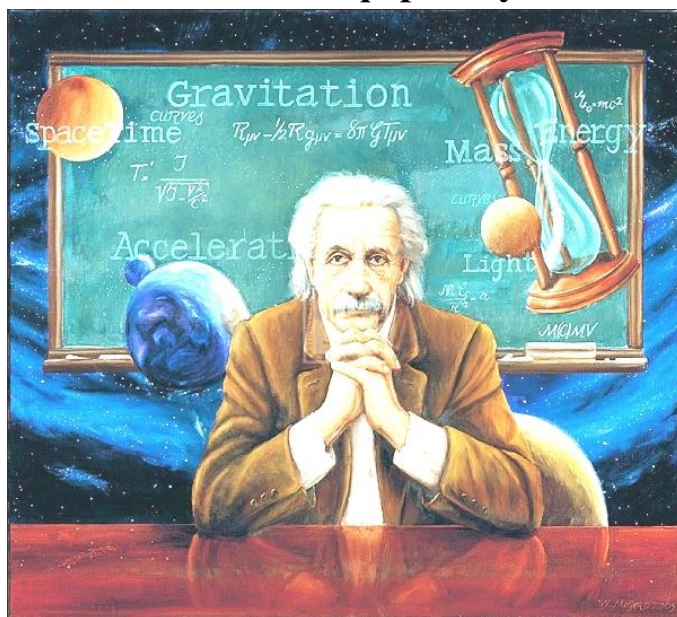


State professional educational institution
«Vorkuta polytechnical school»

ENGLISH LANGUAGE

Famous people in the sphere of science and technics

(Выдающиеся люди в сфере науки и техники)



ГРАММАТИЧЕСКИЙ МАТЕРИАЛ

PASSIVE VOICE

СТРАДАТЕЛЬНЫЙ ЗАЛОГ

Образование: to be + V₃

To write - писать

Active Voice	Passive Voice
Действие выполняет само подлежащее	Подлежащее пассивно, страдает Действие направлено на подлежащее
Present Simple	
V, Vs Write, writes She writes letters every month. Она пишет письма каждый месяц.	To be (am, is, are) V ₃ am written, is written, are written The letters are written every month. Письма пишут каждый месяц.
Past Simple	
Ved, V ₂ Wrote She wrote the letter yesterday Она написала письмо вчера	To be (was, were) V ₃ Was written, were written The letter was written yesterday. Письмо было написано вчера.
Future Simple	
Will V, shall V She will write the letter tomorrow. Она напишет письмо завтра.	Will be written, shall be written The letter will be written tomorrow. Письмо будет написано завтра.

Тренировочные упражнения

Выберите правильный вариант

- 1) The day before yesterday we (**invite**) to the party by Pete.
 - a) are invited
 - b) were invited
 - c) invited
- 2) The letter (**post**) tomorrow.
 - a) will be posted
 - b) will be post
 - c) will post
- 3) In Greece the Olimpic Games (**hold**) once in four years
 - a) were held
 - b) have been held
 - c) are held
- 4) The problem (**study**) for three years, but they haven't got any results.
 - a) have been studied
 - b) is studied
 - c) was studied
- 5) I (**bear**) in small Russian town not far from Samara.
 - a) was borne
 - b) am born
 - c) was born
- 6) Coventry (**bomb**) in the Second World War.
 - a) bombed
 - b) has been bombed
 - c) was bombed
- 7) The Lorries (**make**) in Japan last year.
 - a) were made
 - b) shall be made
 - c) has been made
- 8) The new school (**open**) next year
 - a) opens

- b) will be opened
 c) was opened
- 9) A bicycle (**buy**) for Andrew as a present. He likes it very much.
 a) was bought
 b) will be bought
 c) has been bought
- 10) It is winter, and the ground (**cover**) with snow.
 a) covers
 b) is covered
 c) was covered

THE INFINITIVE

ИНФИНИТИВ

Инфинитив – неопределённая форма глагола, формальным признаком которой является частица to.

Функции инфинитива

Функция	Перевод
1. подлежащее: To read English books is useful.	Читать английские книги полезно.
2. дополнение: I like to read English books in the original.	Я люблю читать английские книги в подлиннике.
3. часть составного сказуемого: Our aim is to master the English language	Наша цель - овладеть английским языком.

