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**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ  
РОССИЙСКОЙ ФЕДЕРАЦИИ**

**федеральное государственное бюджетное образовательное учреждение высшего  
образования «Казанский национальный исследовательский технический**

**университет им. А.Н. Туполева-КАИ»**

**(КНИТУ-КАИ)**

**Чистопольский филиал «Восток»**

**МЕТОДИЧЕСКИЕ УКАЗАНИЯ К ПРАКТИЧЕСКИМ ЗАНЯТИЯМ**  
по дисциплине  
**ИНОСТРАННЫЙ ЯЗЫК В СФЕРЕ ПРОФЕССИОНАЛЬНОЙ  
КОММУНИКАЦИИ**

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Рекомендовано УМК ЧФ КНИТУ-КАИ

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**Тема 1** Причастия. Независимый причастный оборот. Хранение информации. Центральное процессорное устройство.

Запоминающие устройства. Работа цифрового компьютера. Память. Центральное процессорное устройство. Британский образ жизни. Грамматика: Причастия I, II, Perfect Participle и их функции в предложении. Независимый причастный оборот, сложное подлежащее и сложное дополнение с причастием. Суффиксы -age, -ate, Префикс en-.

На практических занятиях комбинируется работа по учебнику Орловской из списка основной литературы (Lesson 7), Учебного пособия для студентов 2-го курса (Lesson 4), а так же учебника Радовель В.А. «Основы компьютерной грамотности» (Unit 7-8). Часть упражнений выполняется вместе с преподавателем, часть входит в самостоятельную работу студента. Кроме того проводится работа по страноведческой теме «British way of life» с использованием видеоматериалов.

### The Participle

There are two types of the Participle:

Participle I (Present Participle) V-ing – переводится на русский язык действительным залогом причастия или деепричастия;

Participle II (Past Participle) V+ed или V<sub>3</sub> – переводится страдательным залогом причастия или деепричастия.

#### Forms of the Participle I

	Active	Passive
Indefinite	Writing	Being written
Perfect	Having written	Having been written

Формы Indefinite выражают действия одновременные с действиями, выраженными сказуемым. Формы Perfect – действие совершилось раньше, чем действие, выраженное сказуемым.

*She stood there looking at me.* – Она стояла там, глядя на меня.

*Having read the paper, he left home.* – Прочитав газету, он вышел из дома.

#### Forms of the Participle II

Active	Passive
-	written

Причастие – это неличная форма глагола, которая обладает свойствами глагола, прилагательного и наречия. Как прилагательное может быть определением или именной частью сказуемого.

*a broken cup*      *a cup was broken*

Как наречие может быть обстоятельством.

*Reading the text* he wrote out new words. – Читая текст, он выписывал новые слова.

Подобно глаголу может иметь временные и залоговые формы.

## Functions and translation

### 1) Attribute or attributive phrase (определение)

*The sleeping child* is my niece. – Спящий ребенок – моя племянница.

*The boy playing in the yard* is my nephew. – Мальчик, играющий во дворе, мой племянник.

She answered through the *locked* door. – Она отвечала через запертую дверь.

Letters *written by my sister* usually are difficult to read. – Письма, написанные моей сестрой, обычно трудно читать.

## 2) **Predicative** (часть сказуемого)

The story is exciting. – Этот рассказ волнующий.

Her words *were terrifying*. – Её слова были ужасающими.

Participle II after *to look, to find, to seem, to be, to remain*.

He *seemed surprised*. – Он казался удивленным.

He *was surprised*. – Он был удивлен.

## 3) **Adverbial modifier of:** обстоятельство

a) of time: *Seeing* him on the other side of the street I called him. – Видя его на другой стороне улицы, я позвал его.

*While reading* the book I came across a lot of new words.

*Having come* home he turned on the TV. – Придя домой, он включил телевизор.

*When questioned* she never answered. – Когда ее спрашивали, она никогда не отвечала.

b) reason (cause) /причина/

Being ill I couldn't go to the institute. – Будучи болен, я не мог пойти в институт.

c) comparison /сравнение/ (**as if, as though**)

She sat as if *thinking*.

He sat as though *lost* in thoughts.

d) condition /условие/

Moving at such a speed we shan't be able to be there in time. – Двигаясь с такой скоростью, мы не сможем быть там во время.

If sent immediately the letter will be received in time.

e) manner and attendant circumstances /образа действия и сопутствующих обстоятельств/

He came in jumping. – Он вошел вприпрыжку.

She wrote a letter, *thanking* him for his help.

He passed *unnoticed*.

f) Concession /уступки/ (**though**).

Her spirit, though *crushed*, was not broken. – Её дух, хоть и был подавлен, не был сломлен.

## 4) **Parentheses** /вводные слова/

Generally speaking, strictly speaking, roughly speaking, taking into account, ... .

*Frankly speaking*, I haven't read this book yet. – Откровенно говоря, я еще не прочел эту книгу.

## Complex Object with the Participle /сложное дополнение/

Состоит из двух элементов:

1) существительное или местоимение

2) причастие I или II.

1            2

I heard the *child crying*. – Я слышал, что ребёнок плачет.

1) После глаголов *to want, to wish, to desire*

I want *the work done*.

2) после глаголов *to have, to get*

I have my hair cut. – Я постригся в парикмахерской.

I have my hair waved. – Я завилась в парикмахерской.

I shall get (have) a new dress made to order. – Я сошью себе новое платье (у портного).

I have cut my hair. – Я постриг волосы (сам).

3) после глаголов *to smell, to start, to look, to catch, to imagine, to leave* (with the Participle I)

I smell *the dinner cooking*. – Я чувствую, что готовится обед.

He started *the machine working*. – Он запустил машину

4) после глаголов to see, to hear, to feel, to find

I hear my wife coming. – Я слышу, что идет моя жена.

5) после глаголов to understand, to consider

I consider myself engaged to Ben. – Я считаю, что помолвлена с Беном.

### **Complex Subject with the Participle.**

Как и Complex object состоит из двух элементов. Используется только с глаголами чувственного восприятия (to see, to hear) и Participle I.

1

2

*The child was heard crying.* – Слышали, как ребенок плакал.

### **Absolute Participle Construction /Независимый причастный оборот/.**

Обороты, в которых причастие выражает действие, не относящееся к лицу (предмету), обозначенному подлежащим предложения. В этом случае действие, выраженное причастием относится к лицу (или предмету), обозначенному существительным в общем падеже или (реже) местоимением в именительном падеже.

The student knowing English well, the examination did not last long.– Так как студент хорошо знал английский, экзамен не занял много времени.

Compare: Knowing English well, the student can translate the text without a dictionary. (Простой причастный оборот) – Хорошо зная английский, студент может переводить текст без словаря.

### **Особенности перевода**

#### ***Независимый причастный оборот всегда выделяется запятыми!***

1. Если независимый причастный оборот находится в начале предложения, то он переводится придаточным предложением и вводится словами: *так как; когда; после того как; поскольку; в виду того, что; если.*

• *My sister having lost the key, we couldn't enter the house.*– Так как моя сестра потеряла ключ, мы не смогли войти в дом.

2. Если независимый причастный оборот находится во второй части предложения, он переводится самостоятельным предложением и вводится союзами *а, и, причем.*

• *That plant produces large quantities of pig-iron, most of the pig-iron being turned into steel.*  
– Этот завод производит большое количество чугуна, причем большая часть чугуна перерабатывается в сталь.

3. Иногда встречаются независимые причастные обороты, начинающиеся с *with*.  
Переводятся они так же.

• *With America and Britain spending large sums on rearmament, it is hard to believe that there can be any serious decline in the demand for metals.* – Так как Америка и Британия тратят большие суммы на перевооружение, трудно предположить, что может быть серьезное снижение спроса на металл.

### **Exercises:**

***Ex.1 Translate the following sentences into Russian. Define the functions of the Participles.***

1. He heard the voices coming through the open window.

2. Waiting for him I looked through the magazines lying on the table.

3. They remained at home refusing to go anywhere that day.

4. The channel linking the two seas is being built now.

5. The explanation given was not complete.

6. The new materials recommended for bridge construction were described in the article written by our professor.
7. The results received were of great importance for further work.
8. A balsa tree found in South America is lighter than any other.
9. Having passed all the examinations he left for his native town.
10. Having been shown the way I could find his house easily.
11. Having waited for him for half an hour they went home.
12. Having obtained the necessary results they stopped their experimental work.
13. When studying elements Mendeleev found that they could be divided into nine groups.
14. When writing a telegram we must use as few words as possible.
15. When burnt, coal produces heat.
16. When reconstructed, the theatre looked more beautiful than before.
17. Being built in a new way modern houses have better facilities.
18. He said he had already translated the article given by the teacher.
19. When translated, his article on chemistry was sent to the International Chemical Congress.
20. Being translated into many foreign languages, Gorky's works were read with great interest all over the world.
21. Translating the English article into Russian he looked up the unknown words in the dictionary.
22. Having translated the article from the newspaper he showed it to the teacher.

