

**O'ZBEKISTON RESPUBLIKASI OLIY VA O'RTA MAXSUS
TA'LIM VAZIRLIGI**

QARSHI MUHANDISLIK - IQTISODIYOT INSTITUTI

I.M. TUXTASINOV, B.H. XOLIYOROV

ENGLISH FOR CADASTRE STUDENTS

O'zbekiston Respublikasi oliy va o'rta maxsus
ta'lim vazirligi texnika oliy o'quv yurtlari uchun
o'quv qo'llanma sifatida ruxsat etgan.

**TOSHKENT
«VORIS – NASHRIYOT»
2020**

UDK 372.881.111.1

KBK 36.273

Tuxtasinov Ilxomjon Madaminovich

Xoliyorov Bunyod Husanovich

I.M. Tuxtasinov, B.H. Xoliyorov. English for cadastre students.. O'quv qo'llanma –T.:

«Voriss – nashriyot», 2020. 92 b.

Taqrizchilar:

Z.P. Aminova –p.f.n. dotsent.

A. A. Aliqulov–f.f.n.

Mazkur o'quv qo'llanma 5311500 – “Geodeziya, kartografiya va kadastr” yo'nalishi talabalarining ingliz tili amaliy mashg'ulotlarida foydalanish uchun mo'ljallangan.

Mazkur qo'llanma maxsus maqsadlarda ingliz tilini o'qitishda o'quv-uslubiy ta'minotni shakllantirish maqsadlarini ko'zda tutgan holda tayyorlangan bo'lib u mazkur yo'nalishda tahsil oluvchi talabalarning o'z sohalariga oid izohli lug'atlarni leksik materiallarni, vizuallar asosida ingliz tilida qanday yuritilishi, sohadagi rasmiy ish yuritish qoidalarini o'rganilayotgan tilda qanday tatbiq etilishini qamrab olgan. Unda yer tuzish va yer kadastriga oid fanning eng so'ngi yutuqlarini amaliyotga tatbiq etishda ingliz tilini qo'llashga doir topshiriqlar va qiziqarli ma'lumotlar bilan boyitilgan.

Qo'llanma Davlat ta'lim standartlari va Kadrlar tayyorlash milliy dasturiga muvofiq sohaga doir internet materiallari hamda xorijiy ta'lim muassasalari tajribalarini qo'llagan holda mahalliy tajriba bilan uyg'unlashtirilgan.

This methodical manual is intended for use in the English language practice of students majoring 5311500 - "Geodesy, Cartography and Cadastre".

The manual is designed to provide instructional teaching tools for teaching English, and it provides students with annotated vocabulary and vocabulary materials in their fields, how it is implemented in the visual language, and how to apply the official business rules in the studying language. It contains a wealth of information and tasks on using the English language in implementing the latest advances in land and cadastral science.

The manual is complemented by local experience, including internet resources and international educational institutions' experiences, in line with State Education Standards and the National Program for Personnel Training.

ISBN 978-9943- 6846-3-8

© I.M. Tuxtasinov, B.H. Xoliyorov, 2020

© «Voriss–nashriyot», 2020

KIRISH

Har bir jamiyatning kelajagi uning ajralmas qismi va hayotiy zarurati bo'lgan ta'lim tizimining qay darajada rivojlanaganligi bilan belgilanadi. Bugungi kunda mustaqil taraqqiyot yo'lidan borayotgan mamlakatimizning uzluksiz ta'lim tizimini isloh qilish va takomillashtirish, yangi sifat bosqichiga ko'tarish, unga ilg'or pedagogik va axborot texnologiyalarini joriy qilish hamda ta'lim samaradorligini oshirish davlat siyosati darajasiga ko'tarildi. "Ta'lim to'grisida"gi Qonun va "Kadrlar tayyorlash milliy dasturi"ning qabul qilinishi bilan uzluksiz ta'lim tizimi orqali zamonaviy kadrlar tayyorlashning asosi yaratildi.

Hech kimga sir emaski, O'zbekistonning rivojlanib borayotgan iqtisodiyoti uchun tayyorlanadigan mutaxassislar rivojlangan mamlakatlar tilida batafsil muomala qiladigan kadr bo'lib yetishishiga qaratilmog'i lozim.

Nofilologik oliy o'quv yurtlarida ingliz tilini o'qitishning maqsadi tilni talabalar tomonidan amalda qo'llay bilish va shu tilda muomala qilishga tayyorlashdan iborat. Chet tilini amalda o'rganish jarayonida og'zaki nutq va tilning fonetik, leksik va grammatik tomonlarini o'rganishi va yozuv ko'zda tutiladi.

Bakalavr darajasidagi har bir mutaxassis o'zi tanlagan sohada atroflicha mutaxassisligi bo'yicha chet tilida faoliyat ko'rsata olishi kerak.

Shu nuqtai nazardan olib qaraganda bugungi kun yoshlarini har tomonlama yetuk, raqobatbardosh kadrlar qilib tayyorlash davr talabi bo'lib qoldi.

Ushbu uslubiy ko'rsatmani yaratishda nofilologik oliy o'quv yurtlarida chet tillarni o'qitish bo'yicha namunaviy dastur asos qilib olingan. Undagi ma'lumotlar yer tuzish va geodeziya, kadastr yo'nalishlari uchun dolzarb atama hamda birikmalarni qamrab olgan leksik mavzularni, audiomateriallarni, interfaol usullarni, shu bilan bir qatorda grammatik darslar majmuini jamlagan.

Unit 1

Warming up

1. Introduction: *Fill in the table providing personal information about you and present it to the auditory:*

Name	Age	position	Place	hobby	marital status

2. SWOT analysis:

Fill in table below using the words about your behavior(your strength, weakness, opportunities and threatens) and speak about them to the audience.

STRENGTH	WEAKNESS	OPPORTUNITIES	THREATEN

3. “What is your name?”

am/is/are

1 What's your name?

Complete the conversation.

A Hello. What's your name?

B Suzanne. What's _____ ?

A My name _____ John. Where _____ you _____ , Suzanne?

B I _____ from London. _____ you from?

A _____ New York.



Text: WHAT IS GEODESY?



4. Find the translation of the following words and word combinations:

measuring

space

gravity

property

point

surface

assign

unique

determine

surveying

define

consistent

manner

National

Spatial

Reference

System

capture

feature

adopt

ellipsoid

smooth

valley

geoid

5. Read and translate the text.

Geodesy is the science of accurately measuring and understanding the Earth's **geometric shape, orientation in space, and gravity field**.

Geodesy is the science of accurately measuring and understanding three fundamental properties of the Earth: its geometric shape, its orientation in space, and its gravity field— as well as the changes of these properties with time. By using GPS, geodesists can monitor the movement of a site 24 hours a day, seven days a week.

To measure points on the Earth's surface, geodesists assign coordinates (similar to a unique address) to points all over the Earth. In the past, geodesists determined the coordinates of points by using Earth-based surveying tools to measure the distances between points. Today, geodesists use space-based tools like the Global Positioning System (GPS) to measure points on the Earth's surface.

Geodesists must accurately define the coordinates of points on the surface of the Earth in a consistent manner. A set of accurately measured points is the basis for the National Spatial Reference System, which allows different kinds of maps to be consistent with one another.

To measure the Earth, geodesists build simple mathematical models of the Earth, which capture the largest, most obvious features. Geodesists have adopted the ellipsoid as the most basic model of the Earth. Because the ellipsoid is based on a very simple mathematical model, it can be completely smooth and does not include any mountains or valleys.

6. Answer the questions below

1. What kind of science is Geodesy?
2. What do the geodesists do to measure the surface of the Earth?
3. What is GPS?
4. What does the National Spatial Reference System allow?
5. Why do the geodesists have adopted ellipsoid model of the Earth?

7. Write the main features of each item using the texts:

<i>CONCEPT</i>	<i>DESCRIPTION</i>
By using GPS, geodesists...	
Geodesists must ...	
In the past, geodesists determined ...	
The ellipsoid...	
Simple mathematical models of the Earth...	

8. Write negative and interrogative forms and translate:

1. Geodesists have adopted the ellipsoid as the most basic model of the Earth.
2. Geodesists can monitor the movement of a site 24 hours a day, seven days a week.
3. Ellipsoid is based on a very simple mathematical model.
4. Geodesists determined the coordinates of points by using Earth-based surveying tools.
5. Geodesists must accurately define the coordinates of points on the surface of the Earth.
6. It is important to know measurement of land structure.

Unit 2

1. Working with geographical maps

Find the countries on the map.

United States of America ☒ Argentina ☐
Australia ☐ Brazil ☐ China ☐ Czech Republic ☐
England ☐ France ☐ Germany ☐ Greece ☐
Italy ☐ Iran ☐ Japan ☐ Poland ☐
Russia ☐ Spain ☐ Turkey ☐



Match the countries with nationalities:

3. Complete the sentences:

Country	Nationality
England	Hungarian
Germany	Mexican
Italy	Egyptian
France	English
Spain	Japanese
Portugal	German
Egypt	Brazilian
Japan	Russian
the United States	Italian
Russia	French
Hungary	American
Brazil	Portuguese
Mexico	Spanish

I'm Brazilian. I'm from São Paulo.

1 Jennifer Lopez _____ American. _____'s from New York.

2 We' _____ Polish. _____'re from Warsaw.

3 A: Excuse me, where are you from?

B: I' _____ from Colombia.

4 A: What is _____ ?

B: I think it' _____ a Japanese car.

5 A: Who are _____ ?

B: They' _____ students in my class.

They' _____ from Brazil.

Text: STRUCTURE OF THE EARTH

4. Find the translation of the following words and word combinations:

radial

layer

spherical

shells

outer

liquid

viscous

mantle

solid

internal

depth

measurement

deep

interior

property

crust

mantle

mantle

core

outer

inner

depth

prism

refract

reflect

seismic

waves

earthquake

shear

velocity

owing to

bending

infer

5. Read and translate the text.

The interior structure of the Earth is layered in spherical shells. These layers can be defined by either their or properties. Earth has an outer solid, a highly, a liquid that is much less viscous than the mantle, and a solid. Scientific understanding of the internal structure of the Earth is based on



observations of and, observations in , samples brought to the surface from greater depths by , analysis of the that pass through the Earth, measurements of the Earth, and experiments with crystalline solids at pressures and temperatures characteristic of the Earth's deep interior.

Structure

The structure of Earth can be defined in two ways: by mechanical properties such chemically. Mechanically, it can be divided into parts. The interior of Earth is divided into 5 important layers. Chemically, Earth can be divided into the **crust**, **upper mantle**, **lower mantle**, **outer core**, and **inner core**. The geologic component layers of Earth are at the following depths below the surface:

Depth		Layer
Kilometres	Miles	
0–60	0–37	Lithosphere (locally varies between 5 and 200 km)
0–35	0–22	... Crust (locally varies between 5 and 70 km)
35–60	22–37	... Uppermost part of mantle
35–2,890	22–1,790	Mantle
100–200	210–270	... Upper mesosphere (upper mantle)
660–2,890	410–1,790	... Lower mesosphere (lower mantle)
2,890–5,150	1,790–3,160	Outer core
5,150–6,360	3,160–3,954	Inner core

The layering of Earth has been inferred indirectly using the time of travel of refracted and reflected seismic waves created by earthquakes. The core does not allow shear waves to pass through it, while the speed of travel is different in other layers. The changes in seismic velocity between different layers causes refraction owing to, like light bending as it passes through a prism. Likewise, reflections are caused by a large increase in seismic velocity and are similar to light reflecting from a mirror.

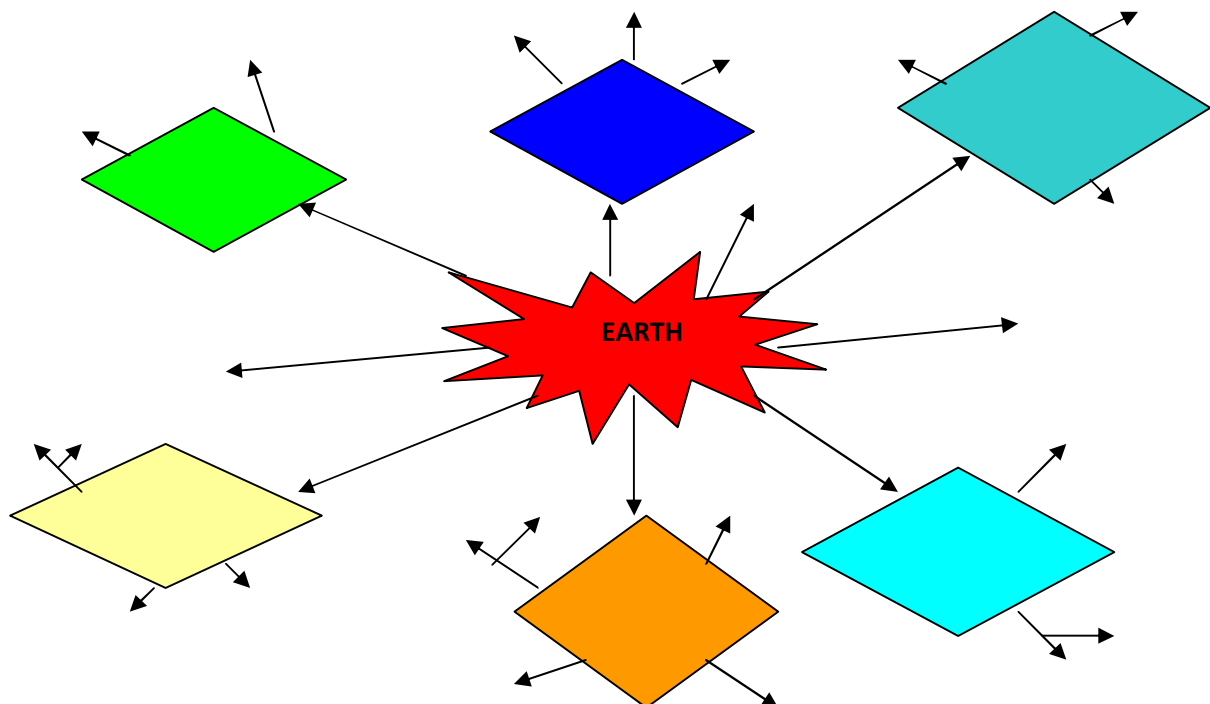
6. Answer the questions below

1. **Speak about scientific understanding of the internal structure of the Earth?**
2. **Chemically division of the Earth?**
3. **How many geological parts are included in the Earth structure?**
4. **What has the layering of Earth been inferred?**
5. **How are the reflections caused by?**

7. Complete the sentences using the words from the box:

velocity; defined; causes; outer; viscous; shear; uppermost; lithosphere; layering; inferred

1. The structure of Earth can be ... in two ways;
2. The changes in seismic ...between different layers ...refraction;
3. Earth has an ... solid, a highly, a liquid that is much less ...than the mantle.
4. The core does not allow ...waves to pass through it.
5. ...part of mantle goes into 35–60 km.s.
6. ...locally varies between 5 and 200 km.
7. The ... of Earth has been ... indirectly using the time of travel of refracted and reflected seismic waves created by earthquakes.
8. **Make up cluster:**



Unit 3

1. Family. Read about the Evans family

THE EVANS FAMILY AT WORK

Paul Evans is a maths teacher. He's thirty-nine. He's at school now. His address is 34 King Street, Bristol.

His wife, Penny, is at work in her office.

She's a bank manager. Her phone number at work is 830 9771.

They have two children, Mark and Jane. Mark is ten and Jane is seven. They are at school.

Write questions for these answers.

About Paul

- 1 What's *his job* _____ ? He's a teacher.
- 2 How _____ ? He's thirty-nine.
- 3 Where _____ now ? At school.
- 4 What _____ ? 34 King Street, Bristol.

About Penny

- 5 Where _____ ? In her office.
- 6 _____ ? She's a bank manager.
- 7 _____ ? 830 9771.

About the children

- 8 _____ ? Ten and seven.
- 9 _____ ? At school.

2.

a. Match the family words with the meanings.

- | | |
|----------------------------------|---------------|
| 1 mother and father | a uncle |
| 2 sons and daughters | b grandmother |
| 3 mother's or father's brother | c nephew |
| 4 mother's or father's sister | d parents |
| 5 mother's or father's mother | e aunt |
| 6 mother's or father's father | f niece |
| 7 brother's or sister's son | g children |
| 8 brother's or sister's daughter | h grandfather |

b Find the meanings of these words in a dictionary.

best friend cousins father-in-law
girlfriend grandparents stepbrother

3.

Complete the sentences. Use *has* or *have*.

- 1 I **have** _____ two brothers and a sister.
- 2 My parents _____ a house in the country.
- 3 My wife _____ a Japanese car.
- 4 My sister and I _____ a dog.
- 5 You _____ a very nice family.
- 6 Our school _____ fifteen classrooms.
- 7 We _____ English classes in the evening.

Text: SUSTAINABLE URBAN LAND USE PLANNING

4. Find the translation of the following words and word combinations:

Urbanization
phenomenon
areas
double
built-up
triple
trends

rapid
spatial
prove
inadequate
cope
challenges
scarcity

slum
poverty
ensure
integrated
sustainable
equitable

5. Read and translate the text.

Urbanization is the defining global phenomenon of this century. For the first time in history, more than half the world's population lives in urban areas. Between 2000 and 2030, in developing countries, the urban population is expected to double, and entire built-up areas are projected to triple if current trends continue. This rapid demographic and spatial transformation may prove to be difficult for cities in developing countries, especially small- and medium-sized cities, where capacity is typically



inadequate to cope with major urban challenges. These challenges include climate change, resource scarcity, slum growth and increased poverty, and safety and security concerns. Urban land use planning, if led by well-informed policies based on sustainable development

principles and supported by well-planned and well-managed initiatives, including investments, can help address these challenges. In this regard, WBI developed this course, which covers many of these policies and actions in detail. The course aims to: ensure that participants have a functional and integrated understanding of the dynamics of urban land use; and demonstrate how to effectively utilize policies and planning instruments to manage urban growth and achieve sustainable, equitable and efficient development outcomes.

6. Answer the questions below

1. What is Urbanization?
2. What is the effect of urbanization to the cities?
3. What are the major urban challenges?
4. What must urban land planning concern?
5. What does the WBI course aim?

7. Choose the suitable forms of the verbs and translate the sentences:

1. More than half the world's population living/lives/live in urban areas.
2. The urban population is expects/expected/expecting to double, and entire built-up areas are projected to triple if current trends being continued/continues/continue.
3. These challenges including/include/included climate change, resource scarcity, slum growth and increasingly/increased/increases poverty.
4. The course demonstrated/demonstrates/demonstrating how to effectively utilize policies and planning instruments to managing/manage/management urban growth.
5. WBI was developed/developed/develop this course, which is cover/covers/cover many of these policies and actions in detail.
6. This rapid demographic and spatial transformation may be proved/proving/prove to be difficult for cities in develops/development/developing countries.

8. "Who is more". Who can write more words under the letters of the word

U	R	B	A	N	I	S	A	T	I	O	N
---	---	---	---	---	---	---	---	---	---	---	---

Unit 4.

1. Match the questions and the answers:

1 Where's the Colosseum?	a 01494 762890.
2 How are you?	b 90p.
3 How old are you?	c Isabel Flett.
4 What's your phone number?	d It's in Rome.
5 Who's your teacher?	e Fine, thanks.
6 How much is a cup of tea?	f Twenty-one.

2

Work in pairs. Read the role card from your teacher. Ask and answer questions.

What ... ?
How do you spell it?
Where ... live?
Do ... live in ... ?
What ... ?
Where ... work?
How many ... speak?
What sports ... like?