<p>4. определение: Here is the book to be read as soon as possible.</p>	<p>Вот книга, которую нужно прочитать как можно быстрее.</p>
<p>5. обстоятельство цели: He worked hard to master the English language.</p>	<p>Он усердно занимался для того, чтобы овладеть английским.</p>

Определите функцию инфинитива в предложении

1. We hope to get a good job.
2. I'll read much in summer.
3. To read much is to know much.
4. I go to the reading-hall to read books.
5. In my class I was the first to read this book.

ЛЕКСИЧЕСКИЙ МАТЕРИАЛ И ТЕКСТЫ ДЛЯ ПЕРЕВОДОВ ГРАММАТИЧЕСКИЕ УПРАЖНЕНИЯ

Вариант 1.

Прочтите текст и ответьте на следующие вопросы:

1. What laws did Newton discover?
2. Can you formulate the Law of Universal gravitation?

ISAAC NEWTON

1. Isaak Newton was born in 1642 in the family of a poor farmer. The boy began his first scientific experiments at school.

2. While studying at Cambridge University, Newton formulated the binomial theorem. In 1662 Cambridge was closed because of the plague and Newton returned to his native village. For the next two years he devoted himself to scientific experimentation.

3. Newton's great discovery was the law of decomposition of light. The scientist proved that the white light of the sun is composed of rays of light of all colours of the rainbow. He also discovered the Law of Universal Gravitation which states that "every particle of matter is attracted by every other particle of matter with a force inversely proportional to the square of their distance apart".

4. Newton applied the principle of gravitation to prove that the power which guides the moon around the earth and the planets around the sun is the

force of gravity. Another application of the law of universal gravitation was Newton's exploration of the tides.

5. Newton was highly honoured by his countrymen and in 1703 he was elected President of the Royal Society. Sir Isaak Newton died in 1727 and was buried in Westminster Abbey.

2. Переведите в письменной форме

3. Заполните пропуски соответствующей активной или пассивной формой глагола и переведите предложения на русский язык:

1. Newton (was performed, performed) many experiments with light.

2. When Cambridge (was closed, closed) in 1662, Newton returned to his native village.

3. Mass (is measured, measured) in grams or kilograms.

4. Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. My parents want me to become a chemist.

2. He is believed to be a very talented person.

3. Newton is considered to be one of the greatest English scientists.

5. Определите функции инфинитива и переведите предложения на русский язык:

1. To carry out this experiment will take you a lot of time.

2. The experiment to be carried out in our laboratory is very important.

3. He forgot to register the results of the experiment.

6. Поставьте глагол-сказуемое предложения в Past Indefinite Tense (прошедшее неопределенное время), употребляя модальные глаголы can, may, must и их эквиваленты:

1. He must work hard to finish his experiment.

2. I can devote myself to scientific work.

3. You may repeat your experiment.

7. Заполните пропуски неопределенными местоимениями some, any, no:

1. The Metric System has (some, any, no) advantages over the English System.

2. Do you remember (some, any, no) facts from Newton' s biography?

3. The young engineer had (some, any, no) experience in such work.

8. а) Прочтите и переведите текст. Выполните задания, которые следуют за текстом.

The two most common types of engines are the petrol engine and the diesel engine. Petrol engines are lighter and smaller than diesel engines. That makes them cheaper, and that is why most cars and motorbikes use petrol engines.

On the other hand, diesel engines use less fuel and last longer than petrol engines. They are also safer and less dangerous. They are widely used in large vehicles such as trucks and trains.

б) Заполните пропуски соответствующей активной или пассивной формой глагола по смыслу и переведите предложения на русский язык:

1. The engine (cooled, is cooled) by water from the radiator.
2. Most cars (use, are used) petrol engines.
3. The electricity (stored, is stored) in the battery.

в) Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. Rudolf Diesel is known to be the inventor of the diesel engine.
2. We expect them to buy a new car.
3. This motor car is considered to be safe.

г) Составьте три специальных и три общих вопроса к тексту.