***Ex.2 Translate the sentences and define the functions of the Participles.***

1. Any vibrating object produces a sound.
2. Electrons, forming an atom, are in motion.
3. Considering the matter he encountered many difficulties.
4. The units used to measure time, space and mass are called fundamental units.
5. Insulated, the wire may be used as a conductor.
6. The pressure removed, the air springs back to its original volume.

***Ex.3 Translate the sentences with the Simple Participle constructions and Absolute Participle constructions.***

1. She bringing this material, we shall use it.
2. Technology having reached a high stage of development new methods of work became possible.
3. The engineer was repairing the damaged machine-tool, two workers helping him.
4. The number of scientists conducting similar experiments was increasing.
5. The effect of temperature is being investigated by the author mentioned above.
6. Having investigated the effect of temperature the authors mentioned above came to a definite conclusion.
7. The article having been translated, he could read some book for pleasure.

***Ex.4 Translate the sentences and define the functions of the Participle: a) attribute, b) predicative, c) adverbial modifier.***

a) Participle I

1. A molecule is a compound **consisting** of two or more atoms.
2. **Combining** hydrogen with oxygen in the proportion of two atoms of hydrogen and one atom of oxygen we produce water.
3. When **speaking** about oxygen it is necessary to say that it is a colourless, odourless gas **having** density at standard pressure and temperature of about one seven-hundredth that of water. It is soluble in water becoming liquid at about 180 °C.

4. While **burning** different substances combine with oxygen.
5. The assistant was **preparing** the solution very carefully.
6. The solution is **boiling**.
7. The **boiling** solution has neither colour nor odour.

b) Participle II

1. The solution of the problem required **concentrated** efforts of many scientists.
2. The data **required** were **analysed** in our laboratory.
3. When **required**, the data will be **applied** in our practical work.
4. The investigations **analysed** resulted in an interesting discovery.
5. **Heated** glass is plastic.
6. When **heated**, glass can be easily **worked**.
7. Some heat-resistant types of glasses can be **heated** until they are red and do not break, if then **placed** into ice water.
8. Some new properties of the **polymer found** during the experiments were quite **unexpected**.

**Ex.5 Translate the sentences with Absolute Participle constructions.**

1. The sun having risen, they continued their way.
2. The professor being ill, the lecture was put off.
3. The wool was placed in the warehouse, the cotton being forwarded to the factory.
4. Weather permitting, the ship will leave port tomorrow.
5. There being a severe storm at sea, the steamer could not leave the port.
6. If being Sunday, the library was closed.
7. The work finished, we went home.
8. The signal given, the train started.
9. The weather being fine, they went for a walk.
10. The goods having been unloaded, the workers left the port.
11. Business on the London Metal Exchange was very brisk that day, over one thousand tons of tin being sold in the afternoon.
12. Agriculture is Costa Rica's chief activity, mining and manufacturing being little developed.
13. Modern digital computers operating with tremendous speed, it is widely used in science and engineering.
14. Radio was invented in Russia, its inventor being the Russian scientist A.S. Popov.
15. Then they heard the noise of the plane, its shadow passing over the open glade.

**Ex.6 Translate the sentences, paying attention to the Participle and its functions.**

1. Being very ill, she couldn't do her work.
2. The first rays of the rising sun lit up the top of the hill.
3. The tree struck by lightning was all black and leafless.
4. Being busy, he postponed the trip.
5. Having been shown the wrong direction, the travelers soon lost their way.
6. Having descended the mountain they heard a man calling for help.
7. Flushed and excited, the boy came running to his mother.
8. He stood watching the people passing by.
9. While being examined, the boy couldn't help crying.
10. Strictly speaking, he is not a good student.

**Ex.7 Translate the sentences, paying attention to the Absolute Participle Construction and its place in a sentence.**

1. There are different types of engines, all of them representing the means by which it is possible to utilize the tremendous amount of energy, stored in water, coal, oil, wood and other fuels.
2. A d. c. motor being installed, the r. p. m. can be controlled automatically.
3. Different molecules have different speeds, the average speed of all molecules remaining the same as long as the temperature is constant.
4. One scientist after another have tried cooling some gas to absolute zero, their attempts coming to nothing.

***Ex.8 Define the form and the function of the Participle in the sentences. Translate them.***

1. Using isotopes in measuring the diffusion of metals we got much more accurate data.
2. Being used in measuring the diffusion of metals isotopes gave much more accurate data.
3. Scientists have found a simple way to produce a laser beam of any colour and frequency desired.
4. Having used a laser beam scientists obtained accurate calculations of Jupiter's temperature - minus 150°F.
5. Being produced by the laser the narrow intense beam travels great distances without spreading.
6. When sent to the Moon in 1962 an intensive red beam illuminated a section of the Moon only two miles in diameter.
7. Having reached the surface of the Moon, it returned to the Earth three seconds later, its return being recorded by sensitive devices.
8. The beam traveled 800,000 km in space, its velocity approaching that light.

**Образец текста для работы с устной темой**

***The British Way of Life***

Almost every nation has a reputation of some kind. The French are supposed to be merry; the Germans dull, formal, fond of military uniforms; the Americans boastful, energetic. The English are reputed to be cold, reserved, rather haughty people who do not shout in the street. They are steady, easy-going and fond of sport. People in England do not shake hands as much as people do in Europe.

The English themselves like to speak of the "Englishness" of the English and they agree that there are really some typical English features – egoism, a strong sense of individualism and intolerance of outsiders, independence and self-confidence, a strong belief in private property and love of comfort.

The English are a nation of stay-at-homes. "The Englishman's home is his castle" is a saying known all over the world. It is true that English people prefer small houses, built to house one family, perhaps with a small garden.

The fire is the focus of the English home. What do other nations sit round? The answer is they don't. They go out to cafes or sit round the cocktail bar. For the English it is the open fire and the ceremony of English tea. Tea is part of the prose of British life as necessary as potatoes or bread. It must be made "just like mother makes it", one teaspoonful of tea for each person. It is drunk with or without sugar but almost always with milk.

The English people often say something about the weather when they begin a conversation. In fact people talk about weather more in Britain than in most parts of the world. For one thing, the weather in Britain changes very quickly. One day may be fine and the next day may be wet. You can never be quite sure what the weather is going to be like. The English often say: "Other countries have a climate, in England we have weather. For another thing, the weather is a safe topic for conversation. It plays a big part in the lives of the British people. Every daily newspaper publishes a weather forecast. Both the radio and the television give the weather forecast several times each day.

The club is decidedly British institution. Club membership is a part of clubmen professional and business life. Membership of the club is regarded as carrying a certain social prestige. Most of the clubs are old. They derived from a coffee-house, where Englishmen gathered for company and conversation. The members of all clubs are to be selected. There exist school clubs and college clubs, political clubs and cultural clubs, town clubs and country clubs. There are sports clubs of all sorts. Sixty years ago clubs were regarded to be only male territory. Now nearly all the clubs are open for both men and women.

These are some peculiarities of the British way of life.

***Vocabulary***

to suppose – полагать

Merry – весёлый

Boastful – хвастливый

to repute, to regard – считать

Reserved – сдержанный

Haughty – высокомерный

Steady – уравновешенный

easy-going – добродушный

Intolerance – нетерпимость

self-confidence – самоуверенность

Property – собственное

Castle – крепость

for one thing – с одной стороны

for another thing – с другой стороны

weather forecast – прогноз погоды

Decidedly – несомненно

Membership – членство

to derive – происходить

to elect, to select – выбирать

Nearly – почти

Peculiarity – особенность

***Answer the following questions:***

1. What are the most striking features of the English?
2. Why are the English called a nation of stay-at-homes?
3. What is the focus of the English home?
4. What is part of the prose of British life?
5. Why does the weather play a big part in the lives of the British people?
6. What is regarded as carrying a certain social prestige?

***Think and say about:***

1. Which of the character features below can you think of as positive or negative? Why?  
a) adaptability; b) individualism; c) independence; d) self-confidence; e) intolerance; f) practicability; g) conservatism; h) boast.
2. What features are characteristic for people of our country?