... about you	
Name	
Town, country	
A house or a flat	
Job	
Place of work	
Languages	
Sports	

3

T 3.2 What do you do first in the day? What do you do next? Number the activities in the correct order for you.

- | | |
|---|--|
| ☐ have lunch | ☐ have dinner |
| ☐ have a shower | ☐ watch television |
| ☐ go to work | ☒ 1 get up |
| ☐ have breakfast | ☐ read a book |
| ☐ start work | ☐ go to bed |
| ☐ go home | ☐ leave home |
| ☐ get dressed | |

Text: LAND CADASTRE

4. Find the translation of the following words and word combinations:

ownership
tenure
precise
location
dimension
rural
parcel

conjunction
title
disputes
landowner
unique
existing
positions

respective
adjoining
adjacent
boundary
references
prior

5. Read and translate the text.

A cadastre commonly includes details of the ownership, the tenure, the precise location (some include GPS coordinates), the dimensions (and area), the cultivations if rural, and the values of individual parcels of land. Cadastres are used by many nations around the world, some in conjunction with other records, such as a title register.

In most countries, legal systems have developed around the original administrative systems and use the cadastre to define the dimensions and location Land parcel described in legal documentation. The cadastre is a fundamental source of data in disputes and between landowners.

A *cadastral map* is a map that shows the border and ownership of land parcels. Some cadastral maps show additional details, such as survey district names, unique identifying numbers for parcels, certificate of title numbers, positions of existing structures, section or lot numbers and their respective areas, adjoining and adjacent street names, selected boundary dimensions and references to prior maps.

6. Answer the questions below

1. What does a cadastre include? 2. How are the cadastres used? 3. Describe the fundamental base of cadastre? 4. What is cadastral map? 5. Speak about additional details of cadastral maps?
--

7. Rearrange words to make up grammatical correct sentences then translate them:

1. around, systems, legal, developed, systems, original, administrative, the, have;
2. details, some, maps, additional, show, cadastral;
3. is, cadastre, the, in, fundamental, disputes, of, data, source, a;
4. and, parcels. Border, of, a, cadastral, shows, map, the, land, ownership;
5. ownership, the, details, of, includes, cadastre, a, commonly;

8. Put the letters in order to make words:

1. *cajnaetd* _____
2. *nwdoaernl* _____
3. *dybnarou* _____
4. *inlotoca* _____
5. *ondsinmie* _____
6. *qeniiuu* _____
7. *apelcr* _____
8. *cipeser* _____

9. Read the text again and give subtitles for each space.

Unit 5

“Grammar Sudoku” Find and place the words from your text that they shouldn’t take place according to their word groups, use sample on the left

verb	Noun	adverb
adjective	Preposition	numeral
Conjunction	Modal verb	pronoun

Text: CADASTRAL MAPS

1. Find the translation of the following words and word combinations:

records
extent
Strictly
compile
taxation
equally

pieces
large -scale
essential
features
reference
plot

adjoining
sufficiently
relevant
beneath
vegetation
manner

Complete the text with the verbs.

gets	gets up x2	has	paints	drinks
cooks	listens to	goes x2	plays	<u>lives</u>

Katya is 25. She’s an artist.

She lives in a small house in the country. She usually _____ at ten o’clock in the morning. She never _____ early. She _____ coffee and toast for breakfast and then she _____ for a walk with her dog. She _____ home at eleven o’clock and she _____ in her studio until seven o’clock in the evening. Then she _____ dinner and _____ a glass of wine. After dinner, she sometimes _____ music and she sometimes _____ the piano. She usually _____ to bed very late, at one or two o’clock in the morning.



2. Read and translate the text.

Cadastral is a technical term for a set of records showing the extent, value and ownership (or other basis for use or occupancy) of land. Strictly speaking, a cadastral is a record of areas and values of land and of landholders that originally was compiled for purposes of taxation. In many countries there is, however, no longer any land tax and in practice the cadastral serves two other equally important purposes. It provides a ready means of precise description and identification of particular pieces of land and it acts as a continuous record of rights in land.

A modern cadastral normally consists of a series of large-scale maps or plans, and corresponding registers. Both the plans and the registers may be stored in computers, as discussed in the chapter “computerization of maps and registers”. The present chapter deals with the essential features of cadastral maps with particular reference to the form they take when drawn on paper or displayed on a computer screen. While the survey of an individual parcel of land has in some countries resulted in a “cadastral map” for that plot of land and may have been unconnected to any adjoining land parcels, the true cadastral map covers all parcels within an area rather than isolated plots. It can act as an index for other land parcel surveys that show more detailed information or can be of sufficiently large scale for the dimensions of each plot to be obtainable from the map. In this chapter, and throughout this monograph, the term ‘cadastral map’ will be associated with any parcel of land whether defined by ownership, value or use provided that the parcel has an independent identity and is relevant to the management of land as a resource. A cadastral map will show the boundaries of such parcels but may in addition incorporate details of the resources associated with them, including the physical structures on or beneath them, their geology, soils, and vegetation and the manner in which the land is used.

3. Answer the questions below

1. What kind of term is cadastral map? 2. How is the content of modern cadastral? 3. What does the present chapter deal with? 4. What is the result of individual survey of land? 5. What will a cadastral map show?
--

4. Fill in the table according to the text:

5.

What is it?	How is it used?	What is the content?	Usage?	Benefits?	Comments

6. Continue the sentences and write negatives:

1. A cadastral is a record of ... ;
2. A modern cadastral normally consists of ... ;
3. The term ‘cadastral map’ will be associated ... ;
4. In many countries there is, however, no longer any ... ;
5. The true cadastral map covers ... ;
6. The plans and the registers may be ... ;
- 7.

Remember the dimensions of length and squares:

MEASURES OF LENGTH:	MEASURES OF SQUARES:
1 kilometers(km)=1000meters(m);	1 square(sq).kilometer(km ²)=1000000 square(sq)meters(m ²);
1 meter(m)=10 decimeters(dm)=10 centimeters(cm);	1square.(sq)meter(m ²)=100sq.decimeters(dm ²)=10000sq.centimeters(cm ²);
1 decimeter(dm)=10centimeters(cm);	1 hectare(ha)=10000sq.meters(m ²);
1centimeter(cm)=10millimeters(mm);	1 ar=10sq.meter(m ²)

8. Find out the values of following units using the table above:

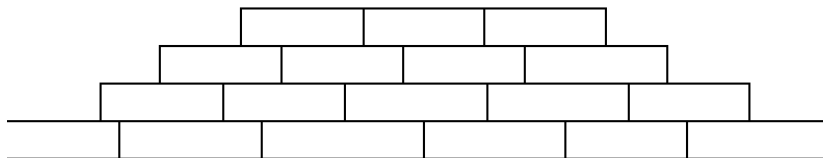
1. 22 m² = _____ dm²;
2. 33km²=_____m²;
3. 45km_____m;
4. 53ha=_____m²;
5. 350dm²=_____cm²;
6. 438m=_____dm;
7. 150m²_____dm²;
8. 10ar=_____m²
9. 1500cm=_____mm;
10. 880km²=_____m²
11. 50ar=_____m²

Unit 6

1.

“Pyramid”. Find words from the bottom of pyramid.

- The place surrounded with water
- There are four ...s in the world
- Sun rises in the
- High level, beginning part of something;



2. Match the proverbs sayings with their endings, and say their meanings.

- | | |
|--------------------------------|---------------------------------------|
| 1. East or West | keeps a doctor away |
| 2. My home is | makes a man healthy, wealthy and wise |
| 3. If you scratch my shoulder | Greek |
| 4. Early to bed, early to rise | is good news |
| 5. Greek meet | home is the best |
| 6. No news | my castle |
| 7. An apple a day | I'll scratch yours |

Text: CADASTRAL MAPS (to be continued)

3. Find the translation of the following words and word combinations:

<i>scale</i>	<i>warrant</i>	<i>obscure</i>
<i>separate</i>	<i>permanent</i>	<i>jurisdictions</i>
<i>possession</i>	<i>capable</i>	<i>merely</i>
<i>data</i>	<i>updated</i>	<i>indicate</i>
<i>quality</i>	<i>subdivision</i>	

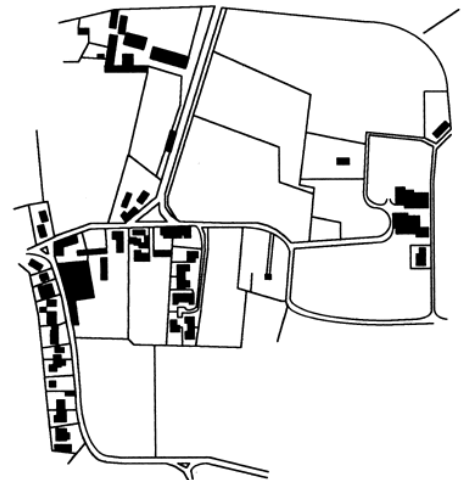
4. Read and translate the text.

The scale of cadastral maps is of great importance. Since the object of the map is to provide a precise description and identification of the land, the scale must be large enough for every separate plot of land which may be the subject of separate possession (conveniently called a "survey plot" or "land parcel") to appear as a recognizable unit on the map. When map data are stored in a computer, they may be drawn at almost any scale and this can give an impression of greater accuracy than the quality of the survey data may warrant.

Since the map and the corresponding registers form complementary parts of the same system of description and identification, there must be some system of cross-referencing between what is shown on the map and what is recorded in the registers. This usually means that either names or numbers must be given to each separate land parcel.

The reference chosen should be easy to understand and easy to remember; easy to use for the public and by computers; permanent so that it does not change with the sale of a property, but capable of being updated when there is for example a subdivision of the land; unique; accurate; and economic to introduce.

It is essential that when these numbers or names are drawn on a map that they do not obscure the details of the map itself. The cadastral map should show the boundaries of each land parcel and in some jurisdictions may also show its area and the actual length and bearing of each boundary line. These considerations may obviously demand a scale somewhat larger than that required merely to indicate each surveyed plot.



5. Answer the questions below

1. What should the object of the map to provide? 2. How may the map data be drawn? 3. Describe the map and corresponding registers condition? 4. How should the reference be done? 5. What should the cadastral map show?

6. Are these sentences true or false? Explain your answers.

<u>Nº</u>	<u>FACTS</u>	<u>TRUE</u>	<u>FALSE</u>
1	<i>There is no any strict rules at the scale of cadastral maps</i>		
2	<i>Separate plot of land which may be the subject of separate possession</i>		
3	<i>Map data may be drawn at one scale</i>		
4	<i>There must be some system of cross-referencing between what is shown on the map and what is recorded in the registers.</i>		
5	<i>The cadastral map should hide the boundaries of each land parcel</i>		

7. Put the appropriate words and translate the sentences:

1. The subject of separate possession conveniently called a ... or ... to appear as a ... unit on the map;
2. It is important that when these numbers or names are drawn on ... that they do not ... the details of the ... itself;
3. The ... chosen should be easy to ... and easy to ...;
4. When map data are stored in a ..., they may be ... at almost any scale;
5. In some jurisdictions may also show its... and the actual ... and bearing of each ... line.
6. These considerations may obviously ... a scale somewhat larger than that required merely to ... each surveyed

Unit 7

1.

Ask and answer these questions with a partner. Make more questions, using the Past Simple.

What did you do ... ?

- last night
- last weekend
- on your last birthday
- on your last holiday

I watched TV.

I went swimming.

2. Find out the values of following units using the table above:

1. 15 m² = _____ dm²;
2. 20 km² = _____ m²;
3. 40 km _____ m;
4. 13 ha = _____ m²;
5. 50 dm² = _____ cm²;
6. 35 m = _____ dm;
7. 10 m² _____ dm²;
8. 10 ar = _____ m²
9. 100 cm = _____ mm;
10. 20 km² = _____ m²
11. 60 ar = _____ m²

3. Opposite verbs

Match a verb in A with its opposite in B.

A	B
1 love	a close
2 start	b relax
3 come	c hate
4 open	d go
5 leave	e finish
6 get up	f arrive
7 work	g be early
8 be late	h go to bed

Text: TOPOGRAPHIC PLAN SHOWING PHYSICAL DETAIL

4. Find the translation of the following words and word combinations:

<i>satisfactory</i> <i>scale</i> <i>primarily</i> <i>circumstances</i> <i>rural</i> <i>countryside</i>	<i>variations</i> <i>level</i> <i>inadequate</i> <i>width</i> <i>hilly</i> <i>scales</i> <i>densely</i>	<i>acceptable</i> <i>plan metric</i> <i>altitudes</i> <i>ordinarily</i> <i>stereoscopy</i> <i>topographic</i>
---	---	--

5. Read and translate the text.

A much larger scale will be necessary for cadastral maps of towns than for those of rural areas. Similarly a closely occupied countryside consisting of small fields and holdings will require maps on a larger scale than is necessary in areas where there are large farms with open fields.

The maps with which most people are familiar are topographic maps at scales of around 1:50,000. Such maps make it possible to show accurately (though not always to scale) the position of roads, railways, footpaths, villages, rivers, streams, bridges, important buildings, administrative boundaries and other similar features as well as the relief of the land, the depth of water and variations in tide level. These maps are however quite inadequate for cadastral purposes. A simple example will make this point clear. A carefully drawn pencil line will have a width of perhaps half a millimetre. On a map on the scale of 1:50,000 this would represent a line of 25 metres wide of the ground. There are many countries, especially hilly countries, with separate fields less than 25 metres wide. Most cadastral maps need to be at scales of between 1:500 and 1:2,500 although in densely developed areas a larger scale may be needed while in open countryside much smaller scales may be acceptable.

Usually cadastral maps need only be “planimetric” maps, that is to say, they need not show topographical relief. There may be special reasons why altitudes should be recorded on cadastral maps, but ordinarily all that is needed is a plan of what is seen, without stereoscopy, from a point vertically above the piece of land observed.

6. Answer the questions below

- 1. What are the differences between town and rural cadastral maps?**
- 2. Speak about the main features of topographic maps?**
- 3. What is the reflection of 25 metres wide of the ground on a map?**
- 4. What are the scale requirements of most cadastral maps in different areas?**
- 5. What are the characteristics of planimetric map?**

7. Match the expressions from the left column with the right column and translate:

SENTENCES	CONTINUATION
1 <i>There are many countries, especially...</i>	a) <i>a width of perhaps half a millimetre.</i>
2 <i>A carefully drawn pencil line will have...</i>	b) <i>cadastral maps of towns than for those of rural areas.</i>
3 <i>Topographic maps make it possible to show accurately (though not always to scale) the...</i>	c) <i>hilly countries, with separate fields less than 25 metres wide.</i>
4 <i>There may be special reasons why altitudes...</i>	d) <i>position of roads, railways, footpaths, villages, rivers, streams, bridges, important buildings, administrative boundaries</i>
5 <i>A much larger scale will be necessary for ...</i>	e) <i>should be recorded on cadastral maps</i>

8. Complete the chart “concept’s analyses”. Write the descriptions of concepts and translate:

CONCEPT	DESCRIPTION
<i>topographic maps</i>	
<i>1:50,000 scale represents</i>	
<i>Planimetric map</i>	
<i>pencil line</i>	

Remember the dimensions of length and squares:

MEASURES OF LENGTH:	MEASURES OF SQUARES:
1 kilometers(km)=1000meters(m);	1 square(sq).kilometer(km ²)=1000000 square(sq)meters(m ²);
1 meter(m)=10 decimeters(dm)=10 centimeters(cm);	1square.(sq)meter(m ²)=100sq.decimeters(dm ²)=10000sq.centimeters(cm ²);
1 decimeter(dm)=10centimeters(cm);	1 hectare(ha)=10000sq.meters(m ²);
1centimeter(cm)=10millimeters(mm);	1 ar=10sq.meter(m ²)

Unit 8

1 Work with a partner. Match the verbs and nouns.

have	the news on TV
wash	your friends
watch	your hair
text	breakfast

have	an email
clear up	the mess
do	a shower
send	the washing-up

make	to music
relax	your homework
listen	a cup of coffee
do	in front of the TV

cook	magazines
go	a meal
put on	make-up
read	to the toilet

2 Where do you usually do the activities in exercise 1? Write them in the chart.

Kitchen	Bathroom	Living room	Bedroom

Discuss with your partner. Then use some of the verbs and nouns in exercise 1 to tell your partner about your daily life.

3 Complete these sentences with the correct words.

- I never _____ breakfast on weekdays, only at weekends.
- I have a hot _____ every morning and every evening.
- My sister washes her _____ at least four times a week.
- She didn't have time to _____ any make-up this morning.
- My brother never reads books or newspapers, he only reads music _____.
- I don't often do the _____ because we've got a dishwasher.
- I'm going to _____ a cup of coffee. Does anybody want one?
- My dad always _____ the ten o'clock news on TV.
- My mum says I text my _____ too much.
- You made this mess, so you _____ it up!
- Can I _____ an email from your computer?
- How can you listen to _____ while you're working?
- I'm always so tired after work, I just want to _____ in front of the TV.
- I cooked a _____ for ten people last night.
- I didn't forget to _____ my homework, I forgot to *bring* it.
- Can you wait a minute? I need to _____ to the toilet.

Text: CADASTRAL PLAN SHOWING BOUNDARIES OF LAND OWNERSHIP

4. Find the translation of the following words and word combinations:

sufficient
enable
measurements

satisfied
triangulation
theodolite

traverses
permanent
fences

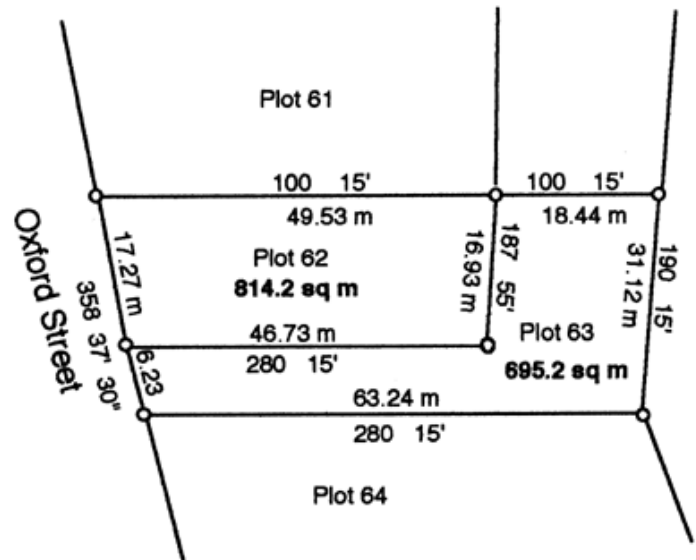
embankments
unfenced
indicating

grid
rectangular
straight

unsympathetic
simplicity
clarity

5. Read and translate the text.

One of the most important requirements of cadastral maps is that they should show a sufficient number of points which can be accurately identified on the ground to enable any other point on the ground to be identified on the map (or vice versa) by eye or by simple and short measurements. Professionally this requirement is satisfied by marks recording the original triangulation stations, or the stations on supplementary theodolite traverses, but this is usually inadequate or inconvenient for practical purposes. In areas where there are permanent fences or fields surrounded by embankments, the fences and banks may be used as points, but in unfenced open fields without any boundaries on the ground will be necessary.



One principal method of identification used in cadastral maps is the “grid”. In some countries, such as much of the public lands in the United States, a grid has been laid out on the ground creating a “rectangular system”. Straight lines, often running north to south and east to west, form all parcels of land. The problem with such a system is that it is unsympathetic to the natural topography but its advantage is its simplicity and the relative clarity of the boundaries on the ground. More commonly, however a grid is used as a referencing system so that the coordinates of all boundary turning points can be measured, calculated and recorded. The data can then be stored in a computer and used either to draw the cadastral maps or else for helping a surveyor to re- establish lost boundary marks.

