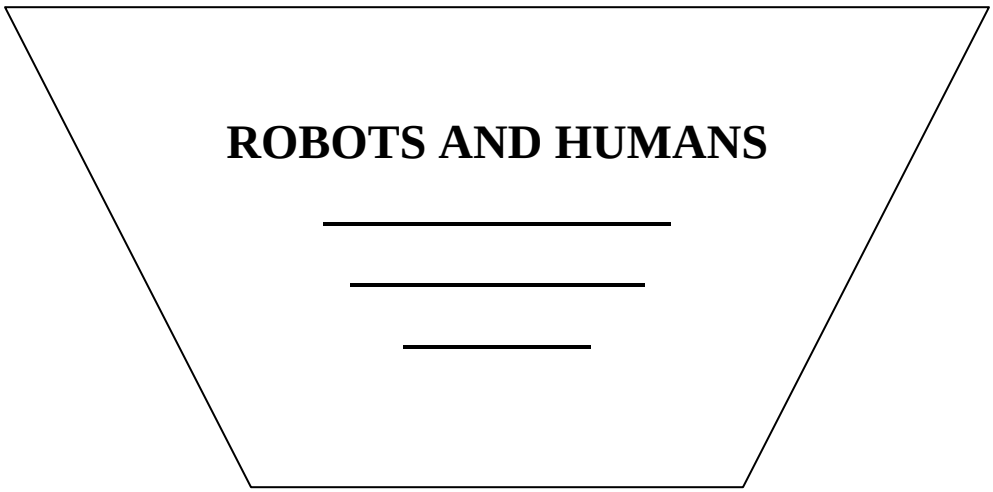
_____

_____

_____


STUDENT LIFE


INVENTIONS


ROBOTS AND HUMANS

Purpose

Whenever you write a text or you deliver an oral presentation, you should think about your purpose. The question you should try to answer is "*Why am I speaking/ writing about this?*"

There are three main purposes for writing or making an oral presentation:

- *to inform*, to give your listeners information regarding a certain topic
- *to persuade*, to convince your listeners (e.g. to persuade your listeners to buy a certain product)
- *to entertain*, to provide an entertaining presentation without trying to convince them of something (you can tell them a legend or a story)

These purposes are often combined: one and the same written or oral text can persuade and entertain or inform and persuade at the same time.

Read the following fragments from oral presentations. For each of them, write the purpose(s). Be ready to defend your choice

1. _____

Hello, everybody. Today I'm going to talk about developments in electronics. We are all students of electronics, but how many of us know how it all started? How many of us know how the existence of electrons was discovered?

Well, the first part of my presentation will try to answer these questions; the second part is a survey of present developments in the field, while the last part is going to offer a glimpse of the future.

More than a century ago, electronics was unknown. There existed no television, computers, artificial satellites, robots, smartphones or other electronic devices we take for granted. The real beginnings of electronics can be traced back to the discovery of the cathode rays in the 19th century…

2. _____

Good morning, ladies and gents. Even though some of you may know who I am, let me introduce myself. I'm Mario Vespucci, the chef of the well known Italian restaurant *La Strada*. It has been said that there is no love more sincere than the love of good food. I'm pretty sure you'll agree to that when you visit our street, I mean our *Strada*. Located in the heart of the city, next to the famous Soho theatres, *La Strada* offers you the best of the best in

Italian cuisine artfully prepared by our unequalled team led by yours truly. Whether you're in London for a special occasion or not, any occasion will become special if you visit us. I guarantee you'll fall in love with *La Strada*…

3. _____

Dear children, how many of you know the story about Snow White? All of you? Very well. What about Cinderella? All of you again? But I think only some of you know the story of a young fellow called Spiderman. Yes, just as I thought. Well, this Spiderman was a boy like you. He had nothing special, in fact he was quite an ordinary teenager, rather shy, in fact. One day, while visiting a kind of museum, a spider stung him and he gradually suffered some mutations that helped him climb up walls and attach himself to buildings by means of huge spider webs…

Audience

The third important element is the audience. The answer to the question "*Who are my listeners?*" is important because you need to adapt your presentation to the audience's needs, interests and background knowledge. Your audience's profile will influence your selection of topic and the way you develop it, your choice of words, the examples and details you include to support your ideas, as well as the amount of specialized information.

Use the checklists below to analyze your class as audience and to evaluate the characteristics of the setting. Compare your results with a partner.

Audience profile checklist

Number of listeners	
Age range	
Average range	
Gender	
Nationality	
Ethnic groups	
Education	

Occupation	
Level of English	
Background knowledge	
Technical knowledge	

Setting checklist

Time limit (how long?)	
Place (where?)	
Seating arrangements	
Formality level	
Audio-visual aids	

Look again at the three selections of oral presentations above. What can you say about the audience each speech is addressed to?

1. Work in pairs. Decide whether these topics are suitable (S) or unsuitable (U) for a 10 minute presentation in your group of students.

1. _____ My Hometown
2. _____ Car of the Future
3. _____ Students' Life in the Hostel
4. _____ House of the Future
5. _____ New Year Celebrations in the World
6. _____ Uses of Lasers in Medicine
7. _____ Pollution
8. _____ Computers and the Human Brain
9. _____ Lung Cancer
10. _____ How Sedimentary Rocks are Formed

2. For each topic that you consider unsuitable, say whether it is too limited, too general, too technical, too well known to be presented in 10 minutes to the students in your group. Insert the number corresponding to the

respective topic in the proper column. Narrow down the topics that are too general using the step-by-step technique presented above.

Too limited	Too general	Too technical	Too well known

1. *Work in pairs. Write down 3 topics that you think are suitable for a 10-minute presentation given to your class. Consider the profile of your class as an audience.*

2. Swap your list with another pair.

3. Evaluate the suitability of their topics. Be prepared to defend your point of view.

4. Take back your own list and improve it, taking into account your peers' opinion.

Structure of an Oral Presentation

Like any oral or written text, your presentation should include the traditional three parts:

- *Introduction* (tell them what you are going to tell them)
- *Body* (tell them)
- *Conclusion* (tell them what you told them)

Introduction

Functions

1. It should attract the listeners' attention, while focusing their interest on the topic (acts as an incentive);
2. It should identify the outline/ steps in your presentation (acts as a frame of reference)

1. The Introduction as an Incentive

Your introduction is one of the most important parts of the presentation. You need to plan a *strong* introduction to make everybody want to listen to your presentation. Try to create common ground with your audience, by taking into account their interests, wants and needs.

Techniques

In order to build a 'strong' introduction, use one or a combination of the following techniques:

Anecdote (A Personal Story)

You can start an oral presentation with a short and amusing personal account of an incident. Not any kind of story, but one that is related to your topic and can lead your audience to the subject and body of your presentation.

Quotation from Authority/ Expert

A well-chosen quotation is a good way of creating common ground, because it gives both you and your listeners the same words to reflect on. You can also start the presentation by quoting a proverb. The quotations you choose should lad to the topic you are going to speak about.

A Surprising, Unusual Fact

If you start your presentation with a strange, surprising, unusual fact, your listeners will be interested in finding out how this incident relates to your presentation.

Impressive Facts or Statistics

By starting your presentation with impressive facts and statistics, you can make your listeners interested in the content of your speech.

A Question

Asking your listeners one or several questions means creating common ground through dialogue and interaction. In this way, you involve your listeners in the presentation you are going to deliver: they will try to answer your question(s) and will want to listen to your presentation to compare their answer to the one(s) you give.

Read these introductions to oral presentations and identify the technique(s) used in each of them.

1. Technique _____

Have you ever wondered which places in the world are the strangest, the most bizarre? One of them is Giant's Causeway, in Northern Ireland. Situated next to the Atlantic Ocean, it is made up of more than 40, 000 short columns created from cool magma which form a honeycomb-like pattern. Scientists think it took about 60, 000 years of erosion for the columns to become visible. Another surreal place is Hvitserkur in North Iceland. It is a natural rock formation of very unusual shape that attracts thousands of tourists every year. Even in pictures one can see streaks of white bird droppings that drip down the edges that give the rock formation the name Hvitserkur. Still another extremely bizarre place is the Red Beach in Panjin, China. Instead of having sand, this beach is covered with a species of seaweed called sueda that stays green most of the year, while in autumn it turns into a cherry-red colour.

