#### ФЕДЕРАЛЬНОЕ АГЕНТСТВО ЖЕЛЕЗНОДОРОЖНОГО ТРАНСПОРТА

Улан-Удэнский колледж железнодорожного транспорта филиал Федерального государственного бюджетного образовательного учреждения высшего образования «Иркутский государственный университет путей сообщения» (УУКЖТ ИрГУПС)



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## УЧЕБНОЕ ПОСОБИЕ

для практических занятий

## дисциплины ОГСЭ.03. ИНОСТРАННЫЙ ЯЗЫК (АНГЛИЙСКИЙ)

для специальности

23.02.01 Организация перевозок и управление на транспорте (по видам)

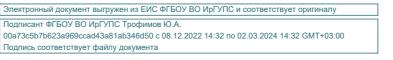
Часть 1

Базовая подготовка среднего профессионального образования

Очная форма обучения на базе

основного общего образования / среднего общего образования Заочная форма обучения на базе среднего общего образования

## УЛАН-УДЭ 2022





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Барская О.В, Сороко Е.В

Б ОГСЭ.03. Иностранный язык (английский) [Текст]: Учебное пособие для практических занятий для обучающихся очной и заочной формы обучения специальности 23.02.01 Организация перевозок и управление на транспорте (по видам) / Барская О.В, Сороко Е.В; Улан-Удэнский колледж железнодорожного транспорта ИрГУПС. – Улан-Удэ: Сектор информационного обеспечения учебного процесса УУКЖТ ИрГУПС, 2022. – 48 с.

Учебное пособие обучающихся профессиональных предназначено для образовательных организаций транспорта. Материал пособия железнодорожного тексты железнодорожной тематики. Упражнения содержит лексического И грамматического характера способствуют формированию у обучающихся общих и профессиональных компетенций, соответствующих специальностям.

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#### Пояснительная записка

Учебное пособие для практических занятий разработано в соответствии с рабочей учебной программой дисциплины ОГСЭ.03. Иностранный язык (английский) для специальности 27.02.03 Автоматика и телемеханика на транспорте (железнодорожном транспорте) и требованиями к результатам освоения программы подготовки специалистов среднего звена ФГОС СПО по данной специальности.

Цель учебного пособия: способствовать развитию навыков чтения специальных текстов на английском языке, а также дальнейшему развитию навыков профессиональной коммуникации.

Пособие состоит из двух частей: первая часть предназначена для обучающихся 2/1 курса очной формы обучения, 1 курса заочной формой обучения, вторая часть – для обучающихся 3-4/2-3 курсов очной формы обучения, 2-4 курсов заочной формы обучения.

Учебное пособие состоит разделов (Units), которые содержат текстовой материал, заимствованный из оригинальных источников, адаптированный под уровень подготовки обучающихся. Тексты снабжены фотографиями и таблицами. К пособию прилагается диск с аудиозаписями.

Тексты сопровождаются методической разработкой упражнений фонетического, лексического и грамматического характера, что позволяет совершенствовать знания, умения и навыки владения английским языком.

Лексические упражнения направлены на изучение и закрепление активной лексики и терминологии, развитие языковой догадки и на совершенствование работы со словарём.

Грамматические упражнения рассчитаны на повторение и дальнейшее углубление знаний.

Речевые упражнения носят творческий характер, в них присутствует мыслительная задача, стимулирующая развитие навыков монологической речи. В зависимости от уровня подготовки группы преподаватель может усложнять или облегчать требования к выполнению заданий.

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Тексты многофункциональны и нацелены на решение нескольких задач одновременно. Их можно использовать для изучающего чтения, развития навыков перевода, работы со словарём, а также могут служить базой для развития навыков говорения по основным темам.

Изучение профессиональных текстов и выполнение практических заданий способствует формированию общих компетенций в соответствии с ФГОС подготовки специалистов среднего звена:

ОК 1. Понимать сущность и социальную значимость своей будущей профессии, проявлять к ней устойчивый интерес.

ОК 2. Организовывать собственную деятельность, выбирать типовые методы и способы выполнения профессиональных задач, оценивать их эффективность и качество.

ОК 3. Принимать решение в стандартных и нестандартных ситуациях и нести за них ответственность.

ОК 4. Осуществлять поиск и использование информации, необходимой для эффективного выполнения профессиональных задач, профессионального и личностного развития.