6. Answer the questions below

1. What is essential for cadastral maps?
2. How are these requirements satisfied by?
3. What will be necessary in different areas?
4. What is “grid”?
5. What is the problem of this system?

7. Write negative and interrogative forms of the sentences:

1. Cadastral maps should show a sufficient number of points;
2. All parcels of land are formed by straight lines;

3. A grid is used as a referencing system;
4. A grid has been laid out on the ground creating a “rectangular system”;
5. The data can then be stored in a computer and used either to draw the cadastral maps;
6. It is unsympathetic to the natural topography;

8. Choose the correct word to complete the sentences and translate.

1. Sufficient number of points can be accurately _____ on the ground;
a) isolated; b) identified; c) rejected;
2. The problem with such a system is that it is _____ to the natural topography;
a) unsympathetic; b) unsystematic; c) underestimated;
3. There are permanent fences or fields surrounded by _____;
a) enhancements; b) inhabitants; c) embankments;
4. One principal method of identification used in cadastral maps is the _____.
a) grasp; b) grain; c) grid

Unit 9

1 Choose the correct verb form.

- 1 I *saw* / *was seeing* a very good programme on TV last night.
- 2 While I *shopped* / *was shopping* this morning, I *lost* / *was losing* my money. I don't know how.
- 3 Last week the police *stopped* / *were stopping* Alan in his car because he *drove* / *was driving* at over eighty miles an hour.
- 4 How *did you cut* / *were you cutting* your finger?
- 5 I *cooked* / *was cooking* and I *dropped* / *was dropping* the knife.
- 6 When I *arrived* / *was arriving* at the party, everyone *had* / *was having* a good time.
- 7 *Did you have* / *Were you having* a good time last night?

2. “FORTUNATELY / UNFORTUNATELY” stories. Continue this story around the class:

1. *I went out for a walk.*
2. *Unfortunately, it began to rain.*
3. *Fortunately, I had an umbrella*
4. *Unfortunately, it was broken.*
5. *Fortunately, I met a friend in his car.*
6. *Unfortunately, his car ran out of petrol.*
7. *Fortunately...*

- I lost my wallet yesterday.
- It was my birthday last week.
- We went out for a meal last night.
- I went on holiday to . . . last year.

3. "Stairs -scanword". Continue the letters to make words.

I	N										
I	N	S									
I	N	N	O								
I	N	T	E	R							
I	N	T	R	O	D						
I	N	T	E	R	M	E					
I	N	A	U	G	U	R	A				

Text: AIR SURVEYS AND CADASTRAL MAPS

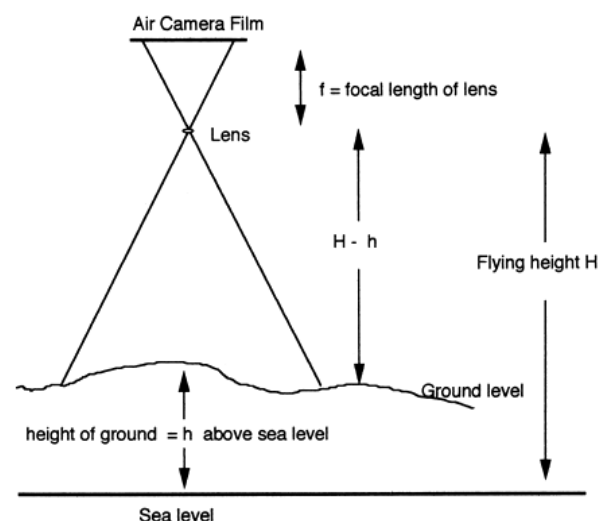
4. Find the translations of the following words and combinations:

<i>primarily</i>	<i>data</i>	<i>compile</i>
<i>sources</i>	<i>conjunction</i>	<i>outline</i>
<i>aerial</i>	<i>mapped</i>	<i>contour</i>
<i>overlapping</i>	<i>focal</i>	<i>traced</i>
<i>transformed</i>	<i>aircraft</i>	<i>ease</i>
<i>analogue</i>	<i>height</i>	<i>obtainable</i>
<i>photogrammetry</i>	<i>terrain</i>	

5. Read and translate the text

Maps may be produced from primary sources in two ways. One is by ground survey and the other by air survey that is by taking measurements from aerial photographs. Points identified on overlapping aerial photographs may be transformed into positions on maps either by mechanical analogue means or with mathematical techniques. The processes, known as photogrammetry, require some ground measurements to be taken in order to establish the precise scale and orientation of any map in relation to the ground data. The quality of modern instrumentation is now so good that in conjunction with computerized techniques and aerial triangulation, the ground control points that must be provided are relatively few. The

actual number depends on the size and shape of the area to be mapped, the accuracy required, and the scale of the photography. The latter varies across a photograph since it is equal to the



ratio between the focal length of the air survey camera (f) and the flying height of the aircraft (H) above any ground point (h); mathematically:
the scale at any point = $f/(H-h)$.
Since the height of the terrain (h) varies across an area, then so does the scale of the photography.

Photogrammetry can be used to establish a greater density of control points from which it is then possible to compile detailed topographic maps.

6. Answer the questions below

1. Speak about the two ways which maps may be produced from primary sources? 2. What does the photogrammetry require? 3. What is the benefit of modern instrumentation? 4. What does the actual number depend on?
--

7. Work in pairs. Summarize the text filling this factsheet:

What?	How?	Requirements?	Advantages?	Usage?	Outline?

8. Put the words correctly to make up grammatical correct sentences:

1. requires, photogrammetry, be measurements, to, some, ground, taken;
2. topographic, it, compile, possible, to, is, maps, detailed;
3. are, ways, maps, may, produced, two, be, from, which, sources, there, in, primary;
4. ease, and, of, economy, outline, the, can, identified, be, and, with, great, features, traced;

Unit 10

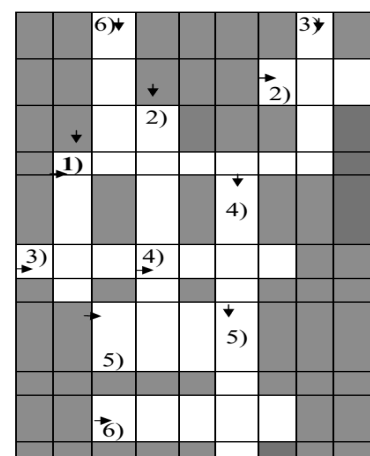
1. Solve the crossword finding antonyms of the given words below:

ACROSS

1. to be full up
2. to be in
3. small
4. upset
5. to be bad
6. to be clever

DOWN

1. to be thick
2. to be married
3. to be free
4. to be good
5. to be hard working
6. short



2.

Write the correct part of speech next to each word in the box.

n = noun *v* = verb *adj* = adjective *prep* = preposition

<i>adj</i> nice	___ enjoy	___ holiday	___ new
___ party	___ in	___ see	___ warm
___ famous	___ near	___ earn	___ win
___ postman	___ on	___ relax	

3. Complete the sentences with a form 2. Change the verb forms if necessary:

- 1 My aunt lives in a (*adj*) nice, old house (*prep*) near the sea.
- 2 Did you (*v*) _____ Frank's (*adj*) _____ car this morning? It's red.
- 3 I play tennis with her (*prep*) _____ Sundays and she always (*v*) _____.
- 4 I (*v*) _____ and watched television yesterday evening. It was so (*adj*) _____ in front of the fire.
- 5 I saw a (*adj*) _____ film star at Peter's (*n*) _____.
- 6 He worked as a (*n*) _____ until he died, and he only (*v*) _____ £10,000 a year.
- 7 They had a (*n*) _____ (*prep*) _____ Spain and they (*v*) _____ it very much.

Text: DIRECT ADVANTAGES OF CADASTRAL SURVEYS AND REGISTRATION OF RIGHTS

4. Find the translations of the following words and combinations:

obvious
advantage
exact
description
legal
provide
comprehensive
particular
derive
directly

immediate
availability
recognize
engage
transaction
title
dispose
presumption
dispose
neglect

fraud
subsequent
eliminate
reduce
absentees
reversionary
pre-emptive
dormant
easements
restrictive

equally
grazing

timber
extraction

define
safeguard

5. Read and translate the text.

The first and most obvious advantage of a cadastral survey and record of rights is that together they give a true and exact description of the legal situation of rights in land at any moment. Only a cadastral map can provide the means of accurate identification necessary to this end and only a continuous and comprehensive record of rights can give an accurate picture of the position at any particular time.

Most of the advantages of the system of survey and record derive directly from the immediate availability of this exact information. The person legally recognized as possessing a right, the nature of the right, and the exact boundaries of the land concerned are at once clear, and any persons engaged in any transaction relating to the right knows at once how they stand. If the record is one of absolute title, the person whose name is recorded in the register, and no other, can dispose of the rights. If the register is one of possession only, there is at least a very strong presumption that the person registered as in possession is the person who can dispose of the rights and a virtual certainty that his or her interest in the transaction cannot be neglected. The possibility of fraud or of subsequent legal difficulties are thus either eliminated or greatly reduced.

Registration also provides adequate protection to all classes of rightholder, including absentees, persons with reversionary or pre-emptive rights, or those with dormant rights of any kind. It also protects any person or class of persons who have rights in easements or other restrictive rights. A public right of way is protected by registration equally with a right to restrict building or land use. Communal or private rights of grazing, extraction of timber, collection of forest produce, use of water, etc. whether on private or public lands, are publicly defined and safeguarded.

6. Answer the questions below:

1. Speak about primary advantages of cadastral surveys?
2. What are the other advantages of survey system?
3. How are the conditions of register types?
4. What does the registration provide?
5. How is the protection obtained by registration?

7. "Step-by-step". Work in groups. Read a paragraph with your small group, give subtitle and write short notes on it. Appoint a leader from your group to present your notes. Then he will present your notes to auditory and answer questions if available.

Paragraph 1

Paragraph 2

Paragraph 3

Think it over. Write the advantages and disadvantages of cadastral surveys and registration of rights:

Advantages		Disadvantages

Unit 11

- Find the jobs and family words in the word chains and write them in the table.

teacher retired dentist television producer
grandparent son niece engineer
cousin shop assistant

Jobs	Family
teacher	

- Complete the sentences with the correct form of a verb from the box:

clean go have leave like play talk
wash watch

My mother cleans our house.

- The teacher _____ in English in class.
- Jake _____ his hair every morning.
- Matt _____ his new job – it's very interesting.
- Tracy _____ to work at 9:00 in the morning.
- My brother _____ football on TV every evening.
- Patrick _____ games on the computer at work.
- Some engineers _____ dangerous jobs.
- The shop assistants _____ work late.

b Change the sentences to make them negative.

My mother *doesn't clean* our house.

3.

Work in groups. Make sentences from the chart.

If you want to ...		
learn English, do well in life, keep fit,	you have to you don't have to you should you shouldn't you must	work hard. do some sport. learn the grammar. go to university. buy a dictionary. smoke. speak your language in class.

Text: FIGURE OF THE EARTH

4. Find the translations of the following words:

precision

size

approximation

sphere

satisfactory

figure

purposes

represent

simplest

entire

distance

deviates

sufficiently

justifying

remained

matter

speculation

estimation

measurement

regardless

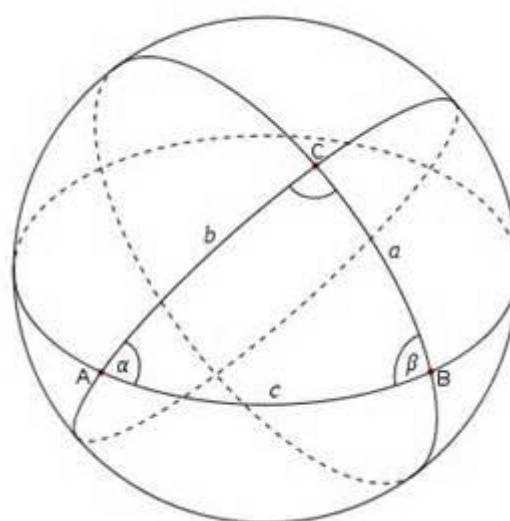
polar

correspond

5. Read and translate the text.

The expression **figure of the Earth** has various meanings in geodesy according to the way it is used and the precision with which the Earth's size and shape is to be defined. While the Sphere is a close approximation of the true figure of the Earth and satisfactory for many purposes, Geodesists have developed a number of models to represent a closer approximation to the shape of the Earth.

The simplest model for the shape of the entire Earth is a Sphere. The Earth's Radius is the Distance from Earth's center to its surface, about 6,371 kilometers (3,959 mi). While "radius" normally is a



characteristic of perfect spheres, the Earth deviates from a perfect sphere by only a third of a percent, sufficiently close to treat it as a sphere in many contexts and justifying the term "the radius of the Earth".

The Earth is only approximately spherical, so no single value serves as its natural radius. Distances from points on the surface to the center range from 6,353 km to 6,384 km (3,947 – 3,968 mi). Several different ways of modeling the Earth as a sphere each yield a mean radius of 6,371 kilometers (3,959 mi). Regardless of the model, any radius falls between the polar minimum of about 6,357 km and the equatorial maximum of about 6,378 km (3,950 – 3,963 mi). The difference 21 kilometers (13 mi) correspond to the polar radius being approximately 0.3% shorter than the equator radius.

6. Answer the questions below:

1. What is the expression of Earth figure used for?
2. What is the Earth's sphere?
3. What is the radius of the Earth?
4. Distances from points on the surface to the center?

7. Complete the fact sheet:

Earth's size and shape...	
A Sphere...	
Earth's Radius ...	
6,353 km to 6,384 km...	
3,959 mi	
6,357 - 6,378 km...	
21 kilometers (13 mi)	

8. Work in groups. Group A is to make question forms, group B will make negative forms, Group C will find the translation of the sentences below:

1. Geodesists have developed a number of models to represent a closer approximation to the shape of the Earth;
2. The Earth deviates from a perfect sphere by only a third of a percent;
3. The Earth is only approximately spherical, so no single value serves as its natural radius;
4. Any radius falls between the polar minimum of about 6,357 km;
5. The difference distances correspond to the polar radius;

Unit 12

must or should?

1 Work in groups. Complete the sentences with *must* or *should*.

When you're driving ...

- 1 you _____ stop at red lights.
- 2 you _____ be kind to other drivers.
- 3 you _____ wear a seat belt.
- 4 On a long journey, you _____ have a rest from time to time.
- 5 In Britain, you _____ drive on the left.



2.

Complete the text with the present continuous form of the verbs in the box.

~~cut~~ get increase cause change melt rise have

Global warming

Power stations, cars and factories produce carbon dioxide (CO₂). Trees and plants change it back to oxygen, but we **a** *are cutting* down trees in the Amazon rainforests, so the amount of carbon dioxide in the air **b** The carbon dioxide allows radiation from the sun to enter the atmosphere but not to leave it. This **c** the atmosphere to heat up.

Scientists think that the polar ice caps and glaciers around the world **d** This is creating more water and the level of the sea **e** In many parts of the world there is a possibility of floods on land near the coast. In general, the world's climate **f** This means warm areas **g** colder winters, and previously cold areas **h** warmer.



Text: WHAT IS LAND POLLUTION?

3. Find the translations of the words below:

pollution
deterioration
misuse
resources
occurs
waste
disposed

pesticides
insecticides
fertilizers
practices
Exploitation
mining
habitats

reduce
capacity
degradation
solid
waste
biodegradable
twigs

4. Read and translate the text

Land pollution is the deterioration (destruction) of the earth's land surfaces, often directly or indirectly because of man's activities and their misuse of land resources. It occurs when waste is not disposed off properly, or can occur when humans throw chemicals unto the soil in the form of pesticides, insecticides and fertilizers during agricultural practices. Exploitation of minerals (mining activities) has also contributed to the destruction of the earth's surface.

Since the Industrial Revolution, natural habitats have been destroyed, and environments have been polluted, causing diseases in both humans and many other species of animals.

Human actions have also caused many large areas of land to lose or reduce their capacity to support life forms and ecosystems. This is known as land degradation. Note that land degradation can result from many factors, and land pollution is only one of them.

Solid Waste. These include all the various kinds of rubbish we make at home, school, hospitals, market and work places. Things like paper, plastic containers, bottles, cans, food and even used cars and broken electronic goods, broken furniture and hospital waste are all examples of solid waste. Some of these are biodegradable (meaning they easily rot or decay into organic matter). Examples include food droppings, paper products as well as vegetation (like grass and twigs). Others are not biodegradable, and they include plastics, metals and aluminum cans, broken computer and car parts.

5. Answer the questions below:

1. What is land pollution?
2. How is it occurred?
3. What is the negative effect of humankind to the environment?
4. What is land degradation?
5. How to avoid land pollution?

6. "Problem". Fill in the table writing the type of problem, case and ways of solving them. Discuss it with your auditory:

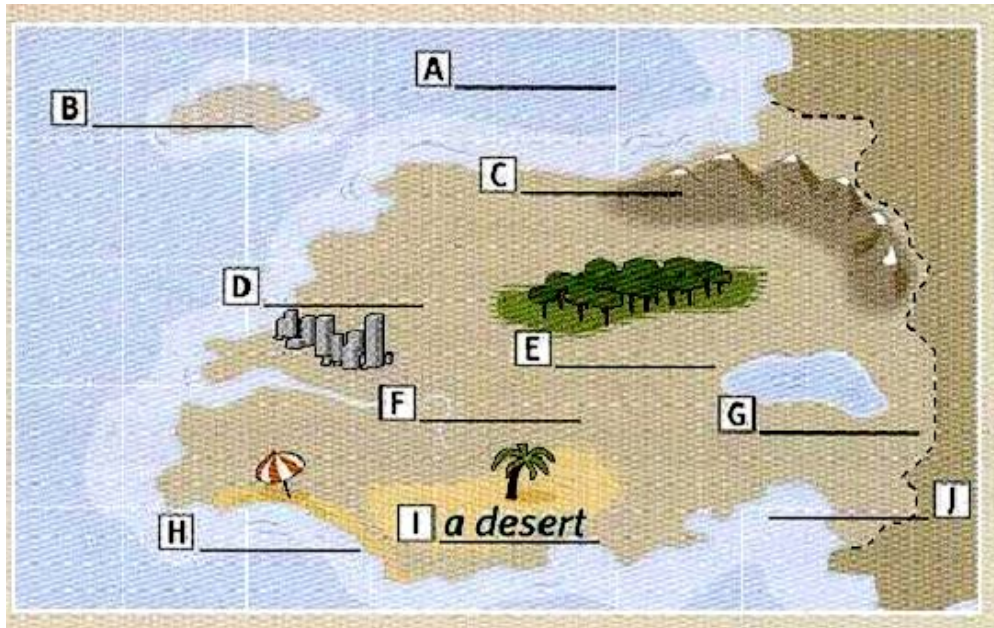
<i>TYPE OF PROBLEM</i>	<i>CASE OF THE PROBLEM</i>	<i>WAYS OF SOLVING PROBLEM AND YOUR ACTS</i>

Unit 13

1.