**Тема 2.** Герундий. Компьютерные системы: обзор



Строение компьютерной системы. Аппаратное обеспечение, программное обеспечение и встроенное ПО. Этапы развития компьютеров. Американский образ жизни. Вашингтон. Грамматика: герундий, глаголы, требующие после себя использования герундия. Герундиальный оборот, префикс over-

Поскольку данное грамматическое явление отсутствует в русском языке, студентам необходимо объяснить и показать на примерах что из себя представляет герундий. На практических занятиях комбинируется работа по учебнику Орловской из списка основной литературы (Lesson 8), Учебного пособия для студентов 2-го курса (Lesson 4), а так же учебника Радовель В.А. «Основы компьютерной грамотности» (Unit5). Часть упражнений выполняется вместе с преподавателем, часть входит в самостоятельную работу студента. Кроме того проводится работа по страноведческой теме “London” с использованием видеоматериалов.

### The Gerund (Герундий)

Герундий – это неличная форма глагола, обладающая свойствами как существительного, так и глагола. Выражает процесс действия.

#### Образуется V+ing

Характерным признаком герундия является наличие перед ним:

- 1) предлога;
- 2) притяжательного местоимения;
- 3) существительного в притяжательном или общем падеже.

Герундий с относящимися к нему словами образует герундиальный оборот.

#### Формы герундия

Tense	Active	Passive
Simple	driving	being driven
Perfect	having driven	having been driven

### Functions.

#### 1. Subject

Reading books in English is very important.– Читать книги на английском языке – очень важно.

There is no avoiding it. - Этого не избежать.

It's no use going there. - Бесполезно идти туда.

#### 2. Predicative

a) after to be: His hobby is collecting stamps. – Его хобби – коллекционирование марок

b) after can't stand, can't bare, can't help: She couldn't help laughing. - Она не могла удержаться от смеха.

I can't stand her singing. - Не могу выносить ее пение.

c) He gave up smoking. - Он бросил курить. (после глаголов, выражающих начало, продолжение и конец действия: to stop, cease, keep on, go on, continue, start, finish, begin, give up).

#### 3. Attribute (after nouns + preposition)

I had a chance of meeting him.– У меня был шанс встретиться с ним.

She has difficulties in speaking.– У нее проблемы с говорением.

#### 4. Object

a) *direct object* (after verbs without prepositions)

I enjoy swimming in the sea.– Я люблю купаться в море.

He denies having taken the book.– Он отрицает, что взял книгу.

b) *indirect object* (after verbs with prepositions)

I am afraid of diving.– Я боюсь глубоко нырять.

They depend on his coming in time.– Они зависят от его своевременного прихода.

5. **Adverbial modifier of:** (всегда с предлогом)

a) **time** (with prepositions: upon, on, after, before, at...)

On coming home he lit up a fire. - Придя домой, он зажег камин.

b) **manner** (in, by)

We spent the day in packing. - Мы потратили день на упаковку вещей.

c) **attendant circumstances** (without)

We danced without speaking. - Мы танцевали молча (без разговоров).

d) **purpose** (for)

The floor is used for dancing.– Площадка используется для танцев.

e) **concession** (in spite of)

In spite of being ill she finished her work. - Несмотря на болезнь, она закончила работу.

f) **condition** (without)

You can't go there without being invited. - Вы не можете пойти туда без приглашения.

g) **reason**

I feel better because of having spent a month at the seaside. - Я чувствую себя лучше, потому что провел месяц на морском побережье.

**Note:** В функции обстоятельства герундий используется после предлогов in, at, on, after, before, etc...

Герундий с последующим существительным указывает на назначение предмета, отвечает на вопросы «для чего? для какой цели?» и переводится либо существительным в именительном или родительном падежах, либо прилагательным. Выполняет функцию определения.

a smoking room – комната для курения;

a boiling point – точка кипения.

**Compare: Participle:** a dancing girl→ no changes are possible.

**Gerund:** dancing shoes→ shoes for dancing

### Gerundial Object

Это сочетание притяжательного местоимения или существительного в притяжательном или общем падеже с герундием. Такой оборот переводится придаточным предложением с союзами «что; то, что; о том, чтобы; в том, что», причем герундий в русском предложении становится сказуемым этого придаточного предложения. Притяжательное местоимение или существительное становится подлежащим придаточного предложения.

We all know of their designing a new type of semiconductor radio set. – Мы все знаем, что они проектируют новый тип радиоприемника на полупроводниках.

*Smirnov's taking part* in the development of the new cooling system was of great help to us. – *То, что Смирнов принял участие* в усовершенствовании новой охлаждающей системы, очень помогло нам.

### Ex. 1 Translate the phrases and the sentences.

a) without destroying; without maintaining; without studying; without replacing; without creating.

b) instead of improving, instead of exploring, instead of putting, instead of solving, instead of saving, instead of processing, instead of mounting, instead of utilizing, instead of constructing, instead of referring.

c) Stop cooling! Stop heating! Stop working! Stop reading! Stop oxidizing! Stop observing!

**Ex. 2 Translate the sentences and define the functions of the Gerund.**

1. Measuring distances to the planets and stars has a lot of difficulties.
2. One of the effects of heat is turning a solid into liquid.
3. He likes reading.
4. Heating the substance up to 85 °C was absolutely necessary.
5. Thank you for coming.
6. The idea of utilizing the energy of oceans and seas for man's needs is not new.
7. I watched Paul's reading.
8. Water may be cooled without becoming solid.
9. I like Jane's singing.
10. There are ways of generating heat besides that of combustion.
11. Heat is a form of energy, that is, it is capable of doing work.
12. Studying these phenomena was a difficult task for the scientists.

**Ex. 3 Translate and define the function and the form of the Gerund.**

**A.**

1. Reading English technical magazines is important for an engineer.
2. He remembers having added some water to the mixture.
3. They finished installing the apparatus only on Saturday.
4. They began making the experiment in May.
5. After failing his examination in January he had to take it again in February.
6. After graduating from the Institute he worked in the Far North.
7. At the meeting they discussed different ways of improving their work.
8. There are different ways of obtaining the substance.
9. The organizers of the conference were informed of his refusing to take part in it.
10. I remember his having been interested in languages in his childhood.

**B.**

1. I know of his having been sent to work to the Far East.
2. What is the reason for his having left our city so suddenly?
3. We heard of the experiment having been started last week.
4. He improved his report by changing the end.
5. They objected to his staying at home.
6. Instead of restoring the old theatre they decided to build a new one in the center of the town.
7. New possibilities for applying atomic energy open up.
8. It is possible to set up power stations based on utilizing the heat of the Sun.
9. The idea of creating a multi-stage rocket belongs to Tsiolkovsky.
10. Before being sent up the balloon was filled with a special gas.
11. What apparatus do we use for measuring air pressure?
12. Science requires experimenting.
13. Speaking foreign languages is important for every educated man.

**Ex. 4 Translate paying attention to the –ing form.**

1. The monument needs restoring.
2. The monument of what century are you restoring?
3. The monument of what century is being restored?
4. The experts restoring the monument were provided with modern techniques.

5. With the help of a magnet we can hold two huge metal plates together without tying them.
6. He pointed out that the assembling time of the apparatus was very short.
7. The police were informed of the criminals having appeared in the city.
8. The committee studied the problem of improving the bus service in the town without increasing the number of buses operating on the routes.
9. Increasing population of the world changes the face of the Earth.
10. Heating the substance to high temperatures the substance considerably expanded.
11. Being heated to high temperatures the substance considerably expanded.
12. The substance was being heated for three hours.

<i>Переведите и запомните следующие глаголы и выражения, требующие после себя герундия:</i>		
<b>to avoid</b>	<b>to excuse</b>	<b>to keep (on)</b>
<b>to burst out</b>	<b>to finish</b>	<b>to mind</b>
<b>cannot help</b>	<b>to forgive</b>	<b>to postpone</b>
<b>to deny</b>	<b>to give up</b>	<b>to put off</b>
<b>to enjoy</b>	<b>to go on</b>	<b>to like</b>

**Ex. 5 Translate the sentences with the Gerund.**

1. He keeps insisting on my going to the south.
2. Oh please do stop laughing at him.
3. Do you mind my asking you a difficult question?
4. Would you mind coming again in a day or two?
5. I don't mind wearing this dress.
6. She could not help smiling.
7. I cannot put off doing this translation.
8. Though David was tired, he went on walking in the direction of Dover.
9. I avoided speaking to them about that matter.
10. She burst out crying.
11. They burst out laughing.
12. She denied having been at home that evening.
13. He enjoyed talking of the pleasures of traveling.
14. Excuse my leaving you at such a moment.
15. Please forgive my interfering.