2. Technique _____

I first learned about the Heimlich maneuver in a frightening way. I was in a restaurant with my brother and parents, celebrating my brother's 18th birthday. We were all laughing and enjoying our beefsteak, when, suddenly, I felt I couldn't breathe or talk any more and I started to turn blue.
My parents jumped up to help me, but they didn't know what to do. People in the restaurant started yelling for help. In a few seconds, a waitress ran to our table and grabbed me out of my mother's arms. She used the Heimlich maneuver and in an instant a piece of steak popped out of my mouth. If it hadn't been for that waitress (who was in fact a medical student working as ca waitress during the summer holidays), I would have probably died in a few minutes.

3. Technique _____

Air pollution is a problem that can threaten the existence of the earth as such. The astronomer Carl Sagan argued for the necessity to find solutions to such problems when he said: "Are we willing to tolerate ignorance and

complacency in matters that affect the entire human family? Do we value short-term advantages above the welfare of the earth? Or will we think on longer time scales, with concern for our children and grandchildren, to understand and protect the complex life-support systems of our planet? The earth is a tiny and fragile world. It needs to be cherished."
So, my speech is going to focus o some issues related to air pollution. My presentation falls into three main parts. First, I'm going to speak about the main causes of air pollution. Next, I will focus on the most important effects. The last part of my presentation will suggest some solutions to this big issue we are confronted with.

2. The Introduction as a Frame of Reference

The introduction should also identify the topic and outline the main points in your speech. This preview offers your listeners a 'map' of your presentation, thus making it easier for them to understand and follow your ideas and arguments.

If you read again the last paragraph of the third introduction (presented below), you can notice some specific language that can be used to:

a) introduce the topic
b) preview the main points in the presentation

Language Patterns Used in Introductions to Oral Presentations
a) Introducing the topic

I'm going to I will I'd like to	deal with focus on… present speak about talk about
This presentation will	analyze be about compare deal with discuss examine

	explain focus on suggest/propose

b) Previewing the Main Points

This presentation	has falls into is divided into	_____parts/ sections
There are	_____ parts/sections	to this presentation

First, Next, Then, Third(ly),	I'd like to I'm going to I will	deal with focus on present speak about talk about
Finally,		conclude review suggest/propose sum up

1. *Work in groups of 3-4. As a group, choose one of the following topics. Alternatively, you may choose a topic that is not listed below. Each member should choose* ***the same*** *topic.*

1. My University
2. Traditional Celebrations in My Hometown
3. Types of Robots
4. The House of the Future
5. Comparing Student Accommodation in Two Different Hostels

6. How to Prepare_____ (name your favourite dish)
7. Advantages and Disadvantages of Modern Technology
8. Leisure Activities on Student Campus
9. The Best Way to Learn _____
10. The Future of Electronics

2. Work individually to prepare an effective two minute introduction to the topic chosen.

3. Choose a specific technique to build a strong introduction. Each student in the group should choose a ***different*** *technique. Introduce your topic and make a preview of your presentation. Select suitable language from the tables above.*

4. When everyone has finished, take turns presenting your introductions to the group. Discuss the strengths and weaknesses of each introduction.
Use the following checklist:

Checklist

	Yes	**No**
1. Does the introduction create interest in the topic?		
2. Does the introduction specify the topic?		
3. Does the introduction preview the topic?		
4. Does the speaker use specific language to introduce and preview the topic?		

13 DELIVERING A PRESENTATION

Determining the Central Idea

The body is the largest part of your presentation in which you state, discuss, explain, analyze, and clarify your ideas. In order to devise a clear, well organized informative oral presentation, you need to develop a clear statement of your central idea. This central idea is in fact the main point of your presentation. Thus, if the general subject is *Robots*, your central idea may be:

1. to speak about various types of robots
2. to discuss landmarks in the evolution of robotics
3. to describe the electric motor that drives a robot
4. to discuss problems of using robots in a factory and suggest solutions to such problems
5. to discuss the effects of wide-scale robotization
6. to compare robots and humans
7. to analyze the advantages and disadvantages of using robots on a wide scale
8. to explain how a robot can recognize things

Work in pairs. Determine at least two different speaking topics, each with a clear central idea, based on these general subjects:

1. Computers
2. Celebrations
3. Modern Technology
4. Satellites
5. Pollution
6. Students
7. Tourist Destinations
8. Sports
9. Fossil Fuels
10. Cars

Organizing the Main Points

In order to make your presentation clear to follow and easy to understand

- Arrange your ideas in conformity with the *pattern of organization* suitable to your topic and central idea;
- Use suitable transitions (see **Appendix 4)**

Patterns of Organization

A. Chronological Order (Time)

Key question: *when?*
Use this pattern when you

- tell a story
- discuss how something evolved over time
- describe steps in a procedure
- give instructions

1. Central idea: - telling a story
   - giving instructions

   Body:
   I. First
   II. Next
   III. Then
   IV. Finally

2. Central idea: explaining steps of a procedure

   Body:
   I. First step
   II. Second step
   III. Third step
   IV. Fourth step

3. Central idea: discussing how something developed in time

   Body:
   I. Past
   II. Present
   III. Future

B. Spatial Order

Key question: *where?*

This patterns arranges objects according to spatial location or direction, such as

- from far to near
- from east to west
- from north to south
- from inside to outside
- from top to bottom
- from left to right

Use this pattern when you

- describe an object, a building, a place

1. Central idea: describing an object
   Body:
   I. Top
   II. Middle
   III. Bottom

2. Central idea: describing a building
   Body:
   I. Location
   II. General description (outside)
   III. First floor
   IV. Second floor
   V. Third floor
   VI. Top floor

3. Central idea: describing a place
   Body:
   I. Geographical position
   II. Central part
   III. Eastern side
   IV. Western side
   V. Southern side
   VI. Northern side

C. Topical Order (Order of Importance)

Key question: *what?*

This pattern divides a larger topic into several subtopics. You can order your ideas in various ways:

- from the least important to the most important
- from the most important to the least important
- from general to specific
- from specific to general
- from the known to the unknown
- from simple to complex

Use this pattern when you

1. classify into categories
2. analyze causes and effects
3. describe a problem and give solutions
4. compare and contrast two situations
5. give arguments and counterarguments
6. show advantages and disadvantages

1. Classifying

Body:

I. First category
II. Second category
III. Third category
IV. Fourth category

2. Explaining causes and effects

2.1 Explaining causes of a situation

Body:

I. Explanation of the situation (and possible effects)
II. First cause
III. Second cause
IV. Third cause

2.2 Explaining effects of a situation

Body:

I. Explanation of the situation (and possible causes)
II. First effect
III. Second effect
IV. Third effect

3. Describing a problem and giving solutions

Body:

I. Defining the problem (causes and effects)
II. Solution 1
III. Solution 2
IV. Solution 3

4. Comparing and contrasting

4.1 Block method

Body :

I. Similarities
II. Differences

4.2 Point-by-point method

Body:

I. Comparing and contrasting two things according to the first point (criterion)
II. Comparing and contrasting two things according to the second point (criterion)
III. Comparing and contrasting two things according to the third point (criterion

5. Giving reasons for/against

Body:

I. Reasons against
II. Reasons for

or

I. Reasons for
II. Reasons against

6. Showing advantages and disadvantages

Body:

I. Disadvantages
II. Advantages

or

I. Advantages
II. Disadvantages

Match each of the topics below (1-10) with the most suitable pattern of organization. Some patterns will be used more than once.