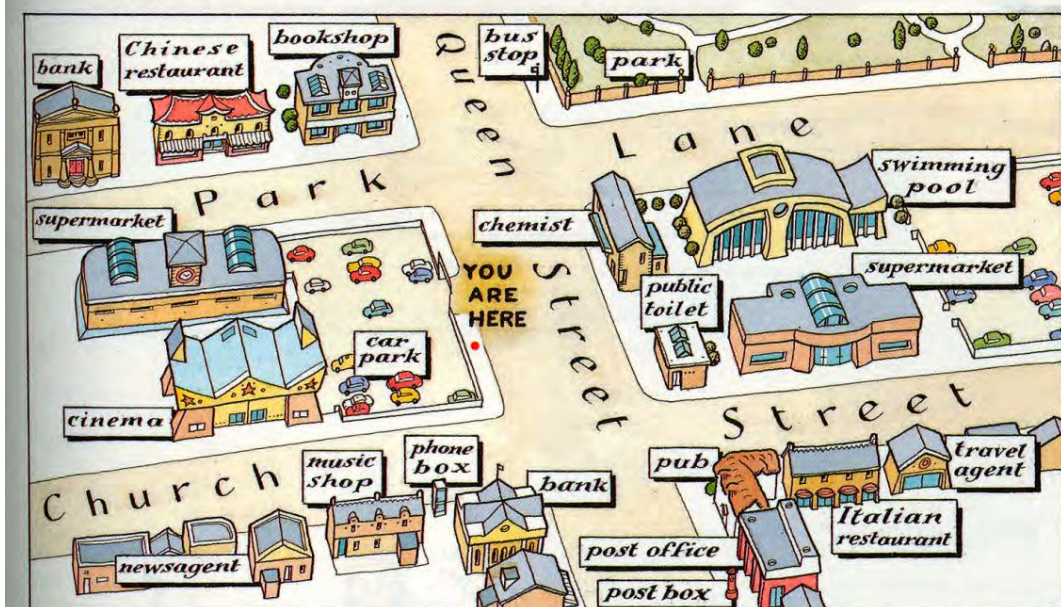
Match the words in the box with the places on the map (A-J).

a bay a beach a city a desert a forest
an island a lake mountains a river the sea



Look at the street map. Where can you buy these things?

some aspirin a CD a plane ticket a newspaper a book some stamps



Text: CARTOGRAPHY

2. Find the translation of the following words:

Combining
technique
cartography
premise
reality
communicate
spatial
effectively
agenda

traits
concern
editing
abstract
Toponymy
terrain
Eliminate
relevant
purpose

generalization
Reduce
complexity
Orchestrate
convey
integrated
constitutes

3. Read and translate the text.

Cartography (from Greek language χάρτης *khartēs*, "map"; and γράφειν *graphein*, "write") is the study and practice of making Map. Combining Science, Aesthetics, and technique, cartography builds on the premise that reality can be modeled in ways that communicate spatial information effectively.

The fundamental problems of traditional cartography are to:¹



1. Set the map's agenda and select traits of the object to be mapped. This is the concern of map editing. Traits may be physical, such as roads or land masses, or may be abstract, such as Toponymy or political boundaries.
2. Represent the terrain of the mapped object on flat media. This is the concern of Map projection.
3. Eliminate characteristics of the mapped object that are not relevant to the map's purpose. This is the concern of Cartographic generalization.
4. Reduce the complexity of the characteristics that will be mapped. This is also the concern of generalization.
5. Orchestrate the elements of the map to best convey its message to its audience. This is the concern of Map design.

Modern cartography is largely integrated with Geographic information science (GIScience) and constitutes many theoretical and practical foundations of Geographic information system.

4. Answer the questions below:

1. Etymology of the cartography?
2. What does the cartography build ?
3. What are the basic problems in traditional cartography?
4. How is modern cartography integrated?

5. Put the letters correctly to make up words:

1. pyoonmot _____;
2. ioneneralzgati _____;
3. nseidg _____;
4. rathgorpyca _____;
5. neaadg _____;

7. Work in groups. Write the main characteristics of the cartography types and show advantages and disadvantages:

CARTOGRAPHY					
MODERN	TRADITIONAL	MODERN		TRADITIONAL	
		+	-	+	-
Conclusion:					

Unit 14

1.

Match questions 1–7 with the questions (a–h) with the same meaning.

- | | |
|------------------------------------|-----------------------------------|
| 1 Does this bag belong to you? | a Are these ours? |
| 2 Is this his? | b Is this hers? |
| 3 Is this Mary's MP3 player? | c Is this mine? |
| 4 Are these our letters? | d Do these books belong to them? |
| 5 Are these theirs? | e Is this yours? |
| 6 Is this present for me? | f Is this ours? |
| 7 Are these mine or yours? | g Are these my keys or your keys? |
| 8 Does this umbrella belong to us? | h Does this belong to Mr McBride? |

Look at the floor plan and complete the dialogue with the correct form of *there is/ isn't* or *there are/ aren't*.



- A: Good morning. Can you give me some information about the house on Chandos Road?
- B: Yes, of course. It's a very nice, big apartment.
- (1) There are three bedrooms, ...
- A: (2) _____ a bathroom with each bedroom?
- B: No, (3) _____. The main bedroom has got a bathroom, and then (4) _____ one other bathroom in the apartment.
- A: OK. Is the kitchen big?
- B: Yes, it is, and it's got a lot of equipment.
- A: What about the dining room?
- B: Ah, well, (5) _____ a dining room. But (6) _____ a large living room with a dining area.
- A: I know there's a garden, but (7) _____ any terraces?
- B: No, (8) _____, I'm afraid.
- A: And finally, (9) _____ a garage?
- B: Yes, (10) _____ a garage at the front of the house.

2.

Complete the conversation starters with a word from the box.

are couldn't Do do Have haven't

- 1 Hello, we _____ met, have we? I'm Anthony.
- 2 So _____ you enjoying the party?
- 3 _____ you tried these snacks?
- 4 Sorry, I _____ help overhearing. You said you've just been to Delhi?
- 5 _____ you know many people here?
- 6 So what _____ you think of this music?

3.Text: MAP DESIGN

4. Find the translations of the following words:

mapmaking
particular
intent

illustrated
manner
percipient

acknowledges
fashion
refers

coined
notion
confusion
enhance
attention
identify
demonstrated

useless
ultimate
goal
convincing
authenticity
implies
richness

multivariate
comparison
hypothesis
stimulates
creator
manner
overall

5. Read and translate the text.

From the very beginning of mapmaking, maps "have been made for some particular purpose or set of purposes". The intent of the map should be illustrated in a manner in which the percipient acknowledges its purpose in a timely fashion. The term *percipient* refers to the person receiving information. The principle of Figure-ground in map design refers to this notion of engaging the user by presenting a clear presentation, leaving no confusion concerning the purpose of the map. This will enhance the user's experience and keep his attention. If the user is unable to identify what is being demonstrated in a reasonable fashion, the map may be regarded as useless.



Making a meaningful map is the ultimate goal. Alan MacEachren explains that a well designed map "is convincing because it implies authenticity". An interesting map will no doubt engage a reader. Information richness or a map that is multivariate shows relationships within the map. Showing several variables allows comparison, which adds to the meaningfulness of the map. This also generates hypothesis and stimulates ideas and perhaps further research. In order to convey the message of the map, the creator must design it in a manner which will aid the reader in the overall understanding of its purpose.

6. Answer the questions below:

1. What should be the intent of the map?
2. Who is percipient?
3. What is the principle of figure ground map design?
4. What is the importance of making meaningful maps?

7. Decide whether the sentences are true or false. If the sentences are true tick(✓), if they are false write your correct comment into it.

No	Facts	True	False
1	The term <i>percipient</i> refers to the person receiving information.		
2	The intent of the map should be		

	<i>demonstrated the latest areal fashion</i>		
3	<i>Showing several variables allows differentials, which seperates to the meaningfulness of the map</i>		
4	<i>Making a meaningful map is very important goal</i>		
5	<i>Maps have been made for some particular purpose or set of purposes</i>		

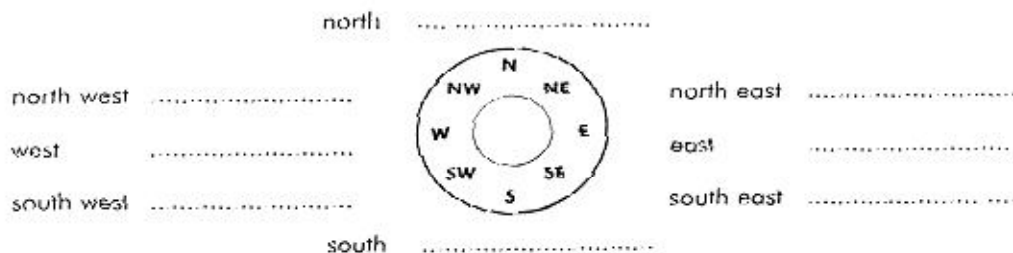
8. Find out the word from its definition: a system that can show the exact position of a person or thing by using signals from satellites (= objects in space that send signals to Earth)



Unit 15

1. Write the translation of the sides of the world and describe your living place as a model below:

Points of the compass



I live in the north of England.

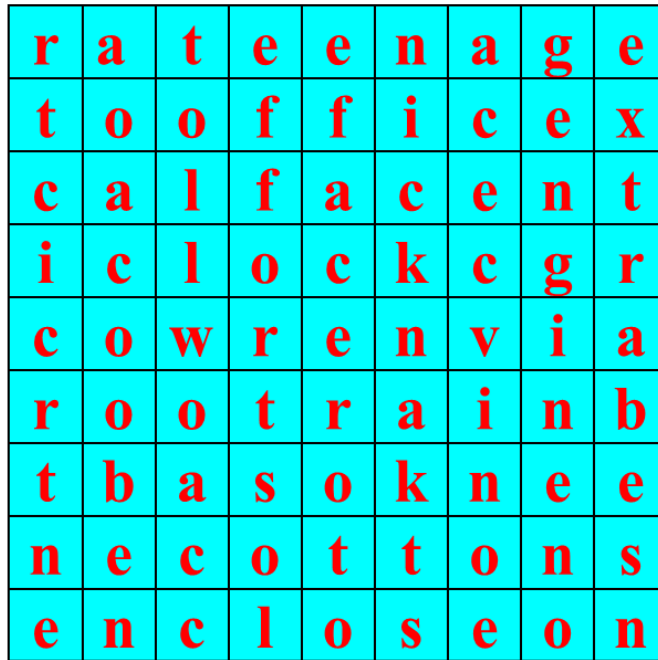
My village is ten kilometres east of York.

Complete the sentences with the comparative form of the adjectives in the box.

expensive heavy modern near peaceful
small

- It's very noisy in here. Shall we go somewhere _____ ?
- The meal was cheap. I expected it to be _____ .
- Your suitcase feels light. Mine is much _____ .
- The style is a bit old-fashioned. I was looking for something _____ .
- That hotel is a long way from the centre. Can't you find anything _____ ?
- This table is enormous. Have you got anything _____ ?

Find the nouns from the grid:



Text: CADASTRAL SURVEYING

2. Find the translations of the following words:

Surveying

sub-field

establishment

estate

component

legal

creation

properties

spatial

respect

neighboring

titles

property

ground

attorneys

corners

monumented

hired

perform

adjoining

determine

obtain

deed

description

tax

incomplete

municipality

county

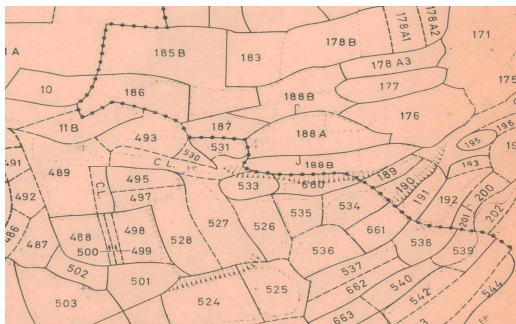
utility

located

conducted

overlooked

3. Read and translate the text.



collective record of lands that many nations have established.

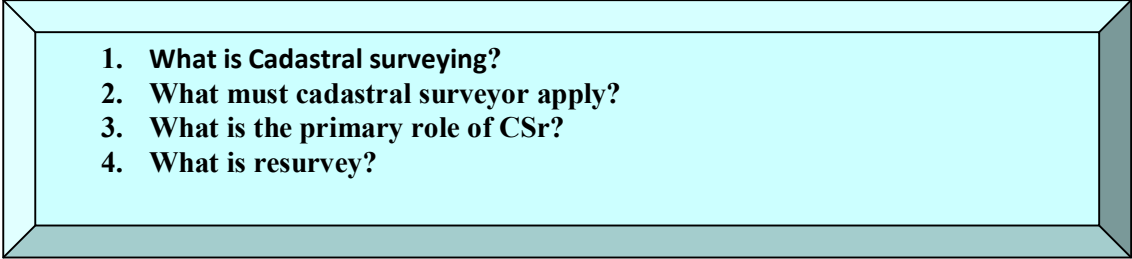
Cadastral Surveying is the sub-field of Surveying that specializes in the establishment and re-establishment of Real estate boundaries. It is an important component of the legal creation of properties. A cadastral surveyor must apply both the spatial-measurement principles of general surveying and legal principles such as respect of neighboring titles. Cadastral Surveying refers to the Cadastre, or

One of the primary roles of the land surveyor is to determine the boundary of real property on the ground. That boundary has already been established and described in legal

documents and official plans and maps prepared by attorneys, engineers, and other land surveyors.

A common use of a survey is to determine a legal property boundary. The first stage in such a survey, known as a resurvey, is to obtain copies of the deed description and all other available documents from the owner. The deed description is that of the deed and not a tax statement or other incomplete document. The surveyor should then obtain copies of deed descriptions and maps of the adjoining properties, any records from the municipality or county, utility maps, and any records of surveys. Depending on which region the survey is located in, some or most of this information may not be available or even exist.

4. Answer the questions below:

- 
- 1. What is Cadastral surveying?**
 - 2. What must cadastral surveyor apply?**
 - 3. What is the primary role of CSr?**
 - 4. What is resurvey?**

5.

Write the sentences from the text using the word combinations “Cadastral surveying” or “cadastral surveyor” and translate.

SPECIAL COURSE

LAW OF THE REPUBLIC OF UZBEKISTAN

from August 28, 1998 of No. 666-I

About the state land cadastre

(incomplete)

(Last edition from 03-12-2004)

Article 1. Purpose of this Law

The purpose of this Law is establishment of the legal basis of maintaining the state land cadastre, use of cadastral data for development of economy, providing safeguards of the rights to the parcels of land, rational use, recovery and protection of lands.

Article 2. Legislation on the state land cadastre

The legislation on the state land cadastre consists of this Law, other acts of the legislation.

If the international treaty of the Republic of Uzbekistan establishes other rules, than what are provided in the legislation of the Republic of Uzbekistan on the state land cadastre, are applied rules of the international treaty.

Article 3. State land cadastre

The state land cadastre is the main constituent of the Single system of the state inventories and represents system of data and documents on natural, economic, legal regime of lands, their categories, the quality indicator and value, the location and the sizes of the parcels of land, their distribution on owners, users, lessees and owners.

The state land cadastre includes: state registration of the rights to the parcels of land, accounting of quantity and quality of lands, appraisal of quality of soils, cost assessment of lands, and also systematization, storage and updating of land and cadastral information.

Article 4. Basic principles of maintaining the state land cadastre

The basic principles of maintaining the state land cadastre are:

- completeness of the scope of all territory of the country;
- application of the single system of spatial coordinates;
- unity of the technique of development of land and cadastral information;
- reliability of land and cadastral information.

Article 5. Public administration in the field of maintaining the state land cadastre

Public administration in the field of maintaining the state land cadastre is performed by the Cabinet of Ministers of the Republic of Uzbekistan, public authorities on places and specially authorized state body on that.

Specially authorized body of public administration in the field of maintaining the state land cadastre is the State committee of the Republic of Uzbekistan on land resources, geodesies, to cartography and the state inventory.

Article 6. Powers of the Cabinet of Ministers of the Republic of Uzbekistan in the field of maintaining the state land cadastre

Powers of the Cabinet of Ministers of the Republic of Uzbekistan in the field of maintaining the state land cadastre treat:

- development of the single state policy directed on rational use of land resources;
- determination of the priority directions and the solution of questions in the sphere of financing and investments;
- approval of the annual National status report of land resources;
- establishment of the procedure for the state registration of the rights to the parcels of land and transactions with them;
- implementation of other powers according to the legislation.

-A-

absentees(n)-yo'q kishi;
abstract(n)- mavhum; namuna;
acceptable(adj) - ma'qul yaroqli;
acknowledge(v)- e'tirof etmoq;
adjacent(adj)- narigi, keyingi, yonidagi;
adjoining(adj)- qo'shni, yondosh;
adopt(v)-qabul qilmoq;
advantage(n)- ustunlik;
aerial (adj)- havoga oid;
agenda(n)- kun tartibi;
aircraft(n)- samolyot, havo kemasi;
altitude(n)- balandlik;
analogue(n)- o'xshash;
approximation(n)- deyarli, taxminiy;
area(n)- hudud;
assign(v)- foydalanish uchun bermoq;
attention(n)- e'tibor
attorney(n)- advokat;
authenticity(n)- ishonchli, haqiqiy;
availability(n)- yaroqlilik;

-B-

bending(adj)- egiluvchi, bukiluvchi;
beneath(adv)- pastida, ostida;
biodegradable(adj)- tabiiy eskiradigan;
boundary(n)- chegara chizig'i
build-up(v)- barpo qilmoq

-C-

capable(adj)- yaroqli, loyiq;
capacity(n)- sig'im, hajm;
capture(v) – qo'lga kiritmoq;
cartography(n)- kartografiya, xaritashunoslik;
challenge(v) – chaqirmoq, da'vat;
circumstance(n)- vaziyat, muhit; moliyaviy ahvol;
clarity(n)- aniqlik;
coin(n)- tanga;(v)kashf qilingan;
combining(n)- birlashtiruvchi, uyg'unlashtiruvchi;

communicate(v)- aloqa qilmoq;
comparison(n)- qiyoslash, taqqoslash;
compile(v)- tuzmoq;
complexity(n)- murakkablik;
component(n)- tarkib, tuzilma;
comprehensive(adj)- atroflicha, mufassal;
concern(v)- qamrab olmoq, tarkibiga kirmoq;
conduct(v)- olib bormoq;
confusion(n)- chalkashish, adashish
conjunction(n)- birlashtirish, birlashma;
consistent(adj)- o'zgarmas;
constitute(v)- yaratmoq, hosil qilmoq;
contour(n)- yotiq chiziq, sirtqi ko'rinish;
convey(v)- yubormoq; bayon etmoq;
convincing(adj)- ishontiruvchi;
cope(v)- eplamoq, uddalamoq;
core(n)- o'zak, mohiyat;
corner(n)- burchak;
correspond(v)- munosib bo'lmoq, muvofiq;
countryside(n)- shahar tashqarisi, qishloq;
county(n)- grafik; villa; ovul;
creation(n)- yaralish, paydo bo'lish;
creator(n)- yaratuvchi, ixtirochi;
crust(n)- ustki qattiq qatlam;

-D-

data(n)- ma'lumotlar;
deed(n)- bajarilgan ish, amal;
deep(adj)- chuqur; teran;
define(v)- tariflamoq, tushunmoq;
aniqlamoq;
degradation(n)- buzilish yemirilish; yuvib ketish;
demonstrate(v)- namoyish qilmoq;
densely(adv)- zich joylashgan, qalin;
depth(n)- chuqurlik;
derive(v)- hosil qilmoq, ajratib olmoq;
description(n)- ta'rif, tavsifnoma;
deterioration(n)- yomonlashish, og'irlashish;
determine(v)- aniqlamoq, belgilamoq;

deviate(v)- og‘moq, surilmoq;
dimension(n)- o‘lcham;
directly(adv)- to‘g‘ridan to‘g‘ri, bevosita;
dispose(v)- joylashtirmoq; egalik qilmoq;
dispute(v)- muhokama qilmoq, bahs;
distance(n)- masofa, oraliq;
dormant(adj)- harakatsiz, yashirin;
double(adj)- ikki marta, ikkilangan, ikki hissa;