**Ex. 6 Translate into English, using the Gerund.**

1. Перестаньте разговаривать.
2. Мы закончили работу над этой проблемой.
3. Продолжайте петь.
4. Вы не против того, чтобы открыть окно?
5. Он отрицал свое участие в преступлении.
6. Я очень люблю рисовать.
7. Мы получили удовольствие от плавания.
8. Я не могла не согласиться с ним.
9. Он рассмеялся.
10. Она бросила курить.
11. Она избегала встречи с ним.
12. Мы отложим обсуждение доклада.

13. Наконец, они перестали смеяться.

14. Она отрицала, что украла деньги.

*Переведите и запомните следующие глаголы и выражения, требующие после себя герундия с определенными предлогами:*

<p><b>to accuse of</b> <b>to agree to</b> <b>to approve of</b> <b>to be afraid of</b> <b>to congratulate on</b> <b>to depend on</b> <b>to dream of</b> <b>to feel like</b> <b>to give up the idea of</b></p>	<p><b>to insist of</b> <b>to look forward to</b> <b>to object to</b> <b>to persist in</b> <b>to prevent from</b> <b>to succeed in</b> <b>to suspect of</b> <b>to thank for</b> <b>to think of</b></p>
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**Ex. 7 Translate the sentences.**

1. My friend succeeded in translating this difficult text.
2. She suspected him of deceiving her.
3. The poor peasant thanked Robin Hood heartily for having helped him.
4. He gave up the idea of ever hearing from her.
5. We are looking forward to seeing you again.
6. He has always dreamt of visiting other countries.
7. He persisted in trying to solve that difficult problem.
8. The cold weather prevented the girls from going for long walks.
9. Jane thought of leaving Lowood after Miss Temple's marriage.
10. They accuse him of having robbed the house.
11. He never agreed to their going on that dangerous voyage.
12. He did not approve of her drinking so much coffee.
13. The teacher of mathematics did not approve of his pupils dreaming.
14. All the happiness of my life depends on your loving me.
15. I don't feel like seeing him.

**Ex. 8 Open the brackets, using the Gerund in Active and Passive form.**

1. He was always ready for (to help) people.
2. He was very glad of (to help) in his difficulty.
3. On (to allow) to leave the room the children immediately ran out into the yard and began (to play).
4. In (to make) this experiment they came across some very interesting phenomena.
5. The results of the experiment must be checked and rechecked before (to publish).
6. David was tired of (to scold) all the time.

**Ex. 9 Give the possible variants of translation.**

**a) Subject:**

1. Maintaining constant temperature and pressure during the test was absolutely necessary.
2. The student's taking part in the research was of great help to the whole laboratory.
3. His offering new temperature conditions for the system will give greater efficiency.

**b) Predicative:**

1. The task of the factory was producing corrosion-resistant polymers in far larger quantities.

2. Their aim is finding new ways of utilizing this first-class polymer in light industry.

**c) Object:**

1. The experimentalist suggested purifying the solution by a new method.
2. The researcher took great interest in our improving the properties of the rubber-like substances.
3. We know of silver and copper being very good conductors of electricity.

**d) Attribute:**

1. The new heating and lighting installations supply the shops of our plant with heat and light.
2. At present scientists take great interest in the methods of turning the light and heat of the sun directly into electricity.

**e) Adverbial modifier:**

1. By subjecting air to very great pressure and cooling it is possible to transform it to the liquid state.
2. One cannot transform water into steam without heating it.
3. In converting water into ice we do not change its composition.
4. Physical changes are those which influence the condition or state of matter without

changing its composition.

***Ex. 10 Translate and define the function of the Gerund.***

1. Using radioactive isotopes opens up new possibilities for medicine and agriculture.
2. John Dalton stated that atoms are incapable of being destroyed or created.
3. The Curies' having discovered radium gave them the possibility of discovering other radioactive elements.
4. One of the ways of producing tremendous energy is imitating on the Earth the process that makes the Sun shine.
5. We know of the atomic reactor being fed with uranium 235.
6. After the young scientist's report having been discussed at the conference it was published in a scientific journal.
7. We know of Yablochkov's having found a brilliant solution to the difficult problem of using the electric arc for lighting.
8. While heavy atoms can be made to release energy by splitting, light atoms, such as hydrogen, can yield energy by being fused together.
9. Work on "braking" the H-bomb and on using the fusion process for generating electricity is going forward in several countries.
10. Conducting heat and electricity is the property of most metals. Their being good conductors of heat and electricity made them widely used in industry.

***Примерный текст по страноведению.***

***London***

London is the capital of Great Britain, it is one of the largest cities in the world. London is situated on both sides of the Thames. There are fourteen bridges across the Thames. There are four parts in London: the City, the West End, the East End and the Port.

The City is the oldest part of London. There are no houses in the City, only large office buildings. It is the country's financial and business centre. The Stock Exchange, the Royal Exchange, the Bank of England are all there. At night the City is quiet and empty.

The name "West End" is associated with the rich. It's the finest part of London. In the West End there are theatres, cinemas, museums, picture galleries, long streets of fine shops and many big houses. There are beautiful parks, too.

The Houses of Parliament, Whitehall, Downing Street are all in the West End. Whitehall is the street where all the Government offices are. It is the heart of the Government of Great Britain.

If the City is the "money" of London, and the West End is the "goods" of London, then the East End is the "hands" of London. Working-class London is in the East End. It is a district of docks, factories, poor little houses and narrow streets. Housing conditions in this part of London are very bad. Lots of old houses have no modern conveniences. They are damp, dirty and dark.

The East End and the Port of London are situated to the east of the City. They are unattractive, but very important to the country's economy.

London is very rich in sights. Among them is Westminster Abbey which is famous for its architecture and history. In Westminster Abbey the kings and queens of England are buried. Here is also the Poet's Corner where many great writers and poets are buried: Kipling, Dickens, Tennyson, the memorials to Shakespeare and Byron, Scott and Longfellow.

Of no less interest are the Houses of Parliament with Big Ben, the Buckingham Palace – the Queen's residence, the National Art Gallery, the British Museum, St. Paul's Cathedral and the Tower, which was first a fortress, then a prison and which is now a museum.

Trafalgar Square is about a hundred years old. The main feature is the tall Nelson monument, with the figure of the great seaman on the top. Many demonstrations and meetings take place here.

There are a lot of parks in London, the most famous of them is Hyde Park with its Speaker's Corner.

Sunday is a very quiet day in London. All the shops are not open and so are theatres and most of the cinemas. Londoners like to get out of the town on Sundays. They often go down to the sea for the day.

### ***Vocabulary***

Associate – ассоциировать

Abbey – аббатство

Fortress – крепость

Financial – финансовый

Empty – пустой

Damp – сырой, влажный

Narrow – узкий

To bury – хоронить

Sights – достопримечательности

Fortress – крепость

Feature – черта, особенность

Top – вершина

Unattractive – непривлекательный

Housing – жилье (зд. жилищный)

The Stock Exchange – Фондовая биржа

The Royal Exchange – Лондонская биржа

"goods" – зд. витрина, где выставлено все на показ

### ***Answer the following questions:***

1. Where is London situated?

2. How many bridges are there across the Thames?
3. What are the four parts of London?
4. What sights do you know in London?
5. What can you say about the City?
6. What can you say about the West End?
7. Where are the East End and the Port situated? What can you say about these districts?
8. What is the most famous park of London?

### Тема 3 Инфинитив. История компьютеров

Первые вычислительные устройства. Первые компьютеры. Четыре поколения компьютеров. Список выражений, рекомендуемых для написания реферата и аннотации. Грамматика: Формы инфинитива и его функции в предложении. Каузативные глаголы to make, to cause, to force.

На практических занятиях разбирается грамматическая тема инфинитив и его функции в предложении и вводится новая лексика по теме вычислительных устройств.. В дальнейшем лексика и грамматика отрабатываются в текстах и упражнениях по учебнику Орловской И.В. (Lesson 10), учебнику Радовель В.А (Unit 3) и учебному пособию для студентов 2-го курса (Lesson 6). “Climate of England” Далее разбираются выражения для составления реферата и аннотации по учебному пособию «Аннотирование и реферирование текста».

#### *The Infinitive*

Инфинитив – неличная форма глагола, которая обладает свойствами существительного, глагола, прилагательного. Представляет основу глагола, которой обычно предшествует частица to.