ОК 5. Использовать информационно - коммуникационные технологии в профессиональной деятельности.

ОК 6. Работать в коллективе и команде, эффективно общаться с коллегами, руководством, потребителями.

ОК 7. Брать на себя ответственность за работу членов команды (подчинённых), за результат выполнения заданий.

ОК 8. Самостоятельно определять задачи профессионального и личностного развития, заниматься самообразованием, осознанно планировать повышение квалификации.

ОК 9. Ориентироваться в условиях частой смены технологий в профессиональной деятельности.

ПК 1.1. Выполнять операции по осуществлению перевозочного процесса с применением современных информационных технологий управления перевозками.

ПК 1.3. Оформлять документы, регламентирующие организацию перевозочного процесса

ПК 3.1. Организовывать работу персонала по обработке перевозочных документов и осуществлению расчетов за услуги, предоставляемые транспортными организациями.

ПК 3.3. Применять в профессиональной деятельности основные положения, регулирующие взаимоотношения пользователей транспорта и перевозчика

Unit 1. English speaking countries

1.1 The United Kingdom of Great Britain and Northern Ireland



# 1. Read and translate the words. Write down their transcription.

To consist of, to be composed of, to be separated from, to be washed by, to be rich in, to abound in , to be situated on, to be famous for, above/below zero, strait, surface, to border, the highland area, deposit.

## 2. Read and translate the text.

## Great Britain

When we speak about the United Kingdom of Great Britain and Northern Ireland we actually speak about 4 countries united into one state: England, Scotland, Wales and Northern Ireland. Each of these countries has its own language, its capital, its government. The capital of Scotland is Edinburgh, the capital of Wales is Cardiff, the capital of Northern Ireland is Belfast and the capital of England is London. At the same time London is the capital of the United Kingdom with an urban population of 10,310,000. The United Kingdom is the 22nd-most populous country, with an estimated 64.5 million inhabitants.

The United Kingdom of Great Britain is situated on the British Isles lying to the north-west of the continent of Europe. The British Isles consist of 2 main islands, Great Britain and Ireland, and more than 5000 smaller ones. The total area of Great Britain is 244,000 square km. In the west they are washed by the Atlantic Ocean, in the east by the North Sea. Great Britain is separated from Ireland by the Irish Sea and from the continent by the English Channel and the Straight of Dover.

The surface of England and Ireland is rather flat, while the highland area comprises Scotland and most of Wales. There are no high mountains in Great Britain. The highest mountain in Scotland is Ben Nevis and the highest mountain in Wales is Snowdon. Ben Nevis is considered to be the highest mountain, but it is only 1343 meters high. The country has no active volcanoes, and an earth tremor which does no more than rattle teacups in a few houses which is reported in the national news media. The insular geographical position of Great Britain promoted the development of shipbuilding, different traiding contacts with other countries.

There are many rivers in Great Britain but they are not long. The chief rivers are the Thames, the Severn and the Clyde.

The United Kingdom is not rich in mineral resources. It has deposits of coal and iron ore, oil and gas, lead, zinc, chalk, shale and others.

Great Britain has a temperate, mild climate, which is determined the Eastern Atlantic and the warm waters of Gulf Stream. Winters are not as severe as they are on the Continent but summers are not as warm as they usually are on the other side of the Channel. Rains all year round and thick fogs in autumn or in winter are the most typical features of the climate of Great Britain.

Great Britain is a highly developed industrial country. It is famous for its industry, heavy and light engineering. The country is the fourth largest exporter of manufactured goods.

The United Kingdom is a capitalist state with mixed economy where production is controlled by both the Government and the private produces. The UK is considered to have a high-income economy. It is a constitutional monarchy with a parliamentary system of governance. Queen Elizabeth II is considered to be the head of the state. She is a monarch of fifteen other independent Commonwealth countries. The monarch has "the right to be consulted, the right to encourage, and the right to warn. But it is more a tradition than a real fact. In reality the legislative power belongs to the Parliament which consists of the House of Lords and the House of Commons. The seats are hereditary in the House of Lords, but the members of the House of Commons are elected every 5 years. There are three main political parties in Great Britain - the Labour Party, the Conservative Party, and the Liberal Party.