-E-

earthquake(n)- zilzila, yer qimirlashi;
ease(v)- yengillashtirmoq, pasaytirmoq;
easement(n)- yengillik;
editing(n)- nashr;
effectively(adv)- samarali;
eliminate(v)- yo‘q qilmoq, barbod qilmoq;
ellipsoid(adj)- berk egri chiziqsimon;
embankment(n)- damba; suv havzasi bo‘yidagi ko‘cha;
enable(v)- huquq bermoq, ruxsat bermoq;
engage(v)- yollamoq; majburiyatni olmoq; diqqatni jalb qilmoq; unash-tirmoq;
enhance(v)- kuchaytirmoq, ko‘paytirmoq;
ensure(v)- kafolatlamoq;
entire(adv)- to‘la to‘kis, butun, mukammal;
equally(adv)- teng, bir xil;
equitable(adv)- teng huquqli, adolatli;
essential(adv)- birlamchi, muhim;
establishment(n)- barpo qilish; muassasa;
estate(n)- mol-mulk; tabaqa, holat; joy qism;
estimation(n)- baho fikr, xulosa;
exact(adv)- aniq, puxta; (v) talab qilmoq;
existing(adj)- mavjud;
exploitation(n)- eksplutasiya, foydalanish;
extent(n)- kattalik, o‘lcham, hajm;
extraction(n)- chiqarib olish;

-F-

fashion(n)- shakl, fason; (v) shakllanmoq;
feature(n)- xususiyat;
fence(v)- to‘smoq, g‘ov tutmoq;
fertilizer(n)- mineral o‘g‘it;
figure(n)- shakl, tasvir;

focal(adj)- markaziy nuqta;
fraud(n)- yolg‘on, soxta;

-G-

generalization(n)- umumlashtirish;
geoid(n)- yerga oid;
goal(n)- maqsad;
gravity(n)- gravitasiya, yerning tortishish kuchi;
grazing(n)- o‘tloq; tegib turuvchi, tutashuvchi;
grid(n)- koordinata; katak, panjara;
ground(n)- maydon, hudud;

-H-

habitats(n)- o‘simlik yoki hayvonning kelib chiqish joyi
height(n)- balandlik;
hilly(adj)- tepalikli, do‘ngli;
hired(adj)- pulga yollangan, haq to‘langan;
hypothesis(n)- taxminiy faraz;

-I-

identify(v)- aniqlamoq, bilmoq;
illustrated(adj)- yoritilgan; ko‘rsatilgan;
immediate(adv)- darhol, zudlik bilan;
imply(v)- anglatmoq, ko‘zda tutmoq;
inadequate(adv)- talabga javob bermaydigan, yaroqsiz;
incomplete(adj)- noto‘liq;
indicate(v)- ko‘rsatmoq, bildirmoq;
infer(v)- kelib chiqmoq, xulosa qilmoq;
inner(adj)- ichki, ichidagi;
insecticide(n)- hasharotlarga qarshi vosita;
integrated(adj)- bir butun qilib biriktirilgan;
intent(n)- maqsad, niyat;
interior(n)- biror narsaning ichki tomoni;
internal(adj)- ichki;

-J-

jurisdiction(n)- yurisdiksiya, huquq;
justify(v)- tasdiqlamoq, dalil bo‘lmoq;

-L-

Landowner(n)- yer egasi;

large –scale(n)- yer o‘lchami;
layer(n)- qatlam, qavat;
legal(adj)- qonuniy;
level(adj)- tekis, silliq; baravar;
 (n)balandlik, sath;
liquid(n)- suyuqlik;
locate(v)- joylashmoq;
location(n)- joy, makon, manzilgoh;

-M-

manner(n)- yo‘sin, tarz, taxlit; atvor, xulq;
mantle(n)- qobiq, yuzaning sathi;
 (v)o‘ramoq, qoplamoq;
mapmaking(n)- xaritashunoslik;
mapped(adj)- xaritalangan
matter(n)- modda, material, asos;
measurement(n)- o‘lcham; o‘lchov;
measure(v)- o‘lchamoq;
merely(adv)- faqatgina, ozgina xolos;
mining(n)- konchilik;
misuse(v)- noto‘g‘ri foydalanmoq;
monumented(adv)- abadiylashtirilgan;
multivariate(v)- ko‘p farqlanmoq;
municipality(n)- o‘z-o‘zini boshqarish organi;

-N-

national(adj)- milliy;
neglect(v)- kam e‘tibor qaratmoq;
neighboring(adj)- yonma-yon joylashgan;
notion(n)- g‘oya, tushuncha;

-O-

obscure(adj)- noaniq, tushunarsiz, noma‘lum;
obtain(v)- erishmoq, yetishmoq;
obtainable(adj)- qo‘lga kiritish mumkin bo‘lgan;
obvious(adj)- aniq, ravshan, ayon;
occur(v)- sodir bo‘lmoq, yuz bermoq;
orchestrate(v)- biror nimani oldindan kelishib qo‘ymoq;
ordinarily(adv)- odatda, umuman;
outer(adj)- tashqi;
outline(n)- shakl, ko‘rinish, plan;
overall(adv)- umumiy, umuman;

overlap(v)- bir-birini qisman qoplamoq; yopmoq;
overlook(v)- yuqoridan qaramoq;
owing to(preposition)- -ga ko‘ra, muvofiq;
ownership(n)- mulkka egalik qiluvchi shaxs, mulkdor;

-P-

parcel(n)- yer, maydon, hudud; bog‘lam, o‘ram;
particular(adj)- maxsus, alohida;
percipient(adj)- yaxshi anglovchi, tushunuvchi;
perform(v)- bajarmoq, amalga oshirmoq;
permanent(adj)- doimiy, o‘zgarmas;
pesticide(n)- zararkunandalarga qarshi kimyoviy vosita;
phenomenon(n)- voqea, hodisa;
photogrammetry(n)- fotogrametriya(tasviriy o‘lcham);
piece(n)- bo‘lak, qism; o‘zak;
planimetric(adj)- planimetrik;
plot(n)- yer, maydon, hudud;
point(n)- nuqta, joy;
polar(adj)- qutbiy;
pollution(n)- ifloslanish;
position(n)- joy; holat; mavqe;
possession(n)- egalik; mol-mulk;
poverty(n)- faqirlik, muhtojlik;
practice(n)- amaliyot;
precise(adj)- aniq, belgili, tayin; puxta;
pre-emptive(adj)- bir ish harakatdan oldin udallangan;
premise(n)- boshlang‘ich, asos, muqaddima;
presumption(n)- taxmin; faktning aksi tasdiqlanmaguncha, shu faktni to‘g‘ri deb topish;
primarily(adv)- dastavval;
prior(adj)- avvalgi, oldingi; muhimroq, ahamiyatliroq;
prism(n)- prizma(ko‘p qirrali figuraning bir turi);
property(n)- mol-mulk; mulkka egalik qilish huquqi; xususiyat;
prove(v)- isbotlamoq, asoslamoq;

provide(v)- ta'minlamoq, yetkazib bermoq;
purpose(n)- maqsad, niyat;

-Q-

quality(n)- sifat; miqdor;

-R-

radial(adj)- nurli; radius bo'ylab tarqaluvchi;
rapid(adj)- jadal, tez;
reality(n)- voqelik, haqiqat;
recognize(v)- tan olmoq, tanimoq;
record(v)- qayd qilib bormoq, yozmoq; yozuv;
rectangular(adj)- to'g'ri to'rtburchakli;
reduce(v)- qisqartirmoq, kamaytirmoq;
reference(n)- qo'llanma, yo'riqnoma; e'tiborga olish;
refer(v)- tilga olmoq, yuritmoq;
refract(v)- nurni sindirmoq;
regardless(adv)- -ga qaramasdan;
relevant(adj)- mavzuga oid, bog'liq;
remain(v)- saqlanmoq, qolmoq;
represent(v)- namoyish qilmoq, ko'rsatmoq;
resource(n)- manbaa;
respect(v)- hurmat qilmoq; munosabat bildirmoq;
respective(adj)- har biri, alohida;
restrictive(adj)- chegaralangan;
reversionary(adj)- qaytuvchi;
richness(n)- boylik, davlat;
rural(adj)- qishloqqa oid;

-S-

safeguard(n)- kafolat, qo'riqlash;
satisfactory(adj)- qoniqarli;
satisfied(adj)- qoniqtiradigan, talabga javob beradigan;
scale(n)- shkala, o'cham, yuza;
scarcity(n)- yetishmovchilik, taqchillik;
seismic(adj)- seysmik, yer qimirlashiga oid;
seperate(v)- ajratmoq;
shear(v)- bo'linmoq, ikkiga ajralmoq;
shell(n)- po'choq, po'stloq; (v) artmoq;
simplest(adj)- eng soda. oddiy;
simplicity(n)- oddiylik, soddalik;

size(n)- hajm, kattalik, o'lchov;
slum(n)- xaroba joylar;
smooth(adj)- silliq, tekis, mayin;
solid(adj)- butun, qattiq, mustahkam;
source(n)- manbaa, asos;
space(n)- koinot, fazo; bo'sh joy, bo'shliq;
spatial(adj)- fazoviy;
speculation(n)- taxmin, faraz;
sphere(n)- sfera, shar, gumbaz, doira;
spherical(adj)- doiraviy;
stereoscopy(n)- stereoskopik;
stimulate(v)- jonlantirmoq, uyg'otmoq;
rag'batlantirmoq;
straight(adj)- tekis, to'g'ri;
strictly(adv)- qat'iyon;
subdivision(n)- qism, bo'lim;
sub-field(n)- maydon qismi;
subsequent(adj)- kelgusi, keyingi;
sufficient(adj)- yetarli, kifoya qiladigan;
surface(n)- yuza, sirt;
survey(v)- kuzatmoq, tadqiqot;
sustainable(adj)- qayta tiklanuvchi;
system(n)- tizim, sistema;

-T-

tax(n)- soliq, boj;
taxation(n)- soliqqa tortish;
technique(n)- texnikaviy usullar;
tenure(n)- mulk, yer-suv, molikona;
terrain(n)- relief, har xil shakldagi yer;
theodolite(n)- teodolit-gorizont va vertical burchaklarni o'lchovchi teleskopsifat asbob;
timber(n)- yog'och taxtalar; taxta materiallar;
title(n)- sarlavha, unvon, nom;
topographic(adj)- topografik, yer sathini o'lchashga doir fan tarmog'i;
toponymy(n)- toponimiya-tilshunoslikning joy nomlarini o'rganuvchi tarmog'i;
trace(v)- nusxa ko'chirmoq; (n)iz;
trait(n)- o'ziga xos xususiyat, fazilat, xossa;
transaction(n)- ish yumush, xizmat; ish yuritish; kelishuv, bitim;
transformed(adj)- shaklan o'zgargan;
traverse(v)- tog' tizmasini ko'ndalang kesib o'tmoq;

trend(n)- yo‘nalish, g‘oya fikr;
triangulation(n)- uchburchaksimon xarita;
triple(adj)- uchyoqlama;
twig(n)- shoxcha, chiviq, novda;

-U-

ultimate(adj)- oxirgi, so‘ngi; muhim, asosiy;
unfenced(adj)- to‘siqsiz;
unique(adj)- noyob, yagona;
unsympathetic(adj)- ixtiyorsiz, xushlamay;
updated(adj)- yangilangan;
urbanization(n)- shaharlashish,
urbanizasiya;
useless(adj)- foydasiz;
utility(n)- jihoz, uskuna;

-V-

valley(n)- vodiya
variation(n)- o‘zgarish, almashtirish,
og‘ish;
vegetation(n)- o‘simliklar; vegetatsiya –
unib-o‘shish;
velocity(n)- jadallik, tezlik;
viscous(adj)- yopishqoq, qovushqoq; qalin;

-W-

warrant(n)- kafolat, ishonch; dalil, hujjat.
Asos;
waste(n)- chiqindi, ortiqcha narsa;
(v)sovurmoq, isrof qilmoq;
wave(n)- to‘lqin, tebranish; (v)tebranmoq,
silkitmoq;
width(n)- bepoyonlik, kenglik, en;

GRAMMAR REFERENCES

TENSES (REVISION)

The diagram shown below will be used in the tense descriptions:



1-1 THE SIMPLE TENSES

TENSE	EXAMPLES	MEANING
SIMPLE PRESENT 	(a) It <i>snows</i> in Alaska. (b) Tom <i>watches</i> television every day.	In general, the simple present expresses events or situations that exist <i>always, usually, habitually</i> ; they exist now, have existed in the past, and probably will exist in the future.
SIMPLE PAST 	(c) It <i>snowed</i> yesterday. (d) Tom <i>watched</i> television last night.	<i>At one particular time in the past, this happened. It began and ended in the past.</i>
SIMPLE FUTURE 	(e) It <i>will snow</i> tomorrow. <i>It is going to snow</i> tomorrow. (f) Tom <i>will watch</i> television tonight. <i>Tom is going to watch</i> television tonight.	<i>At one particular time in the future, this will happen.</i>

	POSITIVE	NEGATIVE	QUESTION
Present simple	Subject + Verb ¹	S + $\frac{do}{does}$ + not + V	$\frac{Do}{Does}$ + S + V ¹ ?
Past simple	S + V ²	S + did not + V ¹	Did + S + V ¹ ?
Future simple	S + shall/will + V ¹	S + shall/will + not + V ¹	Shall/will + S + V ¹ ?

Directions: Answer the questions.

1. Can you think of a “general truth”? What are some other general truths?
2. What are some of the things you do every day or almost every day? Name three activities.
3. What did you do yesterday? Name three separate activities.
4. What are you going to do tomorrow?

yes / no questions and short answers

*Do male penguins keep the eggs warm?
Does water boil at 80°C?*

*Yes, they do.
No, it does not / doesn't.*

question words

We put question words in front of present simple yes / no questions.

*Why do people grow?
Where does water come from?
When do fish sleep?
What does this word mean?
Who do you sit next to?
How does a camera work?*

1. Complete the sentences. Use the correct form from these verbs:

boil close cost go have like meet open smoke speak teacher wash

1. She's very clever. She *speaks* four languages.
2. Steve ten cigarettes a day.
3. We usually dinner at 7 o'clock.
4. I Films. I often To the cinema.
5. Water at 100 degrees Celsius.
6. In Britain the banks at 9.30 in the morning.
7. The City Museum at 5 o'clock every evening.
8. Food is expensive. It a lot of money.
9. Shoes are expensive. They a lot of money.
10. Tina is a teacher. She mathematics to young children.
11. Your job is very interesting. You a lot of people.
12. Peter His hair twice a week.

2. Write sentences about the past (yesterday/last week etc.)

1. He always goes to work by car. Yesterday ...*he went to work by car.*
2. They always get up early. This morning they
3. Bill often loses his keys. He
4. I write a letter to Jane every week. Last week
5. She meets her friends every evening. She yesterday evening.

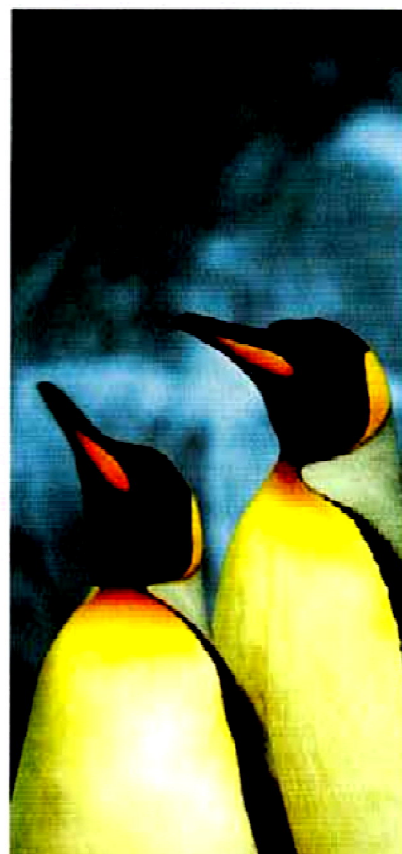
6. I usually read two newspaper every day. yesterday.
7. They come to my house every Friday. Last Friday
8. We usually go to cinema on Sunday. last Sunday.
9. Tom always has a shower in the morning. This morning.
10. They buy a new car every year. Last year
11. I eat an orange every day. Yesterday

3. Where will you be? Write sentences about yourself. Use I'll be .../I'll probably be .../ I don't know where I'll be.

1. (tomorrow at 10 o'clock) *I'll probably be on the beach*
(or *I'll be at work* or *I don't know where I'll be*).
2. (one hour from now) I
3. (at midnight)
4. (at 3 o'clock tomorrow afternoon)
5. (two years from now)

4 Complete the text with the affirmative form of the verbs in brackets.

Emperor penguins **a** (live) *live* in the Antarctic. The sea **b** (provide) all their food, so they are good swimmers. They **c** (dive) under the water and **d** (hold) their breath for up to 20 minutes. When the weather is very cold, the penguins **e** (stand) in a group. This **f** (keep) them warm. The Emperor is the only penguin that **g** (breed) in winter in Antarctica. Each female **h** (lay) one egg in May or June. They then **i** (return) to the sea to feed. Each male then **j** (stand) with an egg on his feet. His feet **k** (keep) the egg warm. He **l** (sleep) most of the time and **m** (eat) no food for about 65 days. When the egg **n** (hatch), the female **o** (come) back and **p** (find) her mate. Now the females **q** (feed) the young penguins. The male **r** (spend) his time eating. After a few weeks, the male **s** (return) to the family, and then both parents **t** (look after) the chick.



	POSITIVE	NEGATIVE	QUESTION
Continuous tenses	S + to be + V ¹ + ing	S + to be + not + V ¹ + ing	To be + S + V ¹ + ing?

1. What's happening at the moment? Write *true* sentences.

1. (I/wash/my hair) *I'm not washing my hair*
2. (it/snow). *It is snowing*
3. (I/sit/on a chair)
4. (I/eat)
5. (it/rain)
6. (I/learn/English)
7. (I/listen/to the radio)
8. (the sun/shine)
9. (I/wear/shoes)
10. (I/read/ a newspaper)
11. You can turn off the radio. I(not/listen) to it.
12. He (not/usually/drive) to work.
13. He usually (walk).

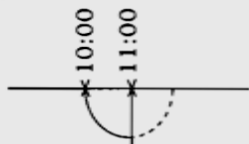
1-2 THE PROGRESSIVE TENSES

Form: **be + -ing** (*present participle*)

Meaning: The progressive tenses* give the idea that an action is in progress during a particular time.

The tenses say that an action *begins before*, *is in progress during*, and *continues after* another time or action.

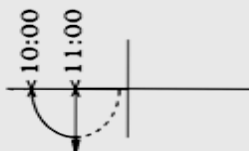
PRESENT PROGRESSIVE



(a) Tom *is sleeping* right now.

It is now 11:00. Tom went to sleep at 10:00 tonight, and he is still asleep. His sleep began in the past, *is in progress at the present time*, and probably will continue.

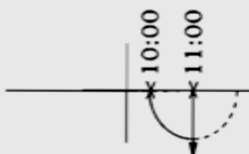
PAST PROGRESSIVE



(b) Tom *was sleeping* when I arrived.