_____ 1. Types of PC games
_____ 2. How an eye and a camera are similar
_____ 3. Advantages and disadvantages of the Internet
_____ 4. Effects of water pollution on the environment
_____ 5. The Palace of Culture
_____ 6. How to start a business
_____ 7. Energy sources in the twenty-first century
_____ 8. How can we reduce air pollution?
_____ 9. Watching television: pros and cons
_____10. How to prepare for an exam

a. chronological
b. spatial
c. classification
d. cause and effect
e. problem solution
f. comparison and contrast
g. reasons for and against
h. advantages and disadvantages

1. Divide into an even number of groups (of about 4-5 students). Each group should choose one of the following subject areas:

1. Students
2. The Environment
3. Books
4. Computers
5. Celebrations
6. Food
7. Cars
8. Television
9. Travel

10.Telecommunications

2. Each member of the group should work individually to develop the subject chosen into two different topics, each with a clear central idea and a specific pattern of organization. Complete the following:

Subject:_____

Topic 1: central idea _____
Pattern of organization _____

Topic 2: central idea _____
Pattern of organization _____

3. Combine your ideas in the group to make a list of 5 different topics, each with a clear central idea and a different pattern of organization. Write the topics on a piece of paper (list of topics) and the corresponding patterns of organization on another piece of paper (Answer Sheet).

4. Swap your list of topics with another group. ***Do not*** *swap your Answer Sheets.*

5. Decide which pattern of organization best suits each of the topics on the other group's list. Write your ideas at the bottom of the other group's List of Topics.

6. Compare your ideas with the other group and reach agreement on the most suitable patterns of organization.

The Conclusion

The conclusion is the final point of contact between you and the audience. Just like the introduction, it is a very important part of your presentation because the listeners remember best what they hear first and last. Therefore, you need to bring all the threads together, while also leaving a strong impression on the audience.

Functions

1**.** summarize the main ideas
2. leave a strong impression on the audience

Techniques used for concluding an oral presentation

- summarize or review main points

- suggest a solution
- give the audience food for thought
  - ask a puzzling question
  - ask the listeners to reflect on the past
  - ask the listeners to speculate on the future
- ask the listeners to take a stand

Language Used for Concluding an Oral Presentation
Summarizing/Concluding

to summarize	to conclude
to sum up	in short
on the whole	in the end
in brief	in conclusion

Read the following conclusions to oral presentations. Work in pairs to identify the technique(s) used in each of them.

1. Technique _____

To sum up, we can say that robots are a blessing, because there are many advantages in using them. On the other hand, robots can also be seen as a curse, because I think that in time they will replace humans in any activity.

2. Technique _____

To conclude, I think that we all need to be aware that we should try to protect the environment. There are many things we can do and, although they may seem unimportant, by doing them we can help our environment become healthier and cleaner for the generations to come. For instance we can

- walk or use bicycles instead of scooters, motorcycles or cars
- recycle paper, glass, plastic, metal, rubber
- avoid to throw litter in the street or in forests after picnicking
- switch off the lights and our electrical appliances when we don't use them
- consume less power and water

- buy green, buy local, buy used and buy less.

3. Technique _____

Before finishing my speech, try to imagine a person from Ancient Greece or Rome or maybe from the Middle Ages getting by accident into our modern world. What would he/she think of all the devices we take for granted? What would such a person feel when placed in front of a smart TV? Will he/she be afraid? Will he/she feel threatened? How will he/she react?

Delivering a Presentation
Types of Delivery (How?)

When you make a presentation, consider both *what* you say (words, information content) and *how* you say it (delivery style).

There are four main styles of delivery:

1. **Manuscript Presentations**

A *manuscript presentation* is one that is written in full and then read to an audience.

Disadvantages

- it takes a long time to write your presentation in full sentences from beginning to end
- you have little or no eye contact with the audience
- difficult to adapt your presentation to suit the audiences' reactions
- difficult to keep the listeners' attention
- your voice does not sound natural and is often monotonous

NB! Reading from the computer screen during a Power Point presentation has the same disadvantages.

2. **Memorized Presentations**

A *memorized presentation* is written out completely and then memorized by heart.

 *Work in pairs. Make a list of the disadvantages of memorized presentations.*

3. Impromptu Presentations

An *impromptu* presentation is one made on the spur of the moment, with little or no previous planning. Such presentations are usually demanded in certain specific work situations. They are usually given by people who have a lot of experience in a certain field and who are also experienced in giving presentations. So, they are not for you, at least not now.

.

4. Extemporaneous Presentations

An *extemporaneous* presentation is carefully prepared and practiced in advance, without learning it word for word. As students, you should become used to giving this type of presentation, because it is the most effective of the four types. In the case of extemporaneous presentations, the ideas are thought in advance, but the speaker **does not** memorize the exact words.
Although they take time to prepare and practice, such presentations have many advantages.

- you can have a lot of eye contact with the audience
- you can adapt your presentation to suit the audience's reactions
- you can keep your audience's interest
- you can speak in a natural, conversational style

 *Think of the oral presentations you have delivered so far. In the list below tick the delivery style(s) you have used:*

Manuscript Presentation
Memorized Presentation
Impromptu Presentation
Extemporaneous Presentation

Effective Delivery

Effective delivery refers to the way you use your eyes, body and voice to communicate what you have to say.

Eye contact is very important in keeping your audience's interest in the topic. It gives the listeners the feeling that you address them as individuals. It is also important for you as a speaker because you can see whether the listeners understand, are following and are interested in your message by watching their faces.

Some Tips

- Maintain good eye contact with all the listeners.
- Move your eyes from person to person.
- Try not to look at one person all the time, because he/she may feel embarrassed.

Body Language and Posture

The way in which you use your posture, facial expressions and gestures conveys a significant message to your audience.

Some Tips

- Be poised and confident.
- Avoid rigidity.
- Avoid excessive informality – e.g. do **not** lean against a desk or a table.
- Do **not** put your hands in your pocket.
- Use a variety of gestures and facial expressions and synchronize them with the point you want to make.
- Avoid repeating the same gesture all the time (avoid mannerisms - do not play with a pencil; do not shift from one foot to another).
- Avoid using too many gestures.

Voice is also very important in keeping your audience's interest and attention.

Some Tips

- Speak loud enough so that everyone can hear you.
- Vary the volume to draw the listeners' attention to the key points in your presentation.
- Speak at a proper rate (speed): neither too fast, nor too slow.
- Vary your rate of speech and use pauses to draw the listeners' attention to the key points in your presentation.
- Use a natural pitch of voice and vary it to prevent monotony.
- Speak in a natural, conversational manner.
- Pronounce your words clearly and correctly.
- Show enthusiasm for your subject.

Work individually. Choose one of the following subjects:

1. Students
2. The Environment
3. Books
4. Computers
5. Celebrations
6. Food
7. Cars
8. Television
9. Travel
10. Telecommunications

2. Limit your subject to an interesting topic with a clear central idea and select a suitable pattern of organization. Then complete the outline form below:

Name:
Topic:
Central idea:
Pattern of organization:

*3. Make an outline of your presentation (see **Appendix 5**)*

4. Prepare a five minute presentation. Look at the checklist below to see how you will be evaluated.

5. Deliver your presentations in turns in small groups. The other students who are listening should complete the checklist below.

Oral Presentations Checklist

Speaker:

Topic:

	Yes	**No**	**Comments**
Delivery			
Does the speaker use a natural, conversational style (not read or memorized word for word)?			
Is the volume loud enough?			
Is the rate of speech appropriate (neither too fast, nor too slow)?			
Does the speaker have eye contact with the audience?			
Is the speaker's body posture appropriate?			
Content and organization			
Is the topic suitable for the audience?			
Is the topic suitable for the time available (neither too broad nor too narrow)?			
Is there a clear central idea?			
Does the presentation fall into three parts (introduction, body, conclusion)?			
Does the introduction specify the topic?			
Does the introduction preview the topic?			
Does the introduction create interest in the topic?			
Are the main points clearly stated?			
Are the main points supported by relevant details, facts, examples?			