Britain's flag, approved in 1801, is a combination of the banners of England (St. George's flag - a red cross on a white field), Scotland (St.Andrew's flag - a white cross on a blue field) and Ireland (St.Patric's flag - a red cross on a white field). The flag is known as Union Jack. One explanation is that it gets its name from the «jack staff » of naval vessels (a small flagpole at the front of Royal Navy vessels) from which the original Union Flag was flown.

## 3. Answer the questions using the text:

- 1. Where is the UK situated?
- 2. What is the official name of this country?
- 3. What countries is the UK made of?
- 4. What are their capitals?
- 5. What is the total area of Great Britain?
- 6. What landscape has Great Britain?
- 7. What are the highest mountains on the British Isles?
- 8. Why is the climate of the British Isles mild?
- 9. What are the natural resources?
- 10. What does the constitutional monarchy mean?
- 11. How many Houses does the British Parliament consist of?
- 12. What is the flag of the United Kingdom made up of?
- 13. How is the flag called? Why?
- 14. When was the flag approved?

## 4. Make up the plan of the text and retell it.

## 1.1 Forming a government

## 1. Listen to the text and be ready to answer the questions.

- 1. Which party forms the government?
- 2. Who becomes Prime Minister?
- 3. Why are Prime Ministers powerful?

- 4. Where does the Cabinet meet?
- 5. What did Margaret Thatcher try to do?
- 6. Why was Margaret Thatcher forced to resign?
- 7. Whose questions must Cabinet ministers answer?
- 2. Read the text and translate it.

## **THE CABINET**

The party which wins the most seats in the General Election forms the government in Britain. The leader of the winning party becomes Prime Minister. As leaders of their political parties and leaders of the country, Prime Ministers are powerful because they have the majority support in Parliament and they can choose their own ministers and government. The PM chooses a committee of ministers called the Cabinet. This is made up of a selection of senior MPs from the House of Commons and some members of the House of Lords. Each member of the Cabinet is a minister responsible for a government department: for example, the Secretary of State for Education and Science is responsible for all the schools, universities and teachers in Britain. The Cabinet of ministers runs the country. The

Cabinet meets at the Prime Minister's house — 10 Downing Street. The cabinet works as a team and all ministers must accept the decisions of the «group». The team of ministers must always agree in public because they are collectively responsible for the decisions they make. If a minister cannot agree with all the others, he usually resigns from the cabinet. Cabinet meetings are held in private and the details must remain secret for at least 30 years. Margaret Thatcher tried to change this style of the Cabinet and was forced to resign when the other ministers could not agree with her. Cabinet ministers cannot, however, do as they please! They are responsible to Parliament and must answer questions from backbenchers from the House of Commons. Even the Prime Minister must answer questions every Tuesday and Thursday in the Commons — this is called Prime Minister's Question Time. Everyone wants to know what has been decided behind the closed doors of the Cabinet Room.

backbencher — рядовой член парламента The PM – The Prime Minister MP- member of Parliament

## 1.2 The United States of America

1. Read and learn new words.

- 1. powerful мощный
- 2. western западный

3. highland regions — возвышенность

4. lowland regions — низменность

5. prairie — прерии

6. to seek (sought, sought) refuge — искать убежище

7. persecution — преследование

9. political and religious beliefs — политические и религиозные убеждения

10. rich oil fields — богатые месторождения нефти

11. It would be no exaggeration to say — не будет преувеличением сказать,

что

12. textile — текстильная промышленность

13.network of roads — сеть дорог

14. to contest presidency — оспаривать, претендовать на пост президента

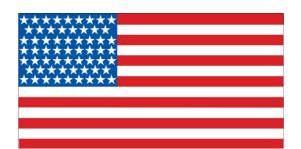
15.the majority of seats in the Congress — большинство мест в Конгрессе

16.the highest legislative body — высший законодательный орган

17.chamber — палата

## 2. Listen to the text and answer the questions below.

## **3.** Read and translate the text.



The USA is the most powerful and highly developed country of the world. It is situated in the central part of the North American continent. Its western coast is washed by the Pacific Ocean and its eastern coast is washed by the Atlantic Ocean and the Gulf of Mexico.

The USA is separated from Canada in the north by the 49th parallel and the Great Lakes and from Mexico in the south by a line following the Rio Grande River and continuing across the highlands to the Pacific Ocean.

The total area of the USA is over 9 million square kilometers.

The continental part of the USA consists of the highland regions and two