#### Формы инфинитива

Tense	Active	Passive
Simple	to help	to be helped
Continuous	to be helping	–
Perfect	to have helped	to have been helped
Perfect Continuous	to have been helping	–

#### Functions

1. Subject (Подлежащее)
  - a) To study well is our duty.– Хорошо учиться – наша обязанность.
  - b) It is necessary (important, nice, good, pleasant, strange...) to read original literature.– Необходимо читать литературу в оригинале.
2. Predicative (Сказуемое)
  - a) after to be: Our duty is to study well.– Наша обязанность – хорошо учиться..
  - b) after the verbs to start, to cease, to stop: The child began to cry.– Ребенок начал плакать.
  - c) after modal verbs bare infinitive! She must be watching TV now.– Она, должно быть, смотрит телевизор сейчас.  
They may have listened to the text already.– Они, возможно, уже прослушали текст.
  - d) after had better (would rather (sooner)) do smith.  
You had better finish your work in time. (bare infinitive!) – Тебе лучше закончить работу вовремя.  
I'd sooner die than kiss him.– Я скорее умру, чем поцелую его.
3. Parentheses (Вводные слова, фразы)
 

to tell the truth, to begin with, needless to say, to put it mildly  
I took salad to begin with.– Для начала я заказал (взял) салат.



#### 4. Object (Дополнение)

a) want, wish, hope, expect, hate, like, prefer...

I hope to meet her.– Надеюсь встретить её.

He likes to eat cakes.– Он любит кушать пирожные.

b) to be glad, to be sorry, to be eager, etc...

I am so sorry to hear it.– Жаль слышать это.

c) to find, to consider, to think

He finds it necessary to join us.– Он считает необходимым присоединиться к нам.

#### 5. Attribute (Определение) (after noun, pronoun, numeral)

I have no time to lose.– Не могу терять время.

She was the first to enter the room.– Она первой вошла в комнату.

#### 6. Adverbial modifier of (Обстоятельство):

a) purpose (so as, in order) – цели

We've come here to study.– Мы пришли сюда, чтобы учиться.

b) result (too, enough) - результата

She is too weak to go upstairs.– Она слишком слаба, чтобы подняться наверх.

You are clever enough to understand it.– Ты достаточно умен, чтобы понять это.

c) comparison (than) - сравнения

It's better once to see than to hear.– Лучше один раз увидеть, чем услышать.

d) exception (no particle "to") – исключения

There was nothing left to do, but go.– Ничего не оставалось делать, как идти.

#### **For-to – Infinitive Construction**

Состоит из существительного или местоимения, выражающего исполнителя действия, выраженного инфинитивом и имеет перед собой предлог "for". Может выполнять в предложении различные функции.

Examples:

1. It's bad **for him to smoke**.– Плохо, что он курит (subj.).

2. **For me to drive** the car will be dangerous.– Мне будет опасно водить машину (subj.).

3. The old man waited **for the door to open**.– Пожилой человек ждал, когда откроется дверь (object).

4. I have a book **for you to read** on the train.– У меня есть книга, которую ты можешь почитать в поезде (attribute).

5. The tendency in these songs **is for the refrain to occupy** a more prominent place.– Тенденция в этих песнях такова, что припев занимает более значительное место (predicative).

6. I'll send you some views of our city **for you to show** them to your wife and daughter.– Я вышлю тебе несколько фотографий нашего города, чтобы ты показал их жене и дочери (adv mod of purpose).

7. He spoke loud enough **for you to hear**.– Он говорил достаточно громко для того, чтобы ты его услышал (adv. mod. of result).

#### **Ex. 1 Translate the sentences.**

1. They were happy to take part in our expedition.

2. She wanted to be answered at once.

3. He was happy to be working with the famous scientist.

4. It's very difficult to drive a car in a big city.

5. Water may be used to drive dynamos which generate electricity.

6. Sputniks do not need any additional energy to move along their orbit.
7. Newton made use of the three laws of motion to explain the movement of the Moon around the Earth and of the planets around the Sun.
8. To extend the main street they had to destroy some old buildings.
9. The workers will use powerful machinery to assemble these huge units.
10. In this area there are no monuments to speak of.
11. Dalton's atomic theory was the first to make successful use of the old Greek theory of atoms in chemistry.
12. The new channel to be constructed here will be the longest in the country.
13. The new branches of industry to be developed in this part of the country are metallurgy and radio engineering.
14. Another reason to consider is the absence of necessary facilities for the experiment.

***Ex.2 Translate and define the functions of the Infinitive.***

1. The problem to be discussed is connected with the city water supply system.
2. This method is not good enough to be used everywhere.
3. A new comfortable coach was developed to transport people over long distances.
4. He was saving money to travel about the country.
5. It did not take much time to pave the road.
6. The internal combustion engine to be used in this lorry is of a new design.
7. The road surface to be repaired was destroyed many years ago by heavy vehicles.
8. Goods to be transported to the north are stored at the railway station.
9. He was too tired to be asked any questions.
10. England looks like one well ordered park. Englishmen like to preserve various old trees. There are some trees which were even too old to be cut for building ships in the seventeenth century.
11. A high speed electronic machine has introduced great changes in carrying out various mathematical calculations. This electronic machine works according to a programme to be prepared in advance and can carry out several thousand arithmetic operations per second.

***Ex. 3 Translate and define the forms and the functions of the Infinitive.***

1. The child wanted to be taken seriously.
2. He didn't hear the boy enter the room.
3. The dog was the first to feel danger.
4. This question is too complicated to be answered at once.
5. The engine to be installed in this car is very powerful.
6. Where is the work to be done?
7. To explain the problem the students were interested in, the engineer demonstrated some diagrams.
8. To grow fruit one must have good soil.
9. Do you know the language well enough to read English newspapers and magazines?

**Тема 4 Инфинитивные конструкции. Устройства ввода и вывода информации**

Средства ввода/вывода информации. Устройства ввода. Устройства вывода. Принтеры. Сканеры. Клавиатурные средства. Составление образца реферата и аннотации. Грамматика: Конструкции «сложное дополнение и сложное подлежащее с инфинитивом», повторение неличных форм глагола (причастие, герундий, инфинитив)

На практических занятиях разбирается грамматическая тема сложных инфинитивных конструкций и вводится новая лексика по теме устройств ввода и вывода информации. В

дальнейшем лексика и грамматика отрабатываются в текстах и упражнениях по учебнику Орловской И.В. (Lesson 11), учебнику Радовель В.А (Unit 9) и учебному пособию для студентов 2-го курса (Lesson 6). Параллельно изучается тема “American way of life”. Далее объясняется, как составлять моnoreферат на английском языке а так же рассматривается пример реферата по учебному пособию «Аннотирование и реферирование текста»

to be sure	наверняка, скорее всего
to be certain	

**She is likely to return** soon.– Вероятно, она скоро вернется.

**We are sure to leave** in a minute.– Скорее всего, мы через минуту уйдем.

1. With the verbs to seem, to happen, to appear, to chance, to prove, to turn out  
She seems to have seen this film.– Оказывается, она видела этот фильм.

### **Grammar exercises:**

*Ex. 1* Translate the sentences with Complex Object. **Сложные инфинитивные конструкции**

#### **Complex Object with the Infinitive – Сложное дополнение с инфинитивом**

**It consists of two elements:**

1 – a noun or a pronoun; 2 – infinitive

1. After verbs of sense perception (hear, see, watch, feel, notice, observe) bare infinitive is used without “to”.

I watched the boy play.– Я смотрел, как мальчик играл.

I felt him touch me. - Я чувствовала, как он прикоснулся ко мне.

2. After verbs of mental activity (understand, know, realize, think, believe, suppose, consider, expect, find)

Everybody considers **her to be** clever.– Все считают её умной.

They expected **me to arrive** on Monday.– Они ожидали, что я приеду в понедельник.

3. After verbs expressing feelings and emotions (like, dislike, hate, love, want, wish, prefer, intent, desire)

I hate **him to grumble**. Терпеть не могу, когда он ворчит.

I’d like **her to arrive**.– Я бы хотела, чтобы она приехала.

4. After verbs of compulsion (cause - вынуждать, bare, stand – выносить)

Her last words caused **him to change** his mind.– Её последние слова заставили его передумать. I can’t bare **him (to) smoke**. –Не выношу, когда он курит.

5. After verbs (make – заставлять, have – допускать, get – добиваться, let - позволять) – bare infinitive is used.

I will not have **you talk** to her in such a way.– Я не допущу, чтоб ты с ней так разговаривал.

We shall **get you** do everything in time.– Мы добьемся, чтобы ты все делал вовремя.

6. After verbs of order and permission (let, allow, order, make, force)

She allowed him to be here tonight.– Она позволила ему здесь быть сегодня вечером.

7. Verbs of speech (say, report, declare, tell)

They reported the girl to be the winner.– Они сообщили, что девочка стала победительницей.

#### **Complex Subject with the Infinitive**

It consists of two elements. The verbs are mainly used in **Passive Voice**.