Does the conclusion summarize the main points of the presentation?			
Does the speaker use suitable transitions in all the introduction, body and conclusion?			
Accuracy and fluency			
Does the speaker use correct grammar structures?			
Does the speaker use vocabulary appropriate for the audience?			
Does the speaker pronounce all the words correctly?			
Does the speaker express his/her ideas fluently?			
Visual aids			
Does the speaker use any visual aids?			
Are the visual aids easy to see and clear?			
Are the visual aids helpful in clarifying the topic?			

14 LOOKING FOR A JOB

1. Work in groups of 7-8. Make a survey in your group, trying to find out which students have a job at present. Complete the table below with information about

- who is working at present
- where he/she is working (field of activity)
- how he/she found out about the job

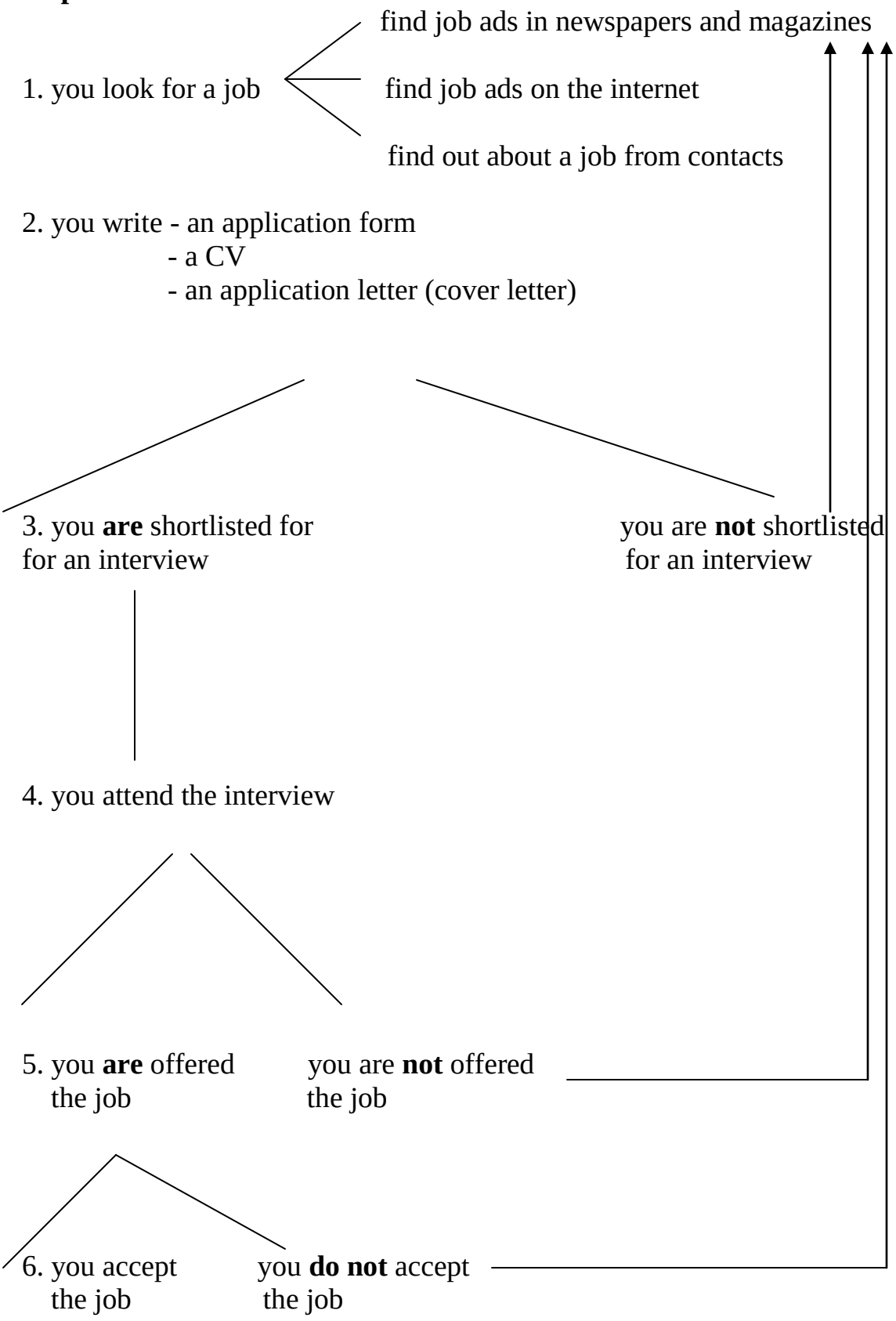
Name	Is working		Where?	How did he/she find out about the job?
	Yes	No		

2. Name a spokesperson who will present the survey results for your group.

1. Work in groups of four. Make a list of the advantages and disadvantages of having a job while you are still a student.

2. Have a whole class discussion on this issue.

Steps


find job ads in newspapers and magazines
1. you look for a job
find job ads on the internet
find out about a job from contacts
2. you write - an application form
- a CV
- an application letter (cover letter)
3. you **are** shortlisted for for an interview
you are **not** shortlisted for an interview
4. you attend the interview
5. you **are** offered the job
you are **not** offered the job
6. you accept the job
you **do not** accept the job

Writing a CV

Writing a good CV is essential in applying for a job. Remember this:

- The CV is the tool to get you to the interview stage
- The interview is the tool to get the job

Below are some tips on what you should/ shouldn't do when writing your CV. In each pair, one assumption is correct, the other one is false. Cross out the false assumption and keep the correct one. The first one has been done for you.

1. Your CV ~~should~~ / shouldn't be handwritten**.**
2. A CV should / shouldn't be short**.**
3. A CV should / shouldn't have a clear layout**.**
4. Abbreviations should / shouldn't be used**.**
5. Work experience should / shouldn't be listed in reverse chronology**.**
6. Your CV should / shouldn't be tailored to the job you are applying for**.**
7. You should / shouldn't lie about your qualifications**.**
8. You should / shouldn't include all your interests and hobbies**.**
9. You should / shouldn't use the pronoun *I* a lot**.**
10. You should / shouldn't check the accuracy of your CV.

Decide which of the following items are generally included in a CV. Place a tick (√) in the appropriate box (Y = Yes ; N = No; S = sometimes). Discuss with a partner and then have a whole class discussion.

No		**Y**	**N**	**S**
1.	The grades you received in your school-leaving examination			
2.	Your current salary			
3.	Your name, address and telephone number			
4.	List of relevant past and present jobs and positions			
5.	Your hobbies and interests			
6.	Date and place of birth			

7.	The name of the job you are applying for			
8.	Details about your education			
9.	Details about previous jobs			
10.	Reasons for applying for this job			
11.	The foreign languages you know			
12.	Your marital status			

Read these two CVs. Which of them do you prefer? Refer to:

- *layout*
- *headings*
- *content*
- *language*

1.

CURRICULUM VITAE

Name MARCEL CERNESCU

Address Unirii nr. 8, Focşani
Telephone: -home: 0237 213457
-cell: 0745 430 497

Date of Birth June 9, 1996

Marital Status Single

Education 2003 to 2007 Primary School no 9 in Focşani
2007 to 2011 Secondary School No 9 in Focşani
2011 to 2015 "AL.I.CUZA" National College, Focşani
- major studies in Mathematics and Physics
- participation in activities such as: football, basketball
2015 I passed the school-leaving examination with good marks in Romanian, Mathematics, and Physics
2015 I became a student at "Gheorghe Asachi" Technical University in Iaşi

Special Qualifications	Driving license (for 1 year) Fluent languages: Romanian, English, German Knowledge of Informatics, Electronics
Personal Abilities	Creative, Enthusiast, Optimistic, Communicative person
Interests	Electronics, Computers, Business, Travelling, Sports
References	Available on request

2.