д) Выпишите из текста все прилагательные в сравнительной и превосходной степени и переведите их на русский язык.

Вариант 2

1. Прочтите текст и ответьте на следующие вопросы:

1. What was the boy interested in?
2. Which of Faraday's discoveries do you know?

MICHAEL FARADAY

1. Michael Faraday, English experimental physicist, was born in 1791 in a poor family. The boy began to work as an apprentice at a bookbinder's

shop at an early age. One day a man entered the shop and found the boy studying an article on electricity. The man was surprised to see a boy so interested in such a difficult subject and gave him four tickets for the lectures at the Royal Institutions.

2. The boy went to the lectures and made notes of what he heard. At the end of the lecture he came to Sir Humphry Davy, the great English scientist, and showed him his notes. Davy was surprised. Later he made Faraday his assistant and helped him in his education.

3. Faraday had many important discoveries. Among his works are the concept of the magnetic field and the magnetic "lines of force", production of new kinds of optical glass, and research on electrolysis.

4. Faraday produced the first mechanical motion by means of a permanent magnet and an electric current. This is the principle upon which the modern electric motor is based.

5. Faraday was very modest and he loved his work more than honours. He refused to become President of the Royal Society and also refused to be knighted.

2. Переведите в письменной форме

3. Заполните пропуски соответствующей активной или пассивной формой глагола и переведите предложения на русский язык:

1. The unit of electricity "farad" (was named, named) after M. Faraday.

2. The first lightning rod (was invented, invented) by B.

Franklin, the outstanding American scientist.

3. At Cambridge, Newton (was read, read) with great interest the writings of Galileo.

4. Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. Faraday is believed to be a great English physicist.
2. We consider Tsiolkovsky to be the father of astronautics.
3. Popov is known to be the inventor of radio in Russia.

5. Определите функции инфинитива и переведите предложения на русский язык:

1. In 1810 Faraday began to attend lectures on natural philosophy.
2. To study the nature of light and colour Newton carried out many experiments with a prism.
3. The lecture to be delivered by a well-known scientist is devoted to the problems of ecology.

6. Используйте глагол-сказуемое в будущем времени, используя эквиваленты модальных глаголов:

1. He must check the temperature three times a day.
2. In this figure you can see a diagram of temperature changes.
3. He may use a barometer to measure the atmospheric pressure.

7. Заполните пропуски неопределенными местоимениями some, any, no:

1. The book contained (some, any, no) diagrams.

2. Are there (some, any, no) diagrams in the book?
3. We have (some, any, no) information on this problem.

8. а) Прочтите и переведите текст. Выполните задания, которые следуют за ним.

The main part of the engine is called the block. It consists of the cylinders and the valves. Air and petrol go into the block by means of the carburetor. The petrol reaches the carburetor from the petrol tank through the action of the petrol pump.

There are two main types of petrol engines: 4-stroke and 2-stroke. All cars and larger motor-cycles are known to use 4-stroke engines. But most smaller motorbikes use 2-stroke engines. They are smaller and cheaper than 4-stroke engines.

б) Определите функции инфинитива и переведите предложения на русский язык:

1. It took me an hour to find a fault in the car.
2. The engine to be used in this truck is of a new design.
3. It's dangerous to drive in such bad weather.

в) Употребите глагол-сказуемое в будущем времени, используя эквиваленты модальных глаголов:

1. He must check a fuel level in his car.
2. You can easily do this work.
3. You may find all the necessary material in the library.

г) Напишите пять вопросов к тексту, начинающихся с What? How? How many? Where? Why?

Вариант 3

1. Прочтите текст и ответьте на следующие вопросы:

1. How old was Lomonosov when he left his native village?
2. When was the first Russian University founded?

M. V. LOMONOSOV

1. M. V. Lomonosov was born in 1711 in the village of Denisovka near Arkhangelsk in the family of a fisherman. At the age of 17 he left his native village and made his way to Moscow. In Moscow he entered the Slavonic-Greek-Latin Academy. Lomonosov didn't finish his last grade, as he was sent with eleven other pupils to St. Petersburg to study at the Academy of Sciences.

2. Less than a year after he came to Petersburg Lomonosov was sent abroad to study metallurgy and mining. In 1741 Lomonosov returned to Russia and began to teach chemistry and physics at the Academy.