Tom went to sleep at 10:00 last night. I arrived at 11:00. He was still asleep. His sleep began before and *was in progress at a particular time in the past*. It continued after I arrived.

FUTURE PROGRESSIVE



(c) Tom *will be sleeping* when we arrive.

Tom will go to sleep at 10:00 tomorrow night. We will arrive at 11:00. The action of sleeping will begin before we arrive, and it *will be in progress at a particular time in the future*. Probably his sleep will continue.

*The progressive tenses are also called the "continuous" tenses: present continuous, past continuous, and future continuous.

2.

Use the prompts to make a question.

a the weather in your country / change

Is the weather in your country changing ?

b it grow / warmer or colder

_____ ?

c storms / happen more often

_____ ?

d less snow / fall in winter

_____ ?

e summer / get hotter

_____ ?

f the changes / become a problem

_____ ?

g people / worry about this

_____ ?

h they / do anything to help

_____ ?

3 Complete the text with the present continuous form of the verbs in brackets.

Good afternoon, everybody. I a (speak) *am speaking* to you from Mount Surprising, the giant volcano. A team of scientists b (visit) _____ the volcano, and I'm here for Big TV, just in case anything exciting happens. I c (stand) _____ here near the top of the crater, and

d (look) _____ down into the volcano. At the moment the four scientists

e (climb) _____ down into the crater. It doesn't look very dangerous, I must say, but they

f (wear) _____ special clothes and a

rescue team g (stand by) _____ just in case!

A little bit of smoke h (rise)

from the volcano, but that's normal. Now the scientists

i (set) _____ up their equipment.

They j (try) _____ to collect some

gas, which will help them understand what exactly

k (go on) _____ under the volcano.

Wait a minute! Something l (happen)

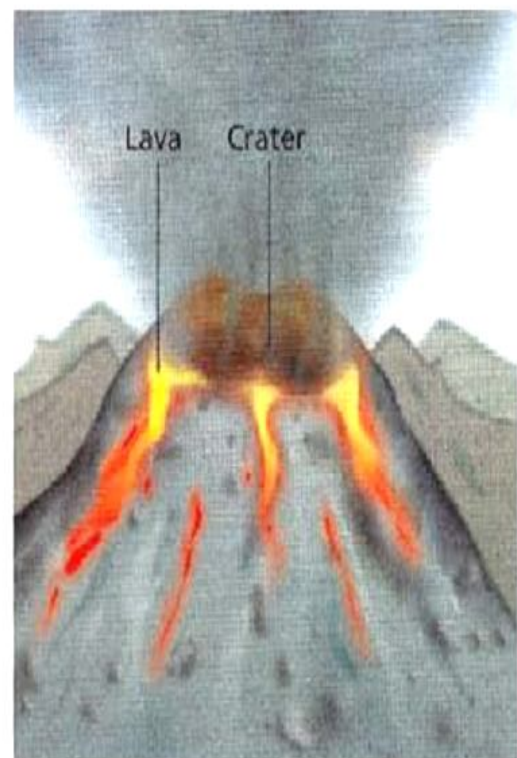
_____ ! The ground m (shake)

_____ ! The four scientists n (climb)

_____ out of the volcano as quickly as

they can. They o (shout)

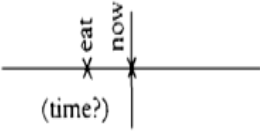
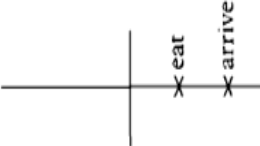
something as well. I think it's time to leave!



1-3 THE PERFECT TENSES

Form: **have + past participle**

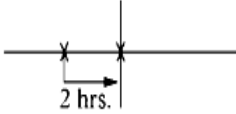
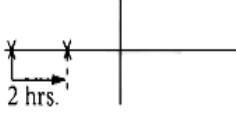
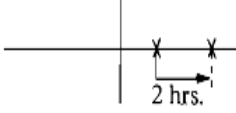
Meaning: The perfect tenses all give the idea that one thing *happens before* another time or event.

PRESENT PERFECT 	(a) Tom has already eaten.	Tom <i>finished</i> eating <i>sometime before now</i>. The exact time is not important.
PAST PERFECT 	(b) Tom had already eaten when his friend arrived.	First Tom finished eating. Later his friend arrived. Tom's eating was <i>completely finished before another time in the past</i>.
FUTURE PERFECT 	(c) Tom will already have eaten when his friend arrives.	First Tom will finish eating. Later his friend will arrive. Tom's eating will be <i>completely finished before another time in the future</i>.

1-4 THE PERFECT PROGRESSIVE TENSES

Form: **have + been + -ing (present participle)**

Meaning: The perfect progressive tenses give the idea that one event is *in progress immediately before, up to, until another time or event*. The tenses are used to express the *duration* of the first event.

PRESENT PERFECT PROGRESSIVE 	(a) Tom has been studying for two hours.	Event in progress: studying. When? <i>Before now, up to now</i>. How long? For two hours.
PAST PERFECT PROGRESSIVE 	(b) Tom had been studying for two hours before his friend came.	Event in progress: studying. When? <i>Before another event in the past</i>. How long? For two hours.
FUTURE PERFECT PROGRESSIVE 	(c) Tom will have been studying for two hours by the time his friend arrives.	Event in progress: studying. When? <i>Before another event in the future</i>. How long? For two hours.

Appendix 1/ tables#1-3

Read the text about climate change. Choose the correct form, A or B, to complete the sentence.

At the moment, scientists agree that the world's climate a B warmer over the past 50 years, but they disagree about the causes. Some believe that human activities b climate change. They argue that for 1,000 or 2,000 years, the temperature was more or less the same. However, since the Industrial Revolution, and more fossil fuels, such as coal, oil and gas, have been burned, the temperature has risen around 280 parts per million. This is an increase of about 0.5°C. Other scientists disagree. They say that the rise in temperature is due to natural processes like volcanic activity. In 1999, 156 countries at the United Nations agreed to reduce greenhouse gases, although Australia, for example, has not.



Use the prompts to make a present perfect simple question about scientific advances. Then answer yes or no. Check the factual answers on page 208.

- a scientists / discover a cure for the common cold?
Have scientists discovered a cure for the common cold?
- b people / live for long periods in space?
- c human beings / land on Mars yet?
- d scientists / invent time travel yet?
- e doctors / manage to transplant human hearts?
- f archaeologists / find the lost city of Atlantis?
- g scientists / ever teach an animal to talk?

Appendix 1/tables# 4-6

Directions: Answer the questions.

1. What are you doing right now? How long have you been *(doing that)*?
2. What were you doing last night at nine o'clock? What time did you stop *(doing that)*? Why did you stop *(doing that)*? How long had you been *(doing that)* before you stopped?
3. What are you going to be doing at nine o'clock tomorrow night? What time are you going to stop *(doing that)*? Why? How long will you have been *(doing that)* before you stop?

1 Use the prompts to write present perfect continuous sentences.

- a James / write e-mails / since this morning *James has been writing e-mails since this morning.*
- b She / teach / for ten years
- c We / not tell / lies to you!
- d My parents / shop / for furniture
- e Juan / not do / his homework
- f It / not rain / for long
- g Mariella / buy new clothes
- h I / read this book / for weeks!
- i They / talk / for hours
- j You / not clean / your room!

2 Use the prompts to write present perfect continuous questions. Then write short answers.

- a you / study for the exam? Yes
Have you been studying for the exam? Yes, I have.
- b How long / they / live in Hong Kong? Three years
- c she / wait / long? No
- d they / practise / the piano? Yes
- e How long / he / playing that game? Two hours
- f you / sit / there all day? No
- g How long / it / snow? Half an hour
- h he / eat / chocolate? Yes

3 Underline the correct form.

I **a** learned / 've learned / 've been learning to play the guitar since Christmas because my parents **b** bought / have bought / have been buying me one as a present. I **c** always wanted / 've always wanted / 've always been wanting to be in a band but I can't sing. My teacher **d** was / has been / has been being very patient. I **e** started / 've started / 've been starting with a few simple chords and now I can play one song. My fingers **f** hurt / 've hurt / 've been hurting when I practise too long. Today I **g** practise / 've practised / 've been practising since lunch and I think I'll have to stop soon. My parents **h** listened / have listened / have been listening to me and I think they want me to stop as well!



reported speech (1)

FORM

If the reporting verb is in the past (eg *said*, *told*), present tenses in the words spoken become past tenses when reported.

	Direct Speech	Reported Speech
present → past	<i>I love spaghetti.</i> <i>John doesn't like the new film.</i> <i>I'm quite happy.</i> <i>The school isn't very good.</i> <i>We are studying Spanish.</i>	<i>He said that he loved spaghetti.</i> <i>She told us that John didn't like the new film.</i> <i>She said she was quite happy.</i> <i>He said that the school wasn't very good.</i> <i>John said they were studying Spanish.</i>

Here are some other changes in verbs.

can → could	<i>I can drive.</i>	<i>Lenny said he could drive.</i>
will → would	<i>I'll phone later.</i>	<i>She said she would phone later.</i>
have → had	<i>We have finished the exercise.</i>	<i>John said they had finished the exercise.</i>
must / have to → had to	<i>I must go to the dentist.</i> <i>We have to go.</i>	<i>He said he had to go to the dentist.</i> <i>She said that they had to go.</i>

Some modal verbs do not change.

should → should	<i>You should see a doctor.</i>	<i>He told me I should see a doctor.</i>
would → would	<i>I would like a cup of tea.</i>	<i>She said that she would like a cup of tea.</i>
could → could	<i>We could take the train or bus.</i>	<i>He said they could take the train or bus.</i>

In reported speech it is normally necessary to make changes to pronouns.

I → he / she	<i>I like fish.</i>	<i>Peter said that he liked fish.</i>
my → his / her etc	<i>It is my book.</i>	<i>Jane told us that it was her book.</i>

Adverbs of time and place also often change.

here → there	<i>I don't like it here.</i>	<i>Paul said he didn't like it there.</i>
now → then	<i>We'll see you now.</i>	<i>They said they would see me then.</i>
today → that day etc	<i>We've worked hard today.</i>	<i>She said they'd worked hard that day.</i>

USE

There are two ways of reporting what people say.

- 1 John said "This book is very interesting."
- 2 John said (that) the book was very interesting.

We can repeat the actual words spoken in quotation marks (" "), as in sentence 1, or use reported speech as in sentence 2. When we use reported speech, the pronouns, tenses and adverbs of time and place may all change.

Say and tell are the most common reporting verbs. There is an important difference. Tell is always followed by a direct object: tell + someone (that) + reported statement.
*He told **her** that he was tired.* NOT *He told that he was tired.*

Say is not followed by a direct object: say (that) + reported statement.
*He **said** he was tired.* *He **said to me** he was tired.* NOT *He said-me that he was tired.*

reported speech (2)

- "I am tired." → John **said** that he was tired.
"I know the answer." → Jan **told** me that she knew the answer.
"I won't see you tomorrow." → Dave **said** he wouldn't see me the next day.
"We don't like the book." → The students **said** they didn't like the book.

We can report a question using the verbs **ask** or **want to know**.

- He **wanted to know** how John was feeling.
She **wanted to know** who knew the answer.
I **asked** her if I would see her tomorrow.
The teacher **asked** them if they liked the book.

When we report a question there are some changes which are the same as for reported statements.

- changing of the person eg I → He
- change of tenses eg present tense → past tense
- changing of expressions of time eg yesterday → the day before

In reported questions there are some other changes. In reported questions

- we use the same word order as for a statement (subject – verb).
How **are you**? They asked me how **I was**.
How long **are you staying** here? He asked me how long **I was staying** there.
- we do not use the auxiliaries **do / does / did** or a question mark (?).
Where **do you live**? He asked me where **I lived**.
~~NOT He asked me where I did live.~~
What time **do you get up**? She wanted to know what time **I get up**.
~~NOT She wanted to know what time I do get up.~~
- with **yes / no** answers there is no question word (*why, what, when*, etc) so we use *if* or *whether*.
Are you tired? He asked **whether I was** tired.
Will you be at the party? She wanted to know **if he would be** at the party.

1 Complete the sentences with *said* or *told*.

- a The new student *said* history was his favourite subject.
- b The teacher us that sand was used to make glass.
- c Scientists have we shouldn't use so much energy.
- d He me that Athens was the capital of Greece.
- e Martina she didn't like maths.
- f Jacob his friend that he wanted to go to the library.
- g My parents me that I couldn't go to the party.
- h She pi was 3.14.
- i Joaquin him it was his birthday that day.
- j He there were eight planets, not nine.

2 Complete the sentences from Exercise 1 in direct speech.

- a "My favourite subject *is* History."
- b "Sand to make glass."
- c "You so much energy."
- d "Athens of Greece."
- e "I maths."
- f "I to the library."
- g "You to the party."
- h "Pi 3.14."
- i "It today."
- j "There , not nine."

3 Rewrite these statements as reported speech. Make all necessary changes.

- a "I'll see Sally this week."
He said *he would see Sally that week.*
- b "I work for a travel agency."
She said
- c "You'll have an exam tomorrow."
The teacher told us
- d "I think the film is brilliant."
John said
- e "I can't go to the party tonight."
She said
- f "I don't think it's a very good idea."
He told us
- g "I'm thinking of going to England this summer."
She said
- h "I have my car here, so I can give you a lift."
She told him

1 Complete the sentences to report the questions.

- a "What are you doing?" She asked him *what he was doing.*
- b "Do you want to go to the cinema?" They asked him
- c "Where is the nearest bank?" He wanted to know
- d "Can I borrow your bicycle?" She asked me
- e "Do you have anything to declare?" The customs officer asked him
- f "What is Jim doing here?" He asked me
- g "Where are you going on holiday?" She asked them
- h "Do you ever go abroad?" We asked them

2 A student has a meeting with his tutor. Put the dialogue in order.

- TUTOR: Good morning Blakemore. Now, do you have your homework with you?
- 1 STUDENT: Err ... No, I don't but I can explain why.
- STUDENT: Yes sir. I'll make a special effort to catch up with my work.
- 9 STUDENT: Thank you sir. Goodbye.
- STUDENT: I know sir, but the final is on Friday.
- STUDENT: I'm very busy this week because the football team is training every night.
- TUTOR: Well, I'm sorry but your schoolwork is more important.
- 2 TUTOR: Oh dear. What is the excuse?
- TUTOR: I understand but this year is very important for your future.
- TUTOR: Very well. You can give me your homework next week.

3 Now complete the gaps to report the conversation.

- BROWN: How did it go with the tutor last week?
- SMITH: Not very well. He asked me a *a if I had my homework* and I had to tell him
b Then he asked me c
- BROWN: What did you say?
- SMITH: I said d because
- BROWN: How did he react?
- SMITH: He told me that e but I said
f but
- BROWN: And what did he say to that?
- SMITH: Well, he said g but
- BROWN: He always says that.
- SMITH: Yeah, so I said h
- BROWN: Did he believe that?
- SMITH: Yeah, he said i next week.
- BROWN: So you got away with it. That was lucky.

She speaks English very well (word order)

verb + object

Sue	reads	a newspaper	every day.
subject	verb	object	

The *verb* (**reads**) and the *object* (**a newspaper**) are usually together. We say:

● Sue **reads a newspaper** every day.

(not 'Sue reads every day a newspaper.')



SUE (SUBJECT)

A NEWSPAPER (OBJECT)

verb + object

He **speaks English** very well. (not 'He speaks very well English.')

I **like Italian food** very much. (not 'I like very much ...')

Did you **watch television** all evening? (not 'Did you watch all evening ...?')

place and time

We went	to a party	last night.
	place	time

Place (**to a party**) is usually before *time* (**last night**). We say:

● We went **to a party last night**. (not 'We went last night to a party.')

place (where?)	time (when? how long? how often?)
Liz walks to work	every day . (not '... every day to work')
Will you be at home	this evening? (not '... this evening at home?')

1.

Put the words in order.

- | | |
|--|-----------------------------------|
| 1 (the door / opened / I / quietly) | <u>I opened the door quietly.</u> |
| 2 (two letters / I / this morning / wrote) | I |
| 3 (passed / Paul / easily / the exam) | ..... |
| 4 (Ann / very well / French / doesn't speak) | ..... |
| 5 (a lot of work / did / I / yesterday) | ..... |
| 6 (London / do you know / well?) | ..... |
| 7 (we / enjoyed / very much / the party) | ..... |
| 8 (the problem / carefully / I / explained) | ..... |
| 9 (we / at the airport / some friends / met) | ..... |
| 10 (did you buy / in England / that jacket?) | ..... |
| 11 (every day / do / the same thing / we) | ..... |
| 12 (football / don't like / very much / I) | ..... |

2.

Right or wrong? Correct the sentences that are wrong.

- | | |
|--|--|
| 1 Did you watch (all evening television?) | <u>Did you watch television all evening?</u> |
| 2 Sue reads a newspaper every day. | <u>OK</u> |
| 3 I like very much this picture. | ..... |
| 4 Tom started last week his new job. | ..... |
| 5 I want to speak English fluently. | ..... |
| 6 Jane bought for her friend a present. | ..... |
| 7 I drink every day three cups of coffee. | ..... |
| 8 Don't eat your dinner too quickly! | ..... |
| 9 I borrowed from my brother fifty pounds. | ..... |

If we go ... If you see ... etc.

If can be *at the beginning* of a sentence or *in the middle*:

If ... , ... (if at the beginning)

If we go by bus, it will be cheaper.

If you don't hurry, you'll miss the train.

If you're hungry, have something to eat.

If the phone rings, can you answer it, please?

... **if** ... (*if in the middle*)

It will be cheaper **if** we go by bus.

You'll miss the train **if** you don't hurry.

I'm going to the concert **if** I can get a ticket.

Do you mind **if** I use your phone? (= Is it OK if I use it?)

In conversation, we often use the **if**-part of the sentence alone:

- 'Are you going to the concert?' 'Yes, **if I can get a ticket.**'

If you see Ann tomorrow ... etc.

After **if**, we use the present (*not* 'will'). We say: **if you see ...** (*not* 'if you will see'):

- **If you see** Ann tomorrow, can you ask her to phone me?
- **If I'm** late this evening, don't wait for me. (*not* 'if I will be')

1.

Make sentences beginning with if. Choose from the boxes.

If +

~~you don't hurry~~
you pass the exam
you fail the exam
you don't want this magazine
you want those pictures
you're busy now
you're hungry
you need money

+

we can have lunch now
you can have them
I can lend you some
you'll get a certificate
~~you'll be late~~
I'll throw it away
we can talk later
you can do it again

2.

Use your own ideas to complete these sentences.

- 1 I'm going to the concert if I can get a ticket.
- 2 If you don't hurry you'll miss the train.
- 3 I don't want to go swimming if
- 4 If you go to bed early tonight,
- 5 Turn the television off if
- 6 Tina won't pass her exams if

3.

Put in **if** or **when**.

- 1 If I'm late this evening, don't wait for me.
- 2 I'm going to do some shopping now. I come back, we can have lunch.
- 3 I'm thinking of going to see Tim. I go, will you come with me?
- 4 you don't want to go out tonight, we can stay at home.
- 5 Do you mind I close the window?
- 6 John is still at school. he leaves school, he wants to go to university.
- 7 Shall we have a picnic tomorrow the weather is good?
- 8 We're going to Madrid next week. We haven't got anywhere to stay – we hope to find a hotel
..... we arrive. I don't know what we'll do we don't find anywhere.

If I had ... If we went ... etc.

Dan likes fast cars but he doesn't have one.
He doesn't have enough money.

If he had the money, he would buy a fast car.