CURRICULUM VITAE

PERSONAL DETAILS:

Name:	IOANA MARINA PAVEL
Address:	Str. Bradului Nr. 10, Bl. A13, Iaşi
Telephone:	- home 0232 248971 - mobile 0756 873 952
Date of Birth:	22 December 1995
Languages:	Conversational English, German
Computer Literacy:	Borland C, C++, Spice, Pascal

EDUCATION:

2002-2006	Primary School No.23 Iaşi
2006-2010	Secondary School No.23 Iaşi
2010-2014	National College Iaşi
2014	Baccalaureate examination: Romanian, Mathematics, Physics
2014 to date	"Gheorghe Asachi" Technical University of Iaşi Faculty of Electronics, Telecommunications and Information Technology

INTERESTS: design, computers, foreign languages

REFERENCES: Available on request

CV Headings

As you can see from the previous examples, the main headings and subheadings in a traditional CV are:

PERSONAL DETAILS

Name
Address (in Romanian)
Telephone
Date of birth
Nationality (when you apply for a scholarship abroad)
Languages
Computer skills
Driving Licence (specify category)

EDUCATION

period... name of school
period... name of university, major field of study
Degree

WORK HISTORY (in reverse chronology)

period name of company, position

INTERESTS (only those connected to the job you are applying for)

REFERENCES (use the phrase 'Available on request') and enclose them if needed

Let us now examine the main sections in more detail:

Education

Terminology

Education (most widely used)
Education and Training
Education and Qualifications

Function: to give the future employer a clear idea about your education background.

Tips

The tips below show you how to write about your educational background in your CV at different stages in your professional development:

You are an undergraduate student	You have just graduated	You have some professional experience
• ***Education*** is the most important section in your CV • ***Sequence of items:*** chronological order, e.g. • high school education • baccalaureate diploma • university education - field of study - major subjects (opt.) - average grade - grades (only the high ones) - your ranking	• ***Education*** is still the most important section in your CV • ***Sequence of items:*** chronological order, e.g. • high school education • baccalaureate diploma • university education - field of study - degree - final ranking (if high) - information on end-of-studies-project (paper)	• ***Education*** is no longer the main point of interest • ***Sequence of items:*** chronological order, e.g. •baccalaureate diploma (optional) •university education - field of study - degree -other degrees (e.g. PhD)

Therefore, the more experience you have, the shorter the rubric about education. This is only natural, since the main focus will shift from education to professional experience.

*Read these **Education** sections. Are they written by*

a. an undergraduate student?
b. someone who has just graduated?
c. someone with professional experience?

Match the letters (a-c) to the corresponding numbers (1-3)

a.	
b.	
c.	

1.

July 2010	Baccalaureate with honours
2010-2014	"Gheorghe Asachi" Technical University of Iaşi Faculty of Electronics, Telecommunications and Information Technology
2014	Degree in Telecommunications Graduated first out of a class of 209 Wrote a 120 page report on *Modern Telecommunication Systems*

2.

2004-2008	"Gh.Asachi" Technical University of Iaşi Faculty of Electronics and Telecommunications
Degrees	
2008	Degree in radiocommunications
2010	MEng in communications systems "Gheorghe Asachi" Technical University of Iaşi
2014	Doctorate in electronics "Gh.Asachi" Technical University of Iaşi

3.

2010-2014 "Roman Vodă" High School Roman
July 2014 Baccalaureate examination: Mathematics, Romanian, Chemistry
2014 to date "Gheorghe Asachi" Technical University of Iaşi
Faculty of Electronics and Telecommunications
Subjects: Electronic Devices and Circuits
Signals, Circuits and Systems
Fundamentals of Electrical Engineering
Ranked third in a class of 289

Work History

Terminology

Work History
Work
Work Experience
Employment History
Experience } These 2 headings are generally used by
Professional Experience } specific professional categories: physicians, lawyers, architects
Career History } This heading is used by people with rich professional experience

Subheadings

Summer Jobs
Skills
Achievements

Function

This section will show your future employer what professional experience you have gained; on its basis, he/she will be able to evaluate and rank your professional potential. The more professional experience you have, the longer the *Work History* rubric becomes.

Information Content

The information included in the *Work History* rubric will expand with time: whenever you get a promotion or you get another job in one and the same company or in another company, you need to include these changes in your CV. Therefore, remember to keep your *Work History* rubric updated.

Here are two formats:

- one that can be used by undergraduate students and/or by people with less work experience
- one that can be used by people with more experience

Less Work Experience	More Work Experience
WORK HISTORY • presentation of jobs (up to the present moment) **reverse chronology** latest job ↓ first job **period, name of company, job** • *Summer Jobs* (if any) presentation of summer jobs **period, name of company, job** • *College Positions* presentation of college positions (e.g. student associations) **activity description**	***WORK HISTORY*** • presentation of jobs (up to the present moment) and responsibilities **reverse chronology** latest job ↓ first job **period, name of company, job responsibilities** • *Achievements / Accomplishments* • **presentation of your professional achievements**

Language

The *Work History* rubric makes use of two main tenses:

- **Past Tense** – whenever you refer to past jobs/ positions or responsibilities,

e.g. my duties *included*…

carried out	improved
coordinated	increased
conducted	organised
designed	tested
developed	participated in
evaluated	promoted
expanded	supervised

• **Present Tense** – when you refer to present job/position or responsibilities, e.g.
my duties *include*…

currently { coordinate / develop / evaluate } (you can choose other verbs in the present that describe your activity)

• Use an **elliptic style**:

- omit the pronoun *I* :
  as Managing Director, { increased sales by 50% / established new markets }
- omit the verbs *have* and *be*:
  while functioning as trainee sales engineer, researched and established new markets
- omit articles, e.g.
  performed same functions as Assistant Manager

Languages
This rubric may be part of the *Personal Details* section or may appear as a separate section, placed before the *Interests*.

Computer Literacy
Just like the *Language* rubric, this one can appear at the beginning, as part of the *Personal Details* or towards the end of your CV, as a separate section. You should enlist here the **computer programmes** you are familiar with, as well as your **computer skills**.

Read the job ads below. Write an efficient CV to apply for one of these jobs:

Trainee Field Service Engineer
Trainee Field Service Engineer
Industry: Advanced Manufacturing
Job Type: Permanent

One of the world's largest manufacturers of Machine Tooling Equipment require a Trainee Field Service Engineer to join their expanding team.

After training, your main job role will be installing, servicing, preventative maintenance and mechanical / electrical repair work on my client's range of CNC Punch Press and Press Brake machinery and associated CNC equipment.

Job purpose

- Installation of equipment at customers' sites.
- Training customer in operation, maintenance and safety aspects.
- Regular routine service of machines and associated equipment.
- Diagnose and rectify machine problems and breakdowns.
- Promote sales of maintenance contracts.
- Promote sales of machine tools and associated equipment.

Key attributes

- A suitable engineering qualification.
- Understanding of electrical / electronic / hydraulic and mechanical drawings and systems.
- Enthusiastic and self-motivated.
- Smart and professional presentation.
- Ability to work alone and under pressure.
- Ability to communicate at all levels of an organisation.
- Full driving licence.

Benefits Package

- Competitive salary.
- Pension scheme.
- Healthcare.
- Company car.
- Laptop for business use.
- 25 days annual leave per annum plus bank holidays.
- Full training.
- Continuous professional development.

If you are interested in this opportunity, please send your CV to lydiabarret@machtoolequip. co.uk

Graduate Electronic Design Engineer

Graduate Electronic Design Engineer required by an established company located in Reading, Berkshire. The company is looking to hire a Graduate Electronic Design Engineer to join its existing, highly skilled team of Electronics Engineers.

The successful Graduate Electronic Design Engineer is likely to have a relevant degree in Electronic Engineering and an enthusiasm to learn new skills and technologies and in particular to work within electronics and embedded software.

Extensive practical training and support will be provided.