3. Lomonosov established the fundamental law of chemical change of substance which is called the Law of Conservation of Mass.

4. Lomonosov founded a new science that we call today physical chemistry. He also studied electrical phenomena in atmosphere of the Earth, the nature of light, and designed an improved telescope. Lomonosov considered nature to be in a state of constant change and development. Coal, oil, etc. were all formed as a result of evolution.

5. Lomonosov was a great scientist. His works in poetry had a great

influence on Russian literature. Owing to his efforts, the first Russian University was founded in Moscow in 1755. This university bearing his name became the centre of knowledge and science in Russia.

2. Переведите в письменной форме

3. Заполните пропуски соответствующей активной или пассивной формой глагола и переведите предложения на русский язык:

1. In 1745 Lomonosov (was appointed, appointed) a professor at the Academy of Sciences.

2. The first electric lamp (was invented, invented) in 1873 by A. N. Lodygin.

3. In 1911 Marie Curie (was received, received) the Nobel Prize in Chemistry.

4. Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. Lomonosov considered chemistry to be his "main profession".

2. The air is known to be a mixture of gases.

3. Lomonosov is considered to be a great Russian scientist.

5. Определите функции инфинитива и переведите предложения на русский язык:

1. Lomonosov began to work at an early age.

2. Edison founded an electric company to supply electricity to New

York and other places

3. The experiment to be made by this scientist will give us important information.

6. Употребите глагол-сказуемое в будущем времени, используя эквиваленты модальных глаголов:

1. They must solve a number of scientific problems.

2. She can do this work in time.

3. You may use this method in your research.

7. Заполните пропуски неопределенными местоимениями some, any, no:

1. There were (some, any, no) other higher schools at that time in Russia.

2. Can you give me (some, any, no) magazines?

3. They carried out (some, any, no) experiments yesterday.

8. а) Прочтите и переведите текст. Выполните задания, которые следуют за ним.

Electricity is made in many ways. One way is a battery, as used in a transistor radio. A simple battery has a positive terminal, connected to a carbon rod. The carbon rod is placed in a chemical paste inside a zinc container.

Any material which will allow electricity to flow through it is called a conductor. Most metals are good conductors.

A simple battery converts, or changes, chemical energy into electrical

energy. Other forms of energy, such as heat and light, may be converted into electricity. The most common way of making electricity is by the conversion of mechanical energy.

б) Употребите нужное по смыслу местоимение:

1. If the petrol tank is empty, pour (some, any, no) petrol into it.
2. There was (some, any, no) water in the radiator, so we had to refill it.
3. This mechanic can repair (some, any, no) type of engine.

в) Выпишите из текста предложения, в которых глагол-сказуемое употребляется в пассиве.

г) Ответьте на следующие вопросы:

1. What is a conductor?
2. Are metals good conductors?
3. What forms of energy can be converted into electricity?

Вариант 4

1. Прочтите текст и ответьте на следующие вопросы:

1. What did Mendeleev discover?
2. What fields of science do his works embrace?

DMITRY MENDELEEV

1. D. I. Mendeleev was born in 1834 at Tobolsk in the family of the director of the town gymnasium. He received his secondary education at Tobolsk and then entered the Petersburg Pedagogical Institute. After

graduation he worked as a teacher for two years.

2. In 1859 he presented his thesis, received his master's degree and went abroad on a two-year scientific commission. Upon his return to Russia he was elected professor of the Petersburg University, where he carried on his scientific and pedagogical activity for 23 years.

3. In 1906 he issued a book under the title Contribution to the Knowledge of Russia which contained thoughts of the further development of Russian industry and economy. The greatest result of Mendeleev's creative effort was the discovery of the Periodic Table of Elements.

4. One of Mendeleev's prominent works is his book Principles of Chemistry in which inorganic chemistry was for the first time explained from the standpoint of the Periodic Law.

5. A great scientist, Mendeleev devoted his life and energies to the progress of his country. His works embrace various fields of science - chemistry, physics, physical chemistry, geophysics.