Usually **had** is *past*, but in this sentence **had** is *not past*. If he **had** the money = if he had the money *now* (but he *doesn't* have it).



IF	I you it they etc.	had/knew/lived/went (etc.) ... , didn't have/know/go (etc.) ... , was/were ... , could ... ,	I you it they etc.	would(n't) could(n't)	buy ... be ... have ... go ... etc.
-----------	-----------------------------	---	-----------------------------	--	--

If (I) was/were ...

You can say: **if** (I/he/she/it) **was** or **were** ... :

- It's cold. **If I were** you, I'd **put** your coat on.
(or **If I was** you ...)

You can say:

- **If he had** the money, he would buy a car. (**If ... at the beginning**)
or He would buy a car **if he had** the money. (... **if ... in the middle**)

I'd / she'd / they'd etc. = **I would / she would / they would etc.**:

- I don't know the answer. **If I knew** the answer, I'd **tell** you.
- It's raining, so we're not going out. **We'd get** wet **if we went** out.

if I have / if it is etc.	if I had / if it was etc.
● I must go and see Ann. If I have time, I will go today. (= perhaps I'll have time, so perhaps I'll go) ● I like that jacket. I'll buy it if it isn't too expensive. (= perhaps it will not be too expensive) ● I'll help you if I can. (= perhaps I can help)	● I must go and see Ann. If I had time, I would go today. (= I <i>don't</i> have time today so I will <i>not</i> go) ● I like that jacket but it's very expensive. I'd buy it if it wasn't so expensive. (= it <i>is</i> expensive, so I'm <i>not</i> going to buy it) ● I'd help you if I could but I can't.

Complete the sentences.

- I don't know the answer. If I knew the answer, I'd tell you.
- I have a car. I couldn't travel very much if I didn't have a car.
- I don't want to go out. If I _____ to go out, I'd go.
- We haven't got a key. If we _____ a key, we could get into the house.
- I'm not hungry. I would have something to eat if I _____ hungry.
- Sue enjoys her work. She wouldn't do it if she _____ it.
- You can't drive. If you _____ drive, I would lend you my car.
- He speaks too fast. I could understand him better if he _____ more slowly.
- I have a lot to do today. If I _____ so much to do, we could go out.

Complete the sentences. Choose from the box and put the verb in the correct form.

we (have) a bigger house	I (watch) it	it (be) a bit cheaper
we (buy) a bigger house	every day (be) the same	I (be) bored
we (have) some pictures on the wall	the air (be) cleaner	

- I'd buy that jacket if it was a bit cheaper.
- If there was a good film on TV tonight, _____
- This room would be nicer if _____
- If there wasn't so much traffic, _____
- Life would be boring if _____
- If I had nothing to do, _____
- We could invite all our friends to stay if _____
- If we had more money, _____

a person **who** ... a thing **that/which** ...
(relative clauses 1)

I met a woman. **She** can speak six languages.
----- 2 sentences -----

she → **who**

----- 1 sentence -----
I met **a woman who** can speak six languages.

Jim was wearing a hat. **It** was too big for him.
----- 2 sentences -----

it → **that or which**

----- 1 sentence -----
Jim was wearing **a hat that** was too big for him.
or
Jim was wearing **a hat which** was too big for him.

who is for people (*not* things):

A thief is a person Do you know anybody The man The people	who steals things. who can play the piano? who phoned who work in the office	didn't give his name. are very friendly.
---	---	---

that is for things *or* people:

An aeroplane is a machine Emma lives in a house The people	that flies. that is 500 years old. that work in the office	are very friendly.
---	---	--------------------

You can use **that** for people, but **who** is more usual.

which is for things (*not* people):

An aeroplane is a **machine**
Emma lives in a **house**

which flies. (*not* 'a machine who ...')
which is 500 years old.

Do not use **which** for people:

- Do you remember **the woman who** was playing the piano at the party?
(*not* 'the woman which ...')

1.

Choose from the boxes and write sentences: **A ... is a person who ...** . Use a dictionary if necessary.

~~a thief~~ a dentist
a butcher a fool
a musician a genius
a patient a liar

doesn't tell the truth is ill in hospital
looks after your teeth ~~steals things~~
is very intelligent is very stupid
plays a musical instrument sells meat

1 A thief is a person who steals things.

2 A butcher is a person

3 A musician

4

5

6

7

8

2.

Put in **who** or **which**.

1 I met a woman **who** can speak six languages.

2 What's the name of the woman lives next door?

3 What's the name of the river flows through the town?

4 Where is the picture was hanging on the wall?

5 Do you know anybody wants to buy a car?

6 You always ask questions are difficult to answer.

7 I have a friend is very good at repairing cars.

8 I think everybody went to the party enjoyed it very much.

9 Why does he always wear clothes are too small for him?

Appendix 1

GRAMMAR TABLES

Table 1

THE PRESENT PERFECT TENSE

Hozirgi tugallangan zamon **to have** yordamchi fe'lining hozirgi zamon shakllari (**have, has**) va **Sifatdosh II** (Participle II) asosiy fe'li yordamida yasaladi

to have + Participle II → Perfect

have, has + Participle II → Present Perfect

Bo'lishli shakli (affirmative form)	So'roq shakli (Interrogative form)	Bo'lishsiz shakli (Negative form)
I have played You have played He \ She has played It / We have played You have played They have played	Have I played? Have you played? he \ Has she played? it / Have we played? Have you played? Have they played?	I have not played You have not played He \ She has not played It / We have not played You have not played They have not played

Table 2

THE PAST PERFECT TENSE

to have yordamchi fe'lining o'tgan zamon shakli **had** shakli va **sifatdosh II** orqali yasaladi:

had + Participle II → Past Perfect

Bo'lishli shakli (affirmative form)	So'roq shakli (Interrogative form)	Bo'lishsiz shakli (Negative form)
I had played You had played He \ She had played It / We had played You had played They had played	Had I played? Had you played? he \ Had she played? it / Had we played? Had you played? Had they played?	I had not played You had not played He \ She had not played It / We had not played You had not played They had not played

Table 3

THE FUTURE PERFECT TENSE

Kelasi zamon **shall, will** va **have** yordamchi fe'llari, sifatdosh II (**Participle II**) yordamida yasaladi

shall (will) + have + PII → Future Perfect Tense

Bo'lishli shakli (affirmative form)	So'roq shakli (Interrogative form)	Bo'lishsiz shakli (Negative form)
I shall have played You will have played He \ She will have played It / We shall have played You will have played They will have played	Shall I have played? Will you have played? he \ Will she have played? it / Shall we have played? Will you have played? Will they have played?	I shall not have played You will not have played He \ She will not have played It / We shall not have played You will not have played They will not have played

Table 4

PRESENT PERFECT CONTINUOUS

To be fe'lining hozirgi tugallangan zamon shakli (**have been, has been**) va hozirgi zamon sifatdoshi (**Participle I**) yordamida yasaladi:

have(has) been + PI → Present Perfect

Bo'lishli shakli (affirmative form)	So'roq shakli (Interrogative form)	Bo'lishsiz shakli (Negative form)
I have been working You have been working He \ She has been working It / We have been working You have been working They have been working	Have I been working? Have you been working? he \ Has she been working? it / Have we been working? Have you been working? Have they been working?	I have not been working You have not been working He \ She has not been working It / working We have not been working You have not been working They have not been working

Table 5

PAST PERFECT CONTINUOUS

To be fe'lining o'tgan tugallangan zamoni shakli (**had been**) va sifatdosh (PI) yordamida yasaladi.

had been + P I (v + ing)

Bo'lishli shakli (<i>affirmative form</i>)	So'roq shakli (<i>Interrogative form</i>)	Bo'lishsiz shakli (<i>Negative form</i>)
I had been working You had been working He \ She had been working It / We had been working You had been working They had been working	Had I been working? Had you been working? he \ Had she been working? it / Had we been working? Had you been working? Had they been working?	I had not been working You had not been working He \ She had not been working It / We had not been working You had not been working They had not been working

Table 6

THE FUTURE PERFECT CONTINUOUS

Bo'lishli shakli (<i>affirmative form</i>)	So'roq shakli (<i>Interrogative form</i>)	Bo'lishsiz shakli (<i>Negative form</i>)
I shall have been working You will have been working He \ She will have been working It / We shall have been working You will have been working They will have been working	Shall I have been working? Will you have been working? he \ Will she have been working? it / Will we have been working? Will you have been working? Will they have been working?	I shall have not been working You will have been not working He \ She will have not been working It / We shall have not been working You will have not been working They will have not been working

Table 7

ACTIVE AND PASSIVE VOICE

Bo'lishli shakli (<i>affirmative form</i>)	So'roq shakli (<i>Interrogative form</i>)	Bo'lishsiz shakli (<i>Negative form</i>)
I am/was sent He is/was sent She is/was sent It is/was sent We are/were sent You are/were sent They are/were sent	Am/Was I sent? Is/Was he sent? Is/Was she sent? Is/Was it sent? Are/Were we sent? Are/Were you sent? Are/Were they sent?	I am/was not sent He is/was not sent She is/was not sent It is/was not sent We are/were not sent You are/were not sent They are/were not sent

Table 8

Infinitive to send – to be sent (shall be sent/will be sent)

Bo'lishli shakli (<i>affirmative form</i>)	So'roq shakli (<i>Interrogative form</i>)	Bo'lishsiz shakli (<i>Negative form</i>)
I shall be sent He will be sent She will be sent It will be sent We shall be sent You will be sent They will be sent	Shall I be sent? Will he be sent? Will she be sent? Will it be sent? Shall we be sent? Will you be sent? Will they be sent?	I shall not be sent He will not be sent She will not be sent It will not be sent We shall not be sent You will not be sent They will not be sent

Table 9

PERFECT PASSIVE (Tugallangan majhul nisbat)	
They have translated the articles. The articles have been translated.	The Present Perfect AV The Present Perfect PV
They had translated the articles. The articles had been translated.	The Past Perfect AV The Past Perfect PV
They will have translated the articles. The articles will have been translated.	The Future Perfect AV The Future Perfect PV
Negative form	
The articles haven't been translated. The articles hadn't been translated. The articles will not (won't) have been translated.	
Interrogative form	
Have the articles been translated? Had the articles been translated? Will the articles have been translated?	

Table 10

INFINITIVE

Forms of Infinitive	Active	Passive
Indefinite	to discuss	to be discussed
Continuous	to be discussing	-
Perfect	to have discussed	to have been discussed
Perfect Continuous	to have been discussed	-

The Indefinite Infinitive (Active and Passive)

The Indefinite Infinitive Active shakli o'zbek tiliga –ish, -moq qo'shimchalarini olgan harakat nomi bilan beriladi.

I helped my friend <i>to translate</i> the text.
--

The article <i>to be translated</i> in time.
--

The Indefinite Infinitive Passive majhul nisbatdagi harakat nomi bilan beriladi. Gapda ega, qo'shma ot kesimning ot qismi, aniqllovchi, hol vazifalarida keladi.

<i>To work</i> on this problem is very difficult (ega).	Bu masala ustida ishlash juda qiyin.
He will go to the University tomorrow <i>to be examined</i> by the teacher. (hol)	U o'qituvchiga imtihon topshirish uchun ertaga universitetga boradi.

Appendix 2 List of irregular verbs (⇒ Unit 24)

<i>infinitive</i>	<i>past simple</i>	<i>past participle</i>
be	was/were	been
beat	beat	beaten
become	became	become
begin	began	begun
bite	bit	bitten
blow	blew	blown
break	broke	broken
bring	brought	brought
build	built	built
buy	bought	bought
catch	caught	caught
choose	chose	chosen
come	came	come
cost	cost	cost
cut	cut	cut
do	did	done
draw	drew	drawn
drink	drank	drunk
drive	drove	driven
eat	ate	eaten
fall	fell	fallen
feel	felt	felt
fight	fought	fought
find	found	found
fly	flew	flown
forget	forgot	forgotten
get	got	got
give	gave	given
go	went	gone
grow	grew	grown
hang	hung	hung
have	had	had
hear	heard	heard
hide	hid	hidden
hit	hit	hit
hold	held	held
hurt	hurt	hurt
keep	kept	kept
know	knew	known
leave	left	left
lend	lent	lent

<i>infinitive</i>	<i>past simple</i>	<i>past participle</i>
let	let	let
lie	lay	lain
light	lit	lit
lose	lost	lost
make	made	made
mean	meant	meant
meet	met	met
pay	paid	paid
put	put	put
read	read /ri:d/*	read /red/*
ride	rode	ridden
ring	rang	rung
rise	rose	risen
run	ran	run
say	said	said
see	saw	seen
sell	sold	sold
send	sent	sent
shine	shone	shone
shoot	shot	shot
show	showed	shown
shut	shut	shut
sing	sang	sung
sit	sat	sat
sleep	slept	slept
speak	spoke	spoken
spend	spent	spent
stand	stood	stood
steal	stole	stolen
swim	swam	swum
take	took	taken
teach	taught	taught
tear	tore	torn
tell	told	told
think	thought	thought
throw	threw	thrown
understand	understood	understood
wake	woke	woken
wear	wore	worn
win	won	won
write	wrote	written

* pronunciation

The following verbs can be regular (-ed) or irregular (-t):

<i>infinitive</i>	<i>past simple / past participle</i>
burn	burned or burnt
dream	dreamed or dreamt

<i>infinitive</i>	<i>past simple / past participle</i>
learn	learned or learnt
smell	smelled or smelt



PRIVATE READING

"I've had a dreadful day," the wife complained to her husband. "First the baby cut his first tooth, then he took his first step, and then he fell and knocked out his first tooth."

"Well, and then what happened?" asked the husband.

"Oh, darling," the wife answered in a shocked voice, "he said his first word."

TRANSLATION

Bobby had a hard time pronouncing his "Rs", so the teacher gave him sentence to learn: "Robert gave Richard a rap in a the rib for roasting the rabbit so rare."

A few days later she asked Babby to repeat the sentence. He rose and said: "Bob gave Dick a poke in the side for not doing the bunny well."

SAME THING

A blushing girl handed the telegraph clerk a message to a boyfriend containing only his name, address and word "Yes."

"You can send five words for the same price," said the clerk helpfully.

"Yes, I know," replied the girl, "but don't you think I'd look too eager is I said the same thing six times?"

STAND BACK

"I don't know what to do about my son. He says he wants to be a racing motorist," the father said.

"If that's the case, you'd better not stand in his way," advised a friend.

TALKING DOGS

A circus owner decided to create a sensation by showing a dog who could speak English. Then he thought better of it and advertised two English-speaking dogs in one number.

At the first night performance the excited owner stood with the trainer behind the scenes. Two dogs were brought on to the arena where they began staring at each other with great animosity. The nervous circus owner asked the trainer: "why, they seem not like each other at all? Will they able to speak?"

"They aren't speaking terms tonight," commented the trainer.

CAN'T SAY "YES"

"Why don't you marry her?"

"She has a slight impediment?"

"How sad, what is it?"

"She can't say 'Yes'."

ISAAC NEWTON'S DINNER

Isaac Newton was often so deeply interested in difficult problems that he became quite absent-minded. One day a gentlemen came to see him, but he was told that sir Isaac Newton was busy in his study and that nobody was allowed to disturb him.

As it was dinner time, the visitor sat down in the dining room to wait for the scientist. The servant came in and placed on the table a boiled chicken under a cover. An hour passed, but Isaac Newton did not

appear. The gentleman, feeling hungry, ate the chicken and covering up the skeleton, asked the servant to prepare another one for his master.

Before the second chicken was ready, however, the scientist came in the room, apologizing for his delay. Then he added: "As I feel rather tired and hungry, I hope you will excuse me a little longer, while I take my dinner, and then I will be at your service." With these words he lifted the cover, and without emotion turned round to the gentleman and said: "See what a strange set we scientists are! I quite forgot that I had dined already."

At this moment the servant brought in the other chicken. The visitor explained how matters stood. After a hearty laugh, the hungry scientist sat down to dine.

QUITE ENOUGH

When Erich Remarque, the well-known German novelist was still a young man, he was once introduced to an American girl who was travelling in Germany. Speaking in German, the girl asked Remarque why he had never visited the United States. His answer was that he couldn't speak English. In fact, he knew only four sentences, he said.

"What are those sentences?" asked the girl, much interested.

Speaking slowly, with a strong German accent, the writer said: "How do you do? I love you. Forgive me. Ham and eggs, please."

"Why," cried the girl, "with these sentences you could tell the United States from Maine to California."

TOO GREAT A MAJORITY

Bernard Shaw's gift of ready wit is well illustrated by the story of how he turned the laugh against a member of the public who was expressing disapproval of one of his plays.

It was the first night of "Arms and the Man", a play which had a very good reception from a crowded house. When the curtain fell at the end of the last act there was tremendous applause, accompanied by insistent call for the author to appear. One man in the gallery was whistling thus expressing his disapproval.

Bernard Shaw appeared before the curtain, waited in silence until the end of the applause. Then, looking up at that critic, he said: "I quite agree with, Sir, but what can we two do against all these people?"

MARK TWAIN'S LECTURE

Once a literary club invited Mark Twain to give a lecture. Before the lecture end of the members of the club came to him and said:

"Mr. Twain, people say that you can tell very funny stories. I hope that during your lecture you will tell a story will make my uncle laugh. He hasn't laughed for ten years."

"I'll do my best," Mark Twain said.

When he began his lecture, Mark Twain noticed the club member. He was sitting in front of him with an old man who had a very sad face.

Mark Twain began to tell jokes, one after another. "I told long jokes and short jokes, new jokes and old jokes," Mark Twain told his friends. "I told every joke in my memory, and soon everybody was laughing. Everybody – but not the old man. He continued to look at me with his cold, blue eyes. I was ashamed to think that I couldn't make him laugh, and I tried again and again. But nothing helped..."

After the lecture, the club member came to Mark Twain and said, "Thank you, Mr Twain I have never heard so many very funny stories."

They weren't funny enough for your uncle," Mark Twain answered. "He didn't even smile."

"I know," the man said. "I told you that he hasn't laughed for ten years. But I didn't tell you that he hasn't heard anything for ten years. He is deaf."

** ** *

Jack was young, rich, and fond of girls. He hardly ever did any work, and spent of his time enjoying himself.

One summer he bought a big motor - boat. As soon as it was ready to go to sea, he telephoned to one of the girls he had met somewhere, and invited her for a trip in his new motor-boat. It was the first of many successful invitations of this kind.

The way Jack used to invite a girl for a trip in his boat was like this: he would begin by saying, "Hello, Laura (or whatever the girl's name was). I have just bought a beautiful new motor-boat, and I would like to take you out for a trip in it."

The girl's answer was usually cautious, because everybody in that part of the country knew Jack's reputation with girls. She would say something like this: "Oh, really? That's nice. What name have you given to the boat?"

Of course, the girl would feel very proud that Jack had chosen her name for the boat out of the names of all his many girl-friends, and she would think that Jack must really love her. She would therefore be quite willing to accept his invitation to go for a trip in his motor-boat.

It would not be until she got down to the harbour and actually saw the boat that she would understand how cleverly Jack had tricked her. Because there in neat gold letters on the boat she would see its name- 'After You'.

** ** *

A man was tired of living in his old house in the country and wanted to sell it and buy a better one. He attempted to sell it for a long time, but was not successful, so at last he decided to solve the problem by using an estate agent.

The agent promptly advertised the house, and a few days later, the owner saw a very attractive photograph of it, with a wonderful description of its gardens, in an expensive magazine.

After the house owner had read the advertisement through, he hastened to telephone the estate agent and said to him, "I'm sorry, Mr Jones, but I've decided not to sell my house after all. After reading your advertisement in that magazine, I can see that it's just the kind of house I've wanted to live in all my life."