2. With the verbs of sense perception (Глаголы чувственного восприятия).

**The girl** was seen **to cross** the street.– Видели, как девочка переходила улицу.

3. With the verbs of mental activity– (Глаголами умственной деятельности).

**You** are supposed **to have done** the exercises.– Предполагается, что вы выполнили упражнения.

**You** are supposed **to go** there.– Предполагается, что вы пойдете туда.

4. With the verbs of order, request, permission (make, let, order, force, allow)

**I** was made **to sweep** the floor.– Меня заставили подмести пол.

5. With the verbs of speech

**She** was reported **to be** the winner.– Сообщили, что она - победитель.

to be likely	похоже, вероятно, наверняка
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1. He wanted us to visit the art exhibition.
2. I expect you to tell me everything.
3. I suppose her to be about 50.
4. The teacher does not consider him to be a good student.
5. The engineer expected the work to be done in time.
6. We expect you to show good results.
7. We know him to have graduated from the Institute two years ago.
8. Everybody knows him to be working on a new book.
9. We believe cybernetics to be an important branch of modern technology.
10. We thought him to have taken part in their experiment.
11. She felt somebody touch her.
12. We heard him come in and close the door behind him.
13. Have you ever seen Ulanova dance?
14. She watched the boy buy a newspaper, open it, look it through and then throw it away.
15. I heard him mention my sister's name.
16. Many people like to watch the sun rise.
17. She saw her son fall and shouted.
18. He likes watching his son play in the garden.
19. The students heard the bell ring.
20. You can't make me believe that all these stories are true.
21. In spite of bad weather the instructor made the sportsmen continue their training.

**Ex. 2. Translate the sentences with Complex Subject**

6. The lecture was said to be very interesting.
7. The members of the committee are reported to come to an agreement.
8. The English delegation is believed to come at the end of the month.
9. She seems to know English and French.
10. He proved to be a good teacher.
11. This school is considered to be the best in the town.
12. The weather appears to be improving.
13. The doctor happened to be there at the time of the accident.
14. She seems to be waiting for you.
15. Lake Baikal is said to be the deepest in the world.

16. This picture proved to be the best at the exhibition.
17. These two scientists happened to work on the same problem.

**Ex. 3 Translate the sentences with Infinitive Constructions.**

1. A lot of people came to watch the ocean liner return home after a long voyage.
2. Everybody thought him to be quite a reliable person.
3. The captain declared the load to be too much for his small boat.
4. He seems to know a great deal about the history of navigation.
5. The boat, though very small, proved to be quite reliable.
6. The 20th century is considered to be the century of space travels.
7. The motor proved to be quite efficient.
8. Atomic ice-breakers are known to operate on a negligible quantity of atomic fuel.
9. The results of the test were found to be very interesting.
10. I know them to be working on the problem of protecting the cosmonauts from the effect of sun radiation.
11. Rubber is known to have been brought from America.
12. Ink is supposed to have been invented in Egypt.
13. We expected him to be appointed director of a new automobile plant.  
This question appears to be of great importance.
14. The plan proved to be a great success.
15. The travellers found the people of the small island (to be) very friendly.
16. They reported the capacity of the new engine to have been increased.
17. The owner of the motor car wanted the old engine to be replaced.

**Как составляется реферат и аннотация**

**Текст: The history of Personal Computer**

In 1952, a major computing company took a decision to get out of the business of making mainframe computers. They believed that there was only a market for four mainframes in whole world. That company was IBM. The following year they reversed their decision.

In 1980, IBM decided that there was a market for 250,000 PCs, so they set up a special team to develop the first IBM PC. It went on sale in 1981 and set a world-wide standard for IBM-compatibility which, over the next ten years, was only seriously challenged by one other company, Apple Computers. Since then, over seventy million PCs made by IBM and manufactures have been sold. Over this period, PCs have become commodity items. Since IBM made the design non-proprietary, anyone can make them.

The history of the multi-billion dollar PC industry has been one of mistakes. Xerox Corporation funded the initial research on personal computers in their Palo Alto laboratory in California. However, the company failed to capitalize on this work, and the ideas that they put together went into the operating system developed for Apple's computers. This was a graphical interface: using a mouse, the user clicks on icons, which represent the function to be performed.

The first IBM PC was developed using existing available electrical components. With IBM's badge on the box it became the standard machine for large corporations to purchase. When IBM were looking for operating system, they went initially to Digital Research, who were market leaders in command-based operating systems (these are operating systems in which the users type in commands to perform a function). When the collaboration between IBM and Digital Research failed, IBM turned to Bill Gates, then 25 years old, to write their operating system.

Bill Gates founded Microsoft on the basis of the development of MS/DC DOS, the initial operating system for IBM PC. Digital Research have continued to develop their operating system DR DOS, and it is considered by many people to be a better product than Microsoft's. However, without an endorsement from IBM, it has become a minor in the market. Novell, the leaders in PC networking, now own Digital Research, so things may change.

The original IBM PC had a minimum of 16K of memory, but it could be upgraded to 512K if necessary, and ran with processor speed of 4.77Mhz. Ten years later, in 1991, IBM were making PCs with 16Mb of memory, expandable to 64Mb, running with the processor speed of 33Mhz. The cost of buying the hardware has come down considerably as the machines have become commodity items. Large companies are considering running major applications on PCs, something which, ten years ago, no one would have believed possible of a PC, in contrast, many computers in peoples homes are just used to play computer games.

The widespread availability of computers has in all probability changed the world forever. The microchip technology, which made the PC possible has put chip not only into computers, but also into washing machines and cars. Some books may never be published in paper form, but may only be made available as part of public databases. Networks of computers are already being used to make information available on a world-wide scale.

***1. Copy out sentences, containing infinitive, translate and state the functions.***

***2. Answer the questions to the text.***

1. How many mainframes did IBM think it was possible to sell in 1952?
2. How many PCs have now been sold?
3. Who paid for the initial research into PCs?
4. Which company later used the results of this research to develop their operating system.
5. What are command-based operating systems?
6. DR/DOS is an acronym. What does it stand for?
7. Since the invention of the IBM PC, many of its features have been improved. Which of the following features does the text not mention in this respect.

***Read and translate the abstract. Get ready to retell it.***

#### **Abstract**

The text is devoted to the history of PC development and research. The purpose of the text is to give the reader some information about the companies which dealt with PC and operation system development such as Digital Research, Apple Computers and so on.

The author starts by telling the readers that in 1980 IBM set up a special team to develop the first IBM PC. He writes that over the years 70 million PCs have been made since that time.

The author points out that Xerox Corporation funded the initial research on personal computers. According to the text, the ideas they put together later went into the operating system developed for Apple Computers.

Further the author writes that IBM turned to Bill Gates to write their operating system. The text goes on to say that over the years PCs memory and speed were considerably upgraded and their cost went down because they became commodity items.

The author comes to the conclusion that computers have changed and will change our world.

In my opinion, the text is up to date and informative, but a bit difficult to understand.

### Annotation

The history of PC development is described in short. Data are given about upgrading since 1980.

**Тема 5.** Сослагательное наклонение. Программирование компьютера.

Языки программирования. Определение главной идеи текстов. Отработка лексики в упражнениях. Составление реферата и аннотации по прочитанным статьям. Грамматика: Сослагательное наклонение

На практических занятиях разбирается грамматическая тема сослагательное наклонение и вводится новая лексика по программирования компьютера и обеспечении компьютерной безопасности. В дальнейшем лексика и грамматика отрабатываются в текстах и упражнениях по учебнику Орловской И.В. (Lesson 12), учебнику Радовель В.А (Unit 11) и учебному пособию «Аннотирование и реферирование текста». После изучения текстов составляется реферат и аннотация по одному из текстов или по нескольким. Параллельно изучается тема “Washington”.

### Сослагательное наклонение (The Subjunctive Mood)

Сослагательное наклонение показывает, что говорящий рассматривает действие не как реальный факт, а как предполагаемое, желательное или нереальное.

В русском языке имеется только одна форма сослагательного наклонения – сочетание формы глагола прошедшего времени с частицей бы (сделал бы, хотел бы и т.д.) Эта форма может относиться к настоящему, прошедшему или будущему времени.

В английском языке имеется несколько форм сослагательного наклонения.

При выражении предположения, желания или возможности в настоящем или будущем времени простые формы сослагательного наклонения совпадают с формой инфинитива без частицы to для всех лиц и чисел (live, try) или с формой Past Simple (finished, broke). Глагол to be в этом случае имеет формы be и were для всех лиц и чисел.