2. Переведите в письменной форме

3. Заполните пропуски соответствующей активной или пассивной формой глагола и переведите предложения на русский язык:

1. At first, the Periodic Law (was received, received) very coldly by other scientists.

2. In 1893 Mendeleev (was appointed, appointed) Director of the Bureau of Weights and Measures.

3. B. Franklin (was founded, founded) the first public library

and the University of Pennsylvania.

4. Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. The year 1895 is considered to be the date of the invention of the radio.
2. We consider Mendeleev to be a great Russian scientist.
3. Manchester is known to be the centre of cotton industry.

5. Определите функции инфинитива и переведите предложения на русский язык:

1. At that time Newton began to think about construction of an astronomical telescope.
2. They made some experiments to prove their theory.
3. The procedure to be followed is described below.

6. Употребите глагол-сказуемое в будущем времени, используя эквиваленты модальных глаголов:

1. He must illustrate this law by several experiments.
2. They may carry out these experiments at the laboratory.
3. She can study chemistry at the university.

7. Заполните пропуски неопределенными местоимениями some, any, no:

1. You must dissolve (some, any, no) salt in water.
2. Tsiolkovsky had (some, any, no) money to finance his experiments.

3. Did Tsiolkovsky make (some, any, no) experiments with the centrifuge?

8. а) Прочтите и переведите текст. Выполните задания, которые следуют за ним.

A dynamo is a machine which makes electricity when it is made to rotate at a high speed. It is often driven by a turbine, which may be made to rotate by steam pressure. This machinery is then called a turbo-generator. A building which houses a turbo-generator is called a power or generating station.

Most of the world's electricity for domestic and industrial use is made or generated in power stations.

б) Заполните пропуски соответствующей по смыслу активной или пассивной формой глагола и переведите предложения на русский язык:

1. The smallest piece of any substance (called, is called) an atom.
2. A molecule (made, is made) up of small particles called atoms.
3. We (use, are used) a lot of electrical devices at home.

в) Переведите предложения на русский язык, обращая внимание на инфинитивные обороты:

1. The atom is said to be neutral when the two charges are equal.
2. We believe him to be a good electrician.
3. Electric current is believed to be the flow of electrons.

г) Ответьте на следующие вопросы:

1. What is a dynamo?
2. What is a dynamo driven by?
3. What is a power station?
4. Where is most of the world's electricity generated?

VOCABULARY

1. the binomial theorem - бином Ньютона
2. plague - чума
3. matter = substance - вещество
4. inversely proportional - обратно пропорциональный
5. the force of gravity - сила притяжения gravitation - притяжение
6. an apprentice - ученик, подмастерье
7. bookbinder's shop - переплетная мастерская
8. the Royal Society - Королевское научное общество
9. lightning rod - громоотвод
10. diesel engine - дизельный двигатель
11. petrol engine – бензиновый двигатель
12. petrol tank - бензобак
13. petrol pump - бензиновый насос
14. 2-stroke (4-stroke) engine - двухтактный (четырёхтактный) двигатель
15. vehicle - экипаж, повозка, автомобиль
16. block - узел, блок
17. valve - клапан
18. carburettor - карбюратор
19. positive terminal - положительная клемма
20. carbon rod - угольный стержень
21. chemical paste - химическая (активная) масса
22. steam pressure - давление пара

23. charge - заряд

24. to increase the voltage - увеличить напряжение

25. to decrease the voltage - уменьшить напряжение

ВОПРОСЫ ДЛЯ САМОКОНТРОЛЯ

1. Как образуется Passive Voice?
2. Какая форма глагола в русском языке соответствует инфинитиву в английском?
3. Какие функции в предложении выполняет инфинитив?
4. Как переводится на русский язык инфинитив в функции обстоятельства?
5. Как переводится на русский язык конструкция Complex Subject?
6. Напишите предложение, содержащее конструкцию Complex Subject.
7. Каким предложением переводится конструкция Complex Object на русский язык?
8. Назовите основные модальные глаголы в английском языке.
9. Какую форму имеет глагол can в Past Indefinite Tense?
10. Назовите эквивалент глагола must.
11. В каких предложениях употребляются местоимения some и any?
12. Как переводится местоимение any в утвердительных предложениях?