** ** *

Jean was a very beautiful young girl, so she was quite used to some men showing their admiration for her, and to others being confused and she when they saw her.

One summer, when Jean was travelling abroad, she went into a café in small town, sat down and waited to be served.

The young waiter was talking to someone at the bar when she came in, and at first he did not pay any attention to her, because he had not looked at her properly. Then he turned round and saw how beautiful she was. His face went bright red, and he hurried over to take her order.

"I'd like coffee without cream, please," Jean said.

The waiter hurried out, and came back a few minutes later without the coffee.

"I'm very sorry," he said, "but we haven't got any cream. Would you like your coffee without milk?"

** ** *

April 1st is a day on which, in some countries, try to play tricks on others. If one succeeds in tricking somebody, one laughs and says, "April Fool", and then who has been tricked usually laughs too.

One April 1st, a country bus was going along a winding road when it slowed down and stopped. The driver anxiously turned switches and pressed buttons, but nothing happened. Then he turned to the

passengers with a worried look on his face and said, "This poor bus is getting old. It can't going as well as it used to. There's only one thing to do if we won't to get home today. I shall count three, and on the word 'three', I want you all to lean forward suddenly as hard as you can. That should get the bus started again, but if it doesn't, I am afraid there is nothing else I can do. Now, all of you lean back as you can in your seats and get ready."

The passengers all obediently pressed back against their seats and waited anxiously.

Then the driver turned to his front and asked, "Are you ready?"

The passengers hardly had enough breath to answer, "Yes."

"One! Two! Three!" counted the driver. The passengers all swung forward suddenly and the bus started up at a great rate. But their smiles turned to surprised and then delighted laughter when the driver merrily cried, "April Fool!"

** ** **

Mr Robinson had to travel somewhere on business, and as he was in a hurry, he decided to go by air. He liked sitting beside a window when he was flying, so when he got on to the plane, he looked for a window seat. He found that all of them had already been taken except for one. There was a soldier sitting in the seat beside this one, and Mr. Robinson was surprised that he had not taken the one by the window; but, anyhow, he at once went towards it.

When he reached it, however, he saw that there was a notice on it. It was written in ink and said, "This seat is reserved for proper load balance. Thank you." Mr. Robinson had never seen such a notice in a plane before, but he thought that the plane must be carrying something particularly heavy in its baggage room which made it necessary to have the passengers properly balanced, so he walked on and found another empty seat, not beside a window, to sit in.

Two or three other people tried to sit in the window seat beside the soldier, but they too read the notice and went on. Then, when the plane was nearly full, a very beautiful girl stepped into the plane. The soldier, who was watching the passengers coming in, quickly took the notice off the seat beside him and in this way succeeded in having the company of the girl during the whole of the trip.

SPECIFIC TEXTS

INTERESTING FACTS ABOUT SURVEYING

Surveying is an old profession, which originates from ancient Egypt to about 3,000 years ago. It determines the position of certain building or land in three dimensions before construction of any structure begins. Licensed surveyors can perform it only since they are the only ones who have the proper surveying equipment. Surveying is an essential part of mapping land boundaries, slopes, distances, features, enabling land development and accurate land dimensions.

Did you know that in the past, every surveyor used a specific surveying tool that would differ him/her from other surveyors? Or that the first president of the United States, George Washington was a known surveyor and map-maker?

- In Greece and Rome, surveyors were people held with exceptional esteem, as they were responsible for the straight angles and perfect lines that shaped the remarkable buildings and coliseums that are still present today. They used a simple surveying tool called Groma.
- Also, Greeks and Romans invented an early surveying tool called Groma, which was a long staff with a cross bar that served to measure right angles and straight lines. Groma is believed to originate from about 400 BC in Mesopotamia, which is today's Iraq.
- The biggest breakthrough in surveying technology occurred in 1773 when Jesse Ramsden, an English mathematician and scientific instrument maker, invented a circular dividing engine. The first quality circular dividing engine allowed the manufacture of very accurate mathematical and scientific instruments and tools. Also, Jesse Ramsden published a Description of an Engine for Dividing Mathematical Instruments in 1777.

Credits: <http://www.interestingreality.com/interesting-facts-surveying/>

COMPASS

A compass is an instrument used for navigation and orientation that shows direction relative to the geographic cardinal directions (or points). Usually, a diagram called a compass rose shows the directions north, south, east, and west on the compass face as abbreviated initials. When the compass is used, the rose can be aligned with the corresponding geographic directions; for example, the "N" mark on the rose points northward. Compasses often display markings for angles in degrees in addition to (or sometimes instead of) the rose. North corresponds to 0° , and the angles increase clockwise, so east is 90° degrees, south is 180° , and west is 270° . These numbers allow the compass to show magnetic North azimuths or true North azimuths or bearings, which are commonly stated in this notation. If magnetic declination between the magnetic North and true North at latitude angle

and longitude angle is known, then direction of magnetic North also gives direction of true North.

HOURLASS

An **hourglass** (or **sandglass**, **sand timer**, **sand clock** or **egg timer**) is a device used to measure the passage of time. It comprises two glass bulbs connected vertically by a narrow neck that allows a regulated trickle of material (historically sand) from the upper bulb to the lower one. Factors affecting the time it is measured include sand quantity, sand coarseness, bulb size, and neck width. Hourglasses may be reused indefinitely by inverting the bulbs once the upper bulb is empty. Depictions of hourglasses in art survive in large numbers from antiquity to the present day, as a symbol for the passage of time. These were especially common sculpted as epitaphs on tombstones or other monuments, also in the form of the winged hourglass, a literal depiction of the well-known Latin epitaph *tempus fugit*.

There are no records of the hourglass existing in Europe prior to the Early Middle Ages, such as invention by the Ancient Greeks; the first supported evidences appears from the 8th century CE, crafted by a Frankish monk named Liutprand who served at the cathedral in Chartres, France. But it was not until the 14th century that the hourglass was seen commonly, the earliest firm evidence being a depiction in the 1338 fresco *Allegory of Good Government* by Ambrogio Lorenzetti.

HECTARE

The **hectare** (/ˈhɛktəər, -tɑːr/; SI symbol: **ha**) is an SI accepted metric system unit of area equal to a square with 100-metre sides, or 10,000 m², and is primarily used in the measurement of land. There are 100 hectares in one square kilometre. An acre is about 0.405 hectare and one hectare contains about 2.47 acres.

In 1795, when the metric system was introduced, the "are" was defined as 100 square metres and the hectare ("hecto-" + "are") was thus 100 "ares" or $\frac{1}{100}$ km² (10,000 square metres). When the metric system was further rationalized in 1960, resulting in the International System of Units (SI), the "are" was not included as a recognized unit. The hectare, however, remains as a non-SI unit accepted for use with the SI units, mentioned in Section 4.1 of the SI Brochure as a unit whose use is "expected to continue indefinitely".

EARTHQUAKE

An **earthquake** (also known as a **quake**, **tremor** or **temblor**) is the shaking of the surface of the Earth, resulting from the sudden release of energy in the Earth's lithosphere that creates seismic waves. Earthquakes can range in size from those that are so weak that they cannot be felt to those violent enough to toss people around and destroy whole cities. The seismicity, or **seismic activity**, of an area is the frequency, type and size of earthquakes experienced over a period of time. The word *tremor* is also used for non-earthquake seismic rumbling.

At the Earth's surface, earthquakes manifest themselves by shaking and displacing or disrupting the ground. When the epicenter of a large earthquake is located offshore, the seabed may be displaced sufficiently to cause a tsunami. Earthquakes can also trigger landslides and occasionally, volcanic activity.

In its most general sense, the word *earthquake* is used to describe any seismic event—whether natural or caused by humans—that generates seismic waves. Earthquakes are caused mostly by rupture of geological faults but also by other events such as volcanic activity, landslides, mine blasts, and nuclear tests. An earthquake's point of initial rupture is called its focus or hypocenter. The epicenter is the point at ground level directly above the hypocenter.

GLOBAL POSITIONING SYSTEM(GPS)

GPS (Global Positioning System) is a satellite-based navigation system that provides distance, time and positioning in the WGS 84 world coordinate system. It allows you to determine the location anywhere on the Earth in almost any weather (excluding subpolar regions) and near-Earth outer space. The system is designed, implemented and operated by the US Department of Defense, and is currently available for civilian use - you only need a navigator or other device (for example, a smartphone) with a GPS receiver.

The main principle of using the system is to determine the location by measuring the timing of the reception of the synchronized signal from the navigation satellites of the consumer antenna.

NASA

The National Aeronautics and Space Administration (NASA) is an agency that is part of the US federal government and reports directly to the President of the United States. It implements the country's civil space program, as well as scientific research of air and outer space and scientific and technological research in the field of aviation, aeronautics and astronautics (according to the terminology adopted in the USA - astronautics).

NASA was created on July 29, 1958 through the reorganization of the National Advisory Committee for Aeronautics (National Advisory Committee for Aeronautics, abbr. NACA) as part of the "space race" after the launch of the first

artificial Earth satellite by the Soviet Union. Earlier, in February of the same 1958, the DARPA agency was created, many of whose projects were transferred to NASA.

MATLAB

MATLAB (short for English “Matrix Laboratory”, pronounced in Russian as Matlab) is a package of application programs for solving problems of technical computing. The package is used by more than a million engineers and scientists, it works on most modern operating systems, including Linux, Mac OS, Solaris (starting with version R2010b, support for Solaris has been discontinued) and Windows.

MATLAB as a programming language was developed by Cleve Moler in the late 1970s when he was dean of the Department of Computer Science at the University of New Mexico. The purpose of the development was to give faculty students the opportunity to use the Linpack and EISPACK software libraries without the need to learn Fortran. Realizing that the new language has great commercial potential, he teamed up with Cleve Mowler and Steve Bangert. Together, they rewrote MATLAB in C and founded The MathWorks in 1984 for further development. These libraries rewritten in C have long been known under the name JACKPAC. MATLAB was originally intended for the design of control systems (the main specialty of John Little), but quickly gained popularity in many other scientific and engineering fields. It was also widely used in education, in particular, for teaching linear algebra and numerical methods.

GOOGLE MAPS

Google Maps is a web mapping service developed by Google. It offers satellite imagery, aerial photography, street maps, 360° panoramic views of streets (Street View), real-time traffic conditions, and route planning for traveling by foot, car, bicycle and air (in beta), or public transportation.

Google Maps began as a C++ desktop program at Where 2 Technologies. In October 2004, the company was acquired by Google, which converted it into a web application. After additional acquisitions of a geospatial data visualization company and a real time traffic analyzer, Google Maps was launched in February 2005. The service's front end utilizes JavaScript, XML, and Ajax. Google Maps offers an API that allows maps to be embedded on third-party websites, and offers a locator for businesses and other organizations in numerous countries around the world. Google Map Maker allowed users to collaboratively expand and update the service's mapping worldwide but was discontinued from March 2017. However, crowd sourced contributions to Google Maps were not discontinued as the company announced those features will be transferred to the Google Local Guides program.

TACHEOMETRY

Tacheometry (/ˌtækiˈɒmɪtri/; from Greek for "quick measure") is a system of rapid surveying, by which the horizontal and vertical positions of points on the earth's surface relative to one another are determined without using a chain or tape, or a separate levelling instrument. Instead of the pole formerly employed to mark a point, a staff similar to a level staff is used. This is marked with heights from the base or foot, and is graduated according to the form of tacheometer in use.

The horizontal distance is inferred from the vertical angle included between two well-defined points on the staff and the known vertical distance between them. Alternatively, also by readings of the staff indicated by two fixed stadia wires in the diaphragm (reticle) of the telescope. The difference of height is computed from the angle of depression or elevation of a fixed point on the staff and the horizontal distance already obtained. The azimuth angle is determined as formerly. Thus all the measurements requisite to locate a point both vertically and horizontally with reference to the point where the tacheometer is centred are determined by an observer at the instrument without any assistance beyond that of a man to hold the staff.

ArcGIS

ArcGIS is a family of geographic information software products of the American company ESRI. They are used for land cadastres, in land management tasks, accounting for real estate, engineering communications systems, surveying and subsoil use and other areas. The ArcGIS product family is divided into desktop and server. The main products of the desktop line - ArcView, ArcEditor, ArcInfo - each subsequent includes the functionality of the previous one. In addition, the desktop line includes free ArcReader (for viewing data published using ArcGIS) and ArcGIS Explorer (lightweight desktop client for ArcGIS Server). The main server product - ArcGIS for Server, is designed for multi-user geo-information projects with a centralized repository and an unlimited number of jobs, publishing interactive maps on the Internet. Image Server is released for publishing large volumes of raster data; ArcSDE is intended for storing spatial data in DBMS and integration with other information systems.

LIST OF USED LITERATURE

1. **SCALE UP. STUDENT'S BOOK.** Bokiyeva G. H., Rashidova. F. M and others. **COURSE 1,2,3.** – T.: Gafur Gulam, 2015;
2. **SCALE UP. WORKBOOK BOOK.** Bokiyeva G. H., Rashidova. F. M and others. **COURSE 1,2,3.** – T.: Gafur Gulam, 2015;
3. **SCALE UP. TEACHER'S BOOK.** Bokiyeva G. H., Rashidova. F. M and others. **COURSE 1,2,3.** – T.: Gafur Gulam, 2015;
4. **“BRITISH COUNCIL - EQUALS CORE INVENTORY FOR GENERAL ENGLISH”.** – Copyright British. Council/EAQUALS, ISBN: 978-086355-653-1, 2010;
5. **ENGLISH FOR ESL AND ESP LEARNERS.** Alovitdinova Kh, Radjabova D. and others. – T.: TNU, 2012;
6. **STRAIGHTFORWARD. INTERMEDIATE. STUDENT'S BOOK.** 2nd edition Kerr P., Jones C.. — Macmillan, 2007;
7. **STRAIGHTFORWARD INTERMEDIATE. EACHER'S BOOK.** Scrivener J., Bingham C., Tennant A., Wasserman S. – Macmillan, 2007;
8. **ENGLISH UNLIMITED. UPPER INTERMEDIATE B2. STUDENT'S BOOK.** Tilbury A., Hendra L. A. – Cambridge University Press, 2011;
9. **ENGLISH UNLIMITED. UPPER INTERMEDIATE B2. TEACHER'S BOOK.** Tilbury A., Hendra L. A. – Cambridge University Press, 2011;
10. **UNDERSTANDING AND USING ENGLISH GRAMMAR.** Third edition. Betty Schramper Azar. 2002;
11. **УЧЕБНИКАНГЛИЙСКОГОЯЗЫКА.** И. С. Салиев. Тошкент «Ўзбекистон» 2003.
12. **ESSENTIAL GRAMMAR IN USE (2nd edition).** R. Murphy. Cambridge;
13. **TA'LIMDA INNOVATION TEXNOLOGIYALAR** (ta'lim muassasalari pedagog - o'qituvchilari uchun amaliy tavsiyalar). Ishmuhammedov. R, Abduqodirov. A, Pardayev. A. O'zbekiston Respublikasi Prezidentining "Iste'dod" jamg'armasi. Toshkent, 2008;
14. **NEW HEADWAY BEGINNER (student's book).** Liz and John Soars. Oxford University press;
15. **NEW HEADWAY PRE-INTERMEDIATE, the third edition (student's book).** Liz and John Soars with Sylvia Wheeldon. Oxford University press;
16. **INTERACTIVE METHODS IN ENGLISH LESSONS (teacher's book).** B. Kholiyrov. Karshi, 2014;
17. **УЧИТЕСЬ ГОВОРИТЬ ПО-АНГЛИЙСКИ.** О. Колыхалова, К. Махмурян. Москва, 1998;
18. **BOOST YOUR VOCABULARY-2.** Chris Barker. Edinburg Gate, England. Penguin English guides, 2001;
19. **ENGLISH.** S. Jumayev, O. Norminova. Karshi, 2011;
20. **ENGLISH-UZBEK DICTIONARY.** Sh. Butayev. Toshkent, "Tafakkur bo'stoni", 2009;
21. **MACMILLAN ENGLISH GRAMMAR IN CONTEXT. Intermediate** Michael Vince. "Macmillan publishers limited". 2007;
22. **INGLIZCHA-O'ZBEKCHA-RUSCHA SO'ZLASHGICH.** Bo'ronov. J, Irisqulov. M, Fayzullayeva E. Toshkent "O'qituvchi" 1995;
23. **INGLIZ TILI FANIDAN IQTIDORLI TALABALAR UCHUNU SLUBIY KO'RSATMA.** B. Xoliyrov. Qarshi, QMII, 2009;
24. **MACMILLAN ENGLISH GRAMMAR IN CONTEXT. Essential.** Simon Clarke. "Macmillan publishers limited". 2008.

INTERNET SOURCES:

1. <http://www.teachingenglish.org.uk/think/articles/listening>
2. http://www.usc.edu/dept/education/CMMR/CMMR_BTSA_home.html

3. <http://www.teachermentors.com/MCenter%20Site/BegTchrNeeds.html>
4. <http://www.inspiringteachers.com/>
5. <http://teachnet.org/ntpi/research/prep/Cooper/http://www.alt-teachercert.org/Mentoring.html>
6. www.examenglish.com
7. www.google.com

CONTENT

№	THEMES	PAGES
1	Unit 1. What is geodesy?	4
2	Unit 2. Structure of the Earth	6
3	Unit 3.Sustainable Urban Land use planning	11
4	Unit 4. Land cadastre	13
5	Unit 5. Cadastral maps	16
6	Unit 6. Cadastral maps(to be continued)	18
7	Unit 7. Topographic Plan showing physical detail	21
8	Unit 8. Cadastral Plan showing boundaries of land ownership	24
9	Unit 9. Air surveys and cadastral maps	26
10	Unit 10.Direct advantages of cadastral surveys and registration of rights	28
11	Unit 11. Figure of the Earth	31
12	Unit 12. What is land pollution?	33
13	Unit 13. Cartography	35
14	Unit 14. Map design	38
15	Unit 15. Cadastral surveying	41
16	SPECIAL COURSE, Law of the Republic of Uzbekistan about State land cadastre	44
17	Glossary	46
	Grammar references	51
18	THE SIMPLE TENSES	51
19	THE PROGRESSIVE TENSES	54
20	THE PERFECT TENSES	56
21	THE PERFECT PROGRESSIVE TENSES	56
22	REPORTED SPEECH(1)	59
23	REPORTED SPEECH(2)	60
24	HE SPEAKS ENGLISH VERY WELL (WORD ORDER)	63
25	IF WE GO.../IF YOU SEE...etc	64
26	IF I HAD... / IF I WENT...etc	66
27	A PERSON WHO.../ A THING THAT/WHICH...(Relative clauses)	68
28	APPENDIX 1. GRAMMAR TABLES	70
29	APPENDIX 2. LIST OF IRREGULAR VERBS	76
30	Private reading	77
31	Used literatures	86

I.M. TUXTASINOV, B.H. XOLIYOROV

**ENGLISH FOR CADASTRE
STUDENTS**

Editor: M. Akramova

Proofreader: S. Tosheva

Technical editor: A. Xo'jayev

Pager in computer: Sh. Ravshanova

Printing License. 195, 28.08.2011.

Permitted to edit 10.11.2020.

“Times UZ”gar. Style 84x108 ¹/₁₆

Conditional printed sheet. 6,05 Publishing sheet. 6,0

Quantity 20 copies. Order № 41

It was printed in printing house of “Voris - nashriyot” LLC.

Toshkent c. Navoi Street, 30.