Сложная форма сослагательного наклонения представляет собой сочетание should (would), could, might с Simple Infinitive без частицы to:

Long live the King!	Да здравствует король!
It is high time he <i>were</i> here.	Давно пора ему быть здесь.
They <i>could take</i> this exam.	Они могли бы сдать этот экзамен.
I <i>should come</i> with pleasure.	Я бы пришел с удовольствием.

При передаче действия нереального, относящегося к прошлому, простая форма сослагательного наклонения совпадает с формой Past Perfect (had + V<sub>3</sub>), а сложная форма представляет собой сочетание глаголов should, would, could, и might с Perfect Infinitive без частицы to:

They had taken the text-books, but the library was closed then.	Они взяли бы учебники, но библиотека была тогда закрыта.
We should have come.	Мы бы пришли.

### Употребление различных форм сослагательного наклонения

I should like to get this book.	Мне бы хотелось получить эту книгу.
He would like to join us.	Он бы хотел к нам присоединиться.
He could do it tomorrow.	Он мог бы сделать это завтра.
They would have helped you, but they couldn't come.	Они бы помогли вам, но не смогли прийти.
You could have done it. Why didn't you try?	Ты мог бы это сделать. Почему ты не попытался?

Формы сослагательного наклонения употребляются:

1) в простых предложениях

Мне бы хотелось достать эту книгу.

Он хотел бы присоединиться к нам.

Он смог бы сделать это завтра. Они бы помогли вам, но не смогли прийти.

Вы могли бы это сделать, почему же вы не попытались?

2) в сложноподчиненных предложениях:

a) в придаточных предложениях после безличных оборотов типа:

It is	necessary ordered important essential desirable possible improbable suggested proposed required demanded	that	Необходимо, чтобы... Необходимо, чтобы... Важно, чтобы... Существенно, чтобы... Желательно, чтобы... Возможно, что... Маловероятно, что... Предполагается, что... Предполагается, чтобы... Требуется, чтобы... Требуется, чтобы...
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В этом случае сложная форма сослагательного наклонения образуется с помощью **should** для всех лиц:

It is desirable that he should be present here. Желательно, чтобы он присутствовал здесь.

b) в дополнительных придаточных предложениях после глаголов to suggest – предполагать, to propose – предлагать, to desire – желать, to require, to demand – требовать, to order – приказывать, to insist – настаивать и т. д.:

The engineer demanded that the test be (should be) repeated. Инженер потребовал, чтобы испытание повторили.

c) в дополнительных придаточных предложениях после глагола **wish**:



I wish he were with us.	Мне жаль, что его с нами нет.
I wish you had brought your camera.	Мне жаль, что ты не принес свою камеру.
I wish he would tell us everything.	Я бы хотел, чтобы он нам все рассказал.
I wish he could come to the party.	Мне бы хотелось, чтобы он пришел на вечер.
I wish you had done it more carefully.	Мне бы хотелось, чтобы вы более тщательно сделали это.

d) в придаточных предложениях цели после союзов *so that, in order that* – так, чтобы; *lest* – чтобы не. В этом случае *should* употребляется для всех лиц:

Send him out of the room so that he should not hear what we talk about.	Отошли его из комнаты, чтобы он не слышал, о чем мы разговариваем.
She put the letter away lest her husband should see it.	Она убрала письмо, чтобы его не увидел муж.

e) в придаточных сравнения с союзами *as if / as though* – как будто, словно:  
 The house is so quite as if there were nobody in it. В доме было так тихо, как будто в нем никого нет.

f) в определительных придаточных предложениях после *'it is time', 'it is high time'* – пора, самое время. В этом случае используется для глагола to be (were) и Past Simple остальных глаголов.

It's time we went home.	Нам пора идти домой.
It's high time you were in bed.	Вам давно пора спать.

g) в обеих частях сложноподчиненного предложения с условными придаточными второго и третьего типов:

If I were not so tired, I should go with you.	Если бы я так не устал, я бы пошел с вами.
If they had a car, they would go to the country.	Если бы у них был автомобиль, они бы поехали за город.
If he hadn't phoned her, she wouldn't have come.	Если бы он не позвонил ей, она бы не пришла.

Grammar exercises:

### 1. Translate the sentences:

1. He had never suggested that I should visit them.
2. Laura insisted that we should put the party off.
3. Con insisted that I be also present.
4. It was important that no sound should give warning of their approach.
5. It's absolutely essential that you shouldn't breathe a word.
6. It seemed necessary that his friends should be kept away from interfering with his work.
7. After lunch it was proposed that they should all go to the lake.
8. It was possible that her only feeling was one of hurt pride.

9. It was agreed that he should be the first to speak.
10. It's only natural that a mother should not wish to be parted from her children.
11. It was improbable that Bart should buy pictures.
12. It is advisable that she should have someone to look after her.

**2. Translate the sentences into Russian:**

1. When the plane touched down he began to look around lest he should miss her in the crowd.
2. She was overcome with fear lest I should let her down.
3. He feared lest his landlord should betray him to the Germans.
4. I had a feeling of terror lest he never should be able to play in public again.
5. They had made a date for the following Friday night and he feared lest she should not come.
6. It was agreed that he should start on his new job on Monday.
7. I wish you had a serious talk with Paula.
8. It's important that I myself should speak with your captain.
9. I feared lest I shouldn't get back in time.
10. I wish I never met you.
11. Tom insisted that we should stop playing and go home.
12. It's about time we heard from him.
13. It's important that children should be taught to know the right things from the very beginning.
14. I wish you thought of something else.
15. It's high time Bill were back home.
16. I wish you were serious.
17. I wish you stopped laughing.
18. Of course it was quite possible that Mrs. Lee should be badly ill.
19. I wish you hadn't caught that dreadful cold.
20. It's necessary that you should find a specialist who could deal with it.
21. The officer ordered that the bridge be destroyed at dawn.
22. They demanded that the doctor would tell them what was the matter.

**Washington**

Washington, the capital of the United States, was founded in 1791 in the district of Columbia. It was Washington who chose the place for the District.

Washington is not the largest city in the United States, it is not as large as New York Chicago, Los Angeles. It has a population of 900,000 people.

Washington is like no other city of the USA. You know that the flag of the USA, the "stars and stripes" has 50 stars on a blue background. Each of these stars represents one of the fifty states. But the city of Washington is not in any of those states. It belongs to all of them.

Washington is the seat of government of the nation. New York is a centre of finance, of shipping; New Orleans deals in cotton. Washington's only industry is government. It does not produce anything except very much scrap paper. Every day twenty-five railway cars leave Washington loaded with scrap paper. There is a law in Washington against building structures higher than the Capitol; therefore, it presents a different appearance from New York with its sky-scrapes.

Washington has many historical places. The White House, where the US President lives and works, the Capitol, the home of the US Congress and the Supreme Court are all in Washington. The Capitol is very high and beautiful, with white marble columns. It is the very centre of the city. Not far from the Capitol is the Library of Congress. It holds five million books.

Today Washington is the city, which attracts a lot of tourists by its fashionable hotels, restaurants and sightseeing attractions as the house of the first president George Washington, the Lincoln Memorial, the Tomb of the Unknown Soldier, the White House and others.

The White House, the residence of the president, is the oldest public structure in the capital and one of the most beautiful. All American presidents except George Washington had lived in the White House.

### ***Vocabulary***

to deal in – торговать

scrap paper – бумажная макулатура

to load – загружать

railway cars – вагоны

building structures – здания

the Capitol – здание Конгресса

the Supreme Court – Верховный Суд

sky-scrapers – небоскребы

marble – мраморный

tomb – могила, склеп

shipping – грузоперевозка, судоходство

belong to – принадлежать

law – закон

### ***Speak about the capital of the United States.***

1. Who chose the place for the District of Columbia?
2. What is the only industry in Washington?
3. Which American state does Washington belong to?
4. What is the special law in Washington?
5. What historical places does Washington have?
6. Why does Washington attract many tourists today?
7. How many stars and stripes are there on the US flag?

**Тема 6.** Повторение неличных форм глагола, страдательный залог. Уязвимость ПО. Призрак кибервойны.

Безопасность: честная игра. Уязвимость ПО. Призрак кибервойны. Определение главной идеи текстов. Отработка лексики в упражнениях. Составление реферата и аннотации по прочитанным статьям. Грамматика: повторение сложных конструкций и страдательного залога. Основной акцент при проведении практического занятия делается на поиск ранее изученных грамматических явлений в рассматриваемых текстах. Обращается особое внимание на их перевод на русский язык. Параллельно идет работа над лексикой по теме Интернет. Работа ведется преимущественно по учебному пособию «Аннотирование и реферирование текста». При выполнении упражнений по грамматике привлекается учебник Орловская И.В.