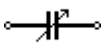
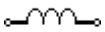
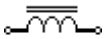
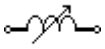
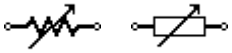
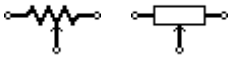
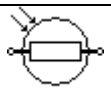
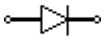
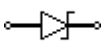
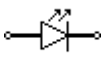
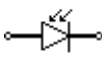
The successful Graduate Electronic Design Engineer will be involved with:

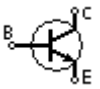
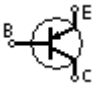
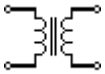
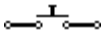
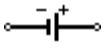
- Digital/Analog electronics design
- Embedded software development
- C++
- Qt
- Real time
- Linux
- Networking

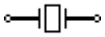
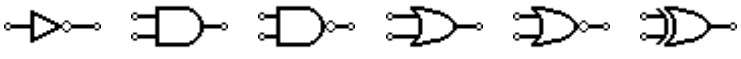
If you are looking for a role of this nature, please contact BrianThomson@SpectrumIT.co.uk or call 02384 755287.

Appendix 1

Electronic Symbols

capacitor	
polarized capacitor	
variable capacitor	
inductor	
iron core inductor	
variable inductor	
resistor	
variable resistor/rheostat	
potentiometer (pot)	
thermistor	
photoresistor/light dependent resistor (LDR)	
diode	
Zener diode	
light emitting diode (LED)	
photodiode	

NPN bipolar transistor	
PNP bipolar transistor	
transformer	
earth ground	
toggle switch	
pushbutton switch	
DIP switch	
voltage source	
current source	
AC voltage source	
generator	
cell	
battery	
ammeter	
voltmeter	
ohmmeter	
wattmeter	

motor	
lamp/light bulb	
electric bell	
buzzer	
SPST relay	
SPDT relay	
fuse	
loudspeaker	
microphone	
operational amplifier (op amp)	
antenna/aerial	
dipole antenna/aerial	
crystal oscillator	
logic gate	 NOT AND NAND OR NOR XOR
D flip-flop	

Appendix 2

Techniques for Generating Ideas

Brainstorming

In order to brainstorm ideas:

- Place your topic at the top of a page;
- Set a time limit (5 or 10 minutes);
- List items related to the topic as quickly as you can, without making any value judgments. At this stage, all items are legitimate for your list, because a good idea can emerge out of what seems to be a bad idea;
- Organize your ideas, by grouping them into related items;
- Set aside the ideas that do not fit into a grouping. Groupings with the greatest number of items indicate areas that may prove to be particularly fertile in developing your piece of writing.

Illustration:
Brainstorming: Robotic Systems

robots: machines

types of robots:
- automata
- robotic systems (industry)
- androids
- cyborgs

uses:
- industry
- home
- army
- space

advantages:
- high accuracy
- speed
- productivity

disadvantages:
- have to be programmed
- lead to unemployment
- high cost
- can have malfunctions

Freewriting

This is a warm-up technique, meant to help you overcome the *writer's block*. To practise this technique, take a watch or a clock and follow these steps:

- Look at the topic you need to write about;
- Write down a sentence starting you point of view at the top of a blank sheet of paper;
- Starting from the topic question, write for five minutes **without interruption. Do not stop writing**. If you are at a loss, you can just repeat what you have already written.
- After **exactly** five minutes, stop writing;
- Read over what you have written;
- Summarize the main idea in a single sentence;
- Write this new sentence at the top of a second sheet of paper;
- Using this new sentence as a starting point, write again for five minutes. **Do not stop writing**;
- Read again what you have written;
- Summarize the main idea in a single sentence;
- Write this idea at the top of a third sheet of paper;
- Repeat the stages until you feel you have overcome the *writer's block*.

Focused Freewriting

This technique offers you the benefits of freewriting while keeping your attention focused on the topic:

- Start with a definite topic;
- Write for five minutes;
- Read over what you have written;
- Circle or underline any words, phrases and sentences that look potentially useful;
- Group these items either at the bottom of the page or on a separate sheet of paper.

Following is a portion of a student's focused freewriting around the topic *Robots - A Mixed Blessing*.

On the one hand, robots are useful in industry because they work full time, they have a very big accuracy and they can work in dangerous places; they

can increase production and they use an advanced technology, giving products a better quality.

On the other hand, they can have malfunctions and if a robot stops, the whole production line can stop. After a period of time, robots must be replaced because they do not last long.

This piece of freewriting was organised into the following notes meant to be expanded.

Robots

Advantages	**Disadvantages**
- work full time	- can have malfunctions
- work in dangerous places	- if a robots stops → the whole production line can stop
- lead to increased prod.	- do not last long - have to be replaced
- make better-quality prod.	

The 'Many Parts' Technique

This method for generating ideas consists in listing its parts and then making notes about the **uses** or **consequences** of some or of all the parts enlisted.

What are the 'parts' (i.e. types) of robots?
1. automata
2. robotic systems
3. androids
4. cyborgs

One Part Explored

What are the uses of robotic systems?
- industry
  - production lines (welding)
  - materials handling
  - assembly (electronic parts)
  - inspection
- military
  - automatic pilot
  - defuse bombs
  - control modern weapons

- ocean - explorer
- space - lift satellites out of spacecrafts
  - put satellites into orbit
  - stationary observer
    - collect samples
    - take photos
- office - clerk
  - mail handler

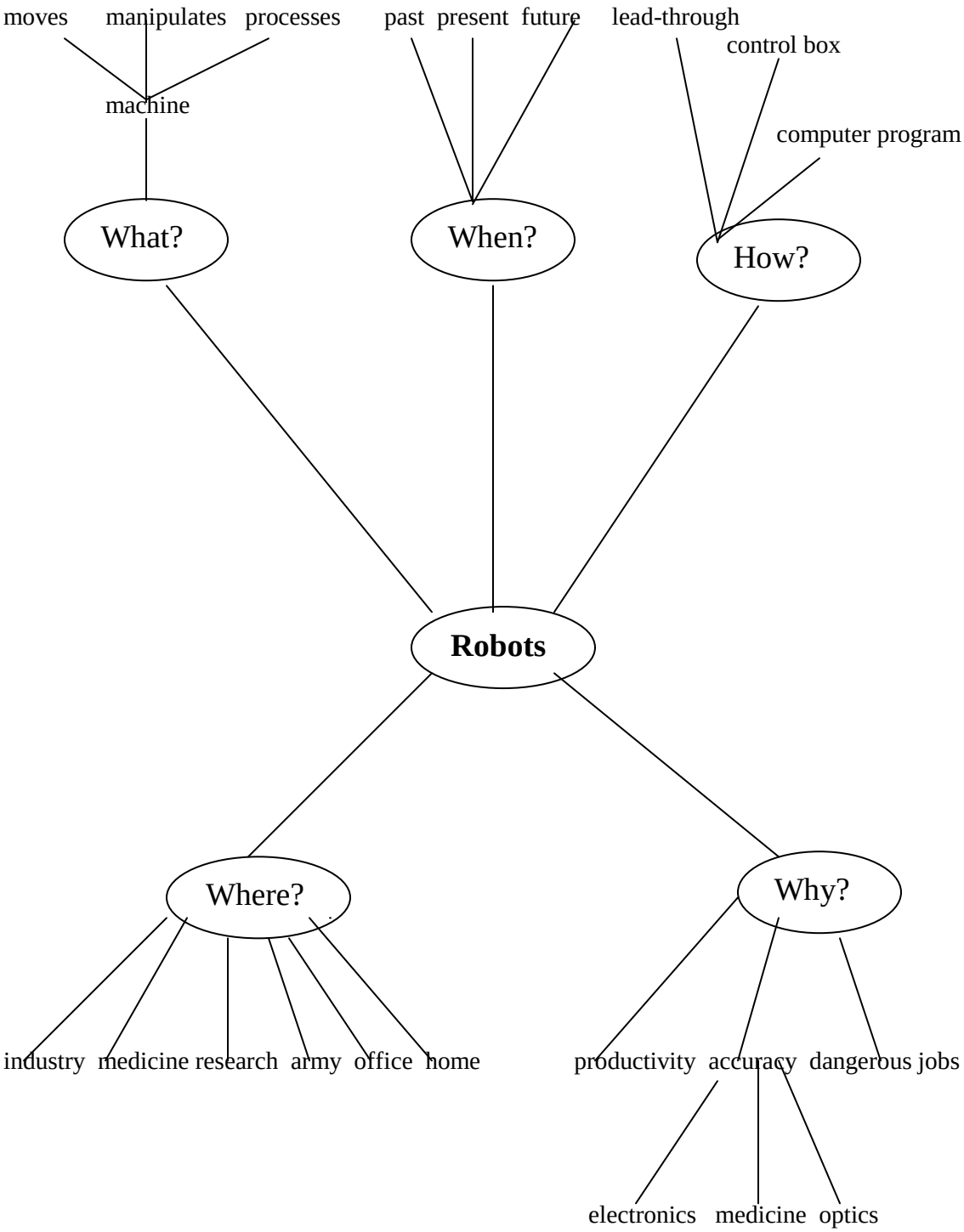
- home
  - companion
  - housekeeper
    - cleaning
    - cooking

What are the consequences of using robotic systems?
- higher productivity
- accuracy
- hard and dangerous work will not be performed by humans
- employees will be mostly knowledge workers
- possibility of totally replacing humans in industry
- unemployment
- disasters (if one part of the system breaks, everything may fall apart)

Mapping Using the Journalist's Questions

This is a technique used both for generating and organizing ideas. It is particularity useful if you enjoy thinking visually. Here are the steps you need to take if you apply this technique:

- Write the topic in the middle of the page;
- Circle the topic;
- Draw several short spokes from the circle (3-6);
- At the end of each spoke place one of the journalist's questions (*who, what, where, why, how*);
- Make a major branch off the spoke for each answer to a question. In answering these questions you can in fact *define, compare, contrast,* or *investigate cause and effect*;
- Working with each answer individually, pose one of the six journalist's questions again


moves
manipulates
processes
machine
What?
past
present
future
When?
lead-through
control box
computer program
How?
Robots
Where?
industry
medicine
research
army
office
home
Why?
productivity
accuracy
dangerous jobs
electronics
medicine
optics

Appendix 3

Irregular Verbs

Infinitive		Past Tense		Past Participle		Translation
be	/bi:/	**was/were**	/wɔz / /wə: /	**been**	/bi:n/	a fi
become	/b 'kʌm/	**became**	/bɪ 'keɪm/	**become**	/bɪ 'kʌm/	a deveni
begin	/bɪ 'gɪn/	**began**	/bɪ 'gæn/	**begun**	/bɪ 'gʌn/	a începe
bend	/bend/	**bent**	/bent/	**bent**	/bent/	a îndoi
bind	/baɪnd/	**bound**	/baʊnd/	**bound**	/baʊnd/	a lega
bite	/baɪt/	**bit**	/bɪt/	**bitten**	/'bɪtn/	a muşca
blow	/bləʊ/	**blew**	/blu:/	**blown**	/bləʊn/	a sufla
break	/breɪk/	**broke**	/brəʊk/	**broken**	/'brəʊkən/	a sparge
bring	/brɪŋ/	**brought**	/brɔ:t/	**brought**	/brɔ:t/	a aduce
build	/bɪld/	**built**	/bɪlt/	**built**	/bɪlt/	a construi
burn	/bə:n/	**burnt**	/bə:nt/	**burnt**	/bə:nt/	a arde
buy	/baɪ/	**bought**	/bɔ:t/	**bought**	/bɔ:t/	a cumpăra
catch	/kætʃ/	**caught**	/kɔ:t/	**caught**	/kɔ:t/	a prinde
choose	/tʃu:z/	**chose**	/tʃəʊz/	**chosen**	/'tʃəʊzən/	a alege
come	/kʌm/	**came**	/keɪm/	**come**	/kʌm/	a veni
cost	/kɔst/	**cost**	/kɔst/	**cost**	/kɔst/	a costa
cut	/kʌt/	**cut**	/kʌt/	**cut**	/kʌt/	a tăia
dig	/dɪg/	**dug**	/dʌg/	**dug**	/dʌg/	a săpa
do	/du:/	**did**	/dɪd/	**done**	/dʌn/	a face
draw	/drɔ:/	**drew**	/dru:/	**drawn**	/drɔ:n/	a desena

dream	/dri:m/	**dreamt**	/dremt/	**dreamt**	/dremt/	a visa
drink	/drɪŋk/	**drank**	/dræŋk/	**drunk**	/drʌŋk/	a bea
drive	/draɪv/	**drove**	/drəʊv/	**driven**	/'drɪvən/	a şofa
eat	/i:t/	**ate**	/eɪt, et/	**eaten**	/'i:tn/	a mânca
fall	/fɔ:l/	**fell**	/fel/	**fallen**	/'fɔ:lən/	a cădea
feed	/fi:d/	**fed**	/fed/	**fed**	/fed/	a hrăni, a alimenta
feel	/fi:l/	**felt**	/felt/	**felt**	/felt/	a simţi
fight	/faɪt/	**fought**	/fɔ:t/	**fought**	/fɔ:t/	a lupta
find	/faɪnd/	**found**	/faʊnd/	**found**	/faʊnd/	a găsi
fly	/flaɪ/	**flew**	/flu:/	**flown**	/fləʊn/	a zbura
forget	/fə'get/	**forgot**	/fə'gɔt/	**forgotten**	/fə'gɔtn/	a uita
forgive	/fə'gɪv/	**forgave**	/fə'geɪv/	**forgiven**	/fə'gɪvən/	a ierta
freeze	/fri:z/	**froze**	/frəʊz/	**frozen**	/'frəʊzən/	a îngheţa
get	/get/	**got**	/gɔt/	**got/gotten**	/gɔt//'gɔtn/	a primi, a obţine
give	/gɪv/	**gave**	/geɪv/	**given**	/'gɪvən/	a da
go	/gəʊ/	**went**	/went/	**gone**	/gɔ:n/	a merge
grow	/grəʊ/	**grew**	/gru:/	**grown**	/grəʊn/	a creşte
hang	/hæŋ/	**hung**	/hʌŋ/	**hung**	/hʌŋ/	a atârna
have	/hæv/	**had**	/hæd/	**had**	/hæd/	a avea
hear	/hɪə/	**heard**	/hə:d/	**heard**	/hə:d/	a auzi
hide	/haɪd/	**hid**	/hɪd/	**hidden**	/'hɪdn/	a (se) ascunde
hit	/hɪt/	**hit**	/hɪt/	**hit**	/hɪt/	a lovi
hold	/həʊld/	**held**	/held/	**held**	/held/	a ţine
hurt	/hə:t/	**hurt**	/hə:t/	**hurt**	/hə:t/	a răni