**Ex 1. Переведите на русский язык следующие предложения, содержащие субъектный инфинитивный оборот:**

1. This region is expected to have extremely rich deposits of copper ore.
2. The special commission of the Russian Academy of Sciences is expected to conduct large-scale excavations works.
3. The delegation is reported to have visited some natural museums.
4. It seems that the deposits of minerals in this region are inexhaustible.

5. Copper wire is estimated to have a great tensile strength.
6. The new system of automatic control is likely to be used in the near future.
7. Industrial electronics is said to be a comparative newcomer to industrial plants.
8. Vacuum tubes appear to perform such functions as: rectification, amplification, detection, modulation and others.
9. The future is expected to bring a great many of new applications for semiconductors.
10. The average user of electrical devices is not likely to know anything about them because they are usually small, almost hidden, and seldom require servicing.
11. Isotopes are found to behave alike in all chemical reactions but to differ in mass.

**Ex 2. Переведите на русский язык предложения, содержащие герундий:**

1. Making this experiment took him much time and energy.
2. Perfecting some instruments the scientists learn more about sun's atmosphere.
3. Constructing simple radio-sets was followed by more complex devices.
4. Before installing the new equipment the engineers were to test its performance.
5. After having changed the design of the transmitter it can be employed in the aircraft.
6. Different methods of conveying signals were examined for this particular application.
7. The ionosphere property of bending radio waves and returning them to the ground was referred to in that text-book.
8. Scientists turned their attention to studying electrons instead of using ultraviolet light.
9. The idea of using machines for purposes of teaching is of great importance.
10. Because of its being applied in different branches of modern industry electronics is growing in importance from day to day.
11. Only by investigating the ultraviolet rays we shall be able to increase our knowledge of the stars.

**Ex 3. Переведите на русский язык следующие предложения, содержащие страдательный залог:**

1. Our country's successes in the construction of hydropower stations have been universally recognized.
2. The weight of the atom is almost entirely concentrated at its centre in the nucleus.
3. If a piece of material is struck by rays of light, electrons will leave the material.
4. The future of astronautics will be a logical continuation of what has already been achieved.
5. Two methods of reproducing sound have already been achieved.
6. Nearly all properties of matter are affected in some degree by temperature changes.
7. Automation is being introduced in building work.
8. The new block of flats was being built at the time of our holidays.
9. We were informed that many scientists were working at the problem of radioactivity.
10. Elimination of the housing shortage which is being realized at present is a problem of great importance.
11. More and more is being learned about outer space and conditions for life there.
12. Numerous new instruments are being used in many branches of science and technology.

**Ex 4. Переведите на русский язык предложения, содержащие модальные глаголы:**

1. A model of the proposed chamber may be made of the transparent plastics so that flow through the chamber can be observed or photographed.
2. Surging must be avoided when the aircraft is put into a dive.
3. An axial compressor cannot be run at too high speed.
4. We may say that a gas turbine engine comprises three main sections.
5. Changes in the shape of the chamber can really be made.

6. Blade vibration may become dangerous.
7. The thrust can be varied by the pilot.
8. Conditions must be studied to find the best fuel.
9. The method described above also enables us to obtain a better value for a friction constant.
10. The rocket is able to travel in a vacuum even better than it can through the air.
11. The speed has to be reduced.
12. The spaceship has to overcome the gravity.

Примерный план работы:

- Определите основные вопросы, рассматриваемые в тексте.
- Отметьте абзацы, в которых содержится наиболее существенная информация текста.
- Найдите ключевые слова, передающие основную мысль абзаца.
- Найдите предложения, передающие наиболее значимую информацию текста.
- Найдите предложения в каждом абзаце, за счет которых можно этот абзац сократить.
- Сформулируйте главную мысль каждого абзаца.
- Составьте план полного изложения текста.
- Составьте краткую аннотацию и реферат к тексту.

### **Water-cooled IBM supercomputer to heat buildings**

*by Manek Dubash of ZDNet UK, June 24, 2009*

IBM and the Swiss Federal Institute of Technology at Zurich plan to build a water-cooled supercomputer whose surplus heat will be reused to heat the university's buildings.

The Aquasar supercomputer will be located at the ETH Zurich facility, and it will start operations next year, the partners said in an announcement on Tuesday.

Water flows along copper pipes in a blade server used in the Aquasar supercomputer.

The supercomputer will combine two rack-mounted IBM BladeCenter servers, each containing multiple blades with a mixed population of IBM PowerPC 8i and Intel Nehalem processors. It is expected to deliver a peak performance of about 10 teraflops.

The installation will reuse heat directly for in-building heating. IBM estimates that the water-cooling scheme will reduce the system's carbon footprint by up to 85 percent and save up to 30 tons of carbon dioxide annually, compared with standard cooling approaches. The comparison calculations are based on average yearly operation of the system and on in-building heating energy being produced by fossil fuels, the company said.

The energy-consuming refrigeration units used by almost every data center consume about half of the data center's energy. Aquasar will need no such equipment. As a result, it should reduce overall energy consumption by 40 percent, according to IBM.

"Energy is arguably the number-one challenge humanity will be facing in the 21st century. We cannot afford anymore to design computer systems based on the criterion of computational speed and performance alone," Professor Poulikakos of ETH Zurich, the leader of the Aquasar project, said in a statement. "The new target must be high-performance and low-net power consumption supercomputers and data centers. This means liquid cooling."

The system is the product of an extended joint research project between ETH and IBM scientists, focused on chip-level water-cooling. It also encompasses a concept for "water-cooled data centers with direct energy re-use" proposed by scientists at IBM's Zurich Lab.

Aquasar's use of warm water rather than cold water for cooling is unique and IBM-patented, a spokesman for the company said. Water, which is about 4,000 times more efficient as a coolant than air, will enter the system at 60 degrees C. This will keep the chips in the system at operating temperatures below their maximum of 85 degrees C, according to IBM.

The high input temperature of the coolant results in an even higher-grade heat as an output, which in this case will be about 65 degrees C, the company said.

The system uses jet impingement cooling, which means that water makes direct contact with the back of the chip via micro-channels in the heat sink, according to research papers by the IBM and ETH scientists involved in the Aquasar project. "This method incurs neither the thermal resistance overhead of a base plate, nor the overhead and reliability problem of thermal interface materials, and thus is promising for removing highest-power densities," according to one paper.

Pipelines from the individual blades link to the server rack's water-pipe network, which in turn is connected to the main water transportation network. Aquasar will need about 10 liters of water for cooling, pumped at some 30 liters per minute, IBM said. The cooling system is a closed circuit: the water is heated by the chips and cooled to the required temperature as it passes through a passive heat exchanger, delivering the removed heat directly to the heating system of the university.

Aquasar will be used by the computer science department at ETH Zurich for multiscale flow simulations related to nanotechnology and fluid dynamics. Researchers plan to show that solving scientific problems efficiently can be performed in an energy-efficient manner.

#### *Vocabulary*

ETH – The Swiss Federal Institute of Technology in Zurich

Surplus heat – избыточное тепло, резерв тепловой мощности

Blade server – ячеечный сервер

Multiple – составной, многочисленный

Teraflops – триллион операций с плавающей точкой в секунду

Humanity – человечество

Encompass – выполнять, осуществлять

Jet impingement cooling – охлаждение ударной струей

Heat sink – теплоотвод

To incur – подвергаться чему-либо

Overhead – непроизводительные затраты

Rack – стойка, штатив

Heat exchanger – теплообменник

Fluid dynamics – гидрогазодинамика

Multiscale – многошкальный

#### ***I. Translate the following phrase in written form and give your comment.***

1. It is expected to deliver a peak performance of about 10 teraflops.
2. Researchers plan to show that solving scientific problems efficiently can be performed in an energy-efficient manner.

#### ***II. Answer the questions to the text.***

1. Where will the Aquasar supercomputer be located and when will it start work?
2. What will the supercomputer combine?
3. What will be the advantages of the water-cooling scheme?
4. What is the main challenge for humanity in the 21<sup>st</sup> century? What is the new target?
5. What companies are involved in the project?

6. What is the maximum operating temperature of the chips in the system?

7. How much water will Aquasar need?

8. Do you know any other examples of solving scientific problems in an energy-efficient manner?

**III. Find and translate in written form the sentences where there is the information about the principle of the system work.**

**IV. Extract the key sentences of the text.**

**V. Read the article and express the key ideas in 2-3 sentences.**

**VI. Find in the text Passive voice, Infinitive constructions, Gerund and Participle.**

**VII. Make up the abstract and reduce it to the annotation.**