keep	/ki:p/	**kept**	/kept/	**kept**	/kept/	a păstra
know	/nəʊ/	**knew**	/nju:/	**known**	/nəʊn/	a şti, a cunoaşte
lay	/leɪ/	**laid**	/leɪd/	**laid**	/leɪd/	a pune, a aşeza
lead	/li:d/	**led**	/led/	**led**	/led/	a (con)duce
learn	/lə:n/	**learnt**	/lə:nt/	**learnt**	/lə:nt/	a învăţa
leave	/li:v/	**left**	/left/	**left**	/left/	a pleca, a părăsi
lend	/lend/	**lent**	/lent/	**lent**	/lent/	a da cu împrumut
let	/let/	**let**	/let/	**let**	/let/	a lăsa
lie	/laɪ/	**lay**	/leɪ/	**lain**	/leɪn/	a se situa, a zăcea
lose	/lu:z/	**lost**	/lɔst/	**lost**	/lɔst/	a pierde
make	/meɪk/	**made**	/meɪd/	**made**	/meɪd/	a face, a fabrica
mean	/mi:n/	**meant**	/ment/	**meant**	/ment/	a însemna
meet	/mi:t/	**met**	/met/	**met**	/met/	a (se) întâlni
pay	/peɪ/	**paid**	/peɪd/	**paid**	/peɪd/	a plăti
put	/pʊt/	**put**	/pʊt/	**put**	/pʊt/	a pune
read	/ri:d/	**read**	/red/	**read**	/red/	a citi
ride	/raɪd/	**rode**	/rəʊd/	**ridden**	/'rɪdn/	a călări
ring	/rɪŋ/	**rang**	/ræŋ/	**rung**	/rʌŋ/	a suna
rise	/raɪz/	**rose**	/rəʊz/	**risen**	/'rɪzən/	a răsări, a se ridica
run	/rʌn/	**ran**	/ræn/	**run**	/rʌn/	a fugi
say	/seɪ/	**said**	/sed/	**said**	/sed/	a spune
see	/si:/	**saw**	/sɔ:/	**seen**	/si:n/	a vedea
sell	/sel/	**sold**	/səʊld/	**sold**	/səʊld/	a vinde

send	/send/	**sent**	/sent/	**sent**	/sent/	a trimite
set	/set/	**set**	/set/	**set**	/set/	a pune
shake	/ʃeɪk/	**shook**	/ʃʊk/	**shaken**	/'ʃeɪkən/	a scutura
shine	/ʃaɪn/	**shone**	/ʃəʊn/	**shone**	/ʃəʊn/	a străluci
shoot	/ʃu:t/	**shot**	/ʃɔt/	**shot**	/ʃɔt/	a împuşca
show	/ʃəʊ/	**showed**	/ʃəʊd/	**shown**	/ʃəʊn/	a arăta, a indica
shut	/ʃʌt/	**shut**	/ʃʌt/	**shut**	/ʃʌt/	a închide
sing	/sɪŋ/	**sang**	/sæŋ/	**sung**	/sʌŋ/	a cânta
sink	/sɪŋk/	**sank**	/sæŋk/	**sunk**	/sʌŋk/	a (se) scufunda
sit	/sɪt/	**sat**	/sæt/	**sat**	/sæt/	a şedea
sleep	/sli:p/	**slept**	/slept/	**slept**	/slept/	a dormi
smell	/smel/	**smelt**	/smelt/	**smelt**	/smelt/	a mirosi
speak	/spi:k/	**spoke**	/spəʊk/	**spoken**	/'spəʊkən/	a vorbi
spell	/spel/	**spelt**	/spelt/	**spelt**	/spelt/	a ortografia
spend	/spend/	**spent**	/spent/	**spent**	/spent/	a petrece, a cheltui
spill	/spɪl/	**spilt**	/spɪlt/	**spilt**	/spɪlt/	a vărsa (lapte)
spit	/spɪt/	**spat**	/spæt/	**spat**	/spæt/	a scuipa
spoil	/spoɪl/	**spoilt**	/spoɪlt/	**spoilt**	/spoɪlt/	a răsfăţa
stand	/stænd/	**stood**	/stʊd/	**stood**	/stʊd/	a sta (în picioare)
steal	/sti:l/	**stole**	/stəʊl/	**stolen**	/'stəʊlən/	a fura
strike	/straɪk/	**struck**	/strʌk/	**struck**	/strʌk/	a lovi
swim	/swɪm/	**swam**	/swæm/	**swum**	/swʌm/	a înota
take	/teɪk/	**took**	/tʊk/	**taken**	/'teɪkn/	a lua
teach	/ti:tʃ/	**taught**	/tɔ:t/	**taught**	/tɔ:t/	a preda,

						a învăţa (pe altul)
tear	/tɛə/	**tore**	/tɔ:/	**torn**	/tɔ:n/	a rupe, a sfâşia
tell	/tel/	**told**	/təʊld/	**told**	/təʊld/	a spune, a povesti
think	/θɪŋk/	**thought**	/θɔ:t/	**thought**	/θɔ:t/	a (se) gândi
throw	/θrəʊ/	**threw**	/θru:/	**thrown**	/θrəʊn/	a arunca
understand	/ʌndə 'stænd/	**understood**	/ʌndə 'stʊd/	**understood**	/ʌndə 'stʊd/	a înţelege
wake	/weɪk/	**woke**	/wəʊk/	**woken**	/'wəʊkən/	a se trezi
wear	/wɛə/	**wore**	/wɔ:/	**worn**	/wɔ:n/	a purta (haine)
win	/wɪn/	**won**	/wʌn/	**won**	/wʌn/	a câştiga
write	/raɪt/	**wrote**	/rəʊt/	**written**	/'rɪtn/	a scrie

Appendix 4

Transitions (Connectives) and Referring Words

Addition / Reinforcement		**Alternation**	**Negative**
and	both...and	or	nor
above all	furthermore	either ... or	neither
additionally	in addition	neither ... nor	not
again	moreover		
also	too		
besides			

Similarity	**Contrast**	**Concession**
similarly	but	al(though)
similar to	while	anyhow
also	whereas	anyway
too	although	else
like	however	even if
likewise	unlike	even though
in the same way	conversely	however
as…as	in contrast (to)	in spite of
both…and	contrary (to)	nevertheless
the same…(as)	different from	still
just as	instead	yet
	on the one hand… on the other hand	
	otherwise	

Reason / Cause
as
because
due to
owing to
as a result of
since

Result / Effect
as a result
as a consequence
consequently
hence
so
therefore
thus
accordingly

Purpose
in order to
to
in order that
so that

Space
above
below
here
at the center
in front of
behind
beside
near
next to
between
across
there
to the left/ right
north/ south/ east/ west
top/ bottom
inside/ outside

Time
before
during
now
while
as
meanwhile
when
by the time
as soon as
then
eventually
subsequently
later
afterwards
at last

Sequencing
first(ly)
second(ly)
third(ly)
next
then
finally
last(ly)

Introduction	Moving to Another Point	Conclusion / Summary	Including	Excluding
to begin with	now, let's turn to…	in conclusion	along with	apart from
to start with	now, let's move on to…	in summary	as well as	except
let us start with…	the second/ third/ main thing/ point is…	in the end	together with	except for
the first thing/ point/ I would like to speak about/deal with is…		on the whole		
		to conclude		
		to summarise		
		to sum up		

Exemplifying	Emphasising	Referring back	Referring forward
for example	even	the former	at the end
for instance	indeed	the latter	in the next paragraph/section/chapter
namely	in fact	as (I) mentioned above/before/earlier	later
to illustrate	of course	as (I) said earlier	see below
		at the beginning	the following
		see above	

Patterns That Signal Classifications

There are three/four/five kinds/types/classes/ categories/groups of…	A consists of/includes three/four/several types/classes/categories	First,…/Second,…/ Third,…/Finally,…
There are several/ many kinds/types/classes/ categories/groups of…	There are three/four/ several types/classes/ categories of…	One class/category…; Another class/category…
A can be classified/ divided into three/four kinds/types/classes/groups	The first/ second/ third type/ class/category/group is…	

Patterns That Introduce Reasons for/ against

There are two/three/four arguments for/ against…	For one thing…/For another…
The main reason/argument for/against is…	First, due to…; Second…
One reason is…/Another reason is…	Because, first…; and second…

Transitions That Signal Advantages/Disadvantages

There are three/ four advantages/ disadvantages…	The first/ second advantage/ disadvantage is that…
The most important advantage/ disadvantage is that…	The drawback is that…

Appendix 5

Presentation Outline

Introduction

I. Main point_____
   A. _____
   B. _____

II. Main point_____
   A. _____
   B. _____

Body

I. Main point_____
   A. _____
   B. _____

II. Main point_____
   A. _____
   B. _____

III. Main point_____
   A. _____
   B. _____

Conclusion

I. Main point_____
   A. _____
   B. _____

II. Main point_____
   A. _____
   B. _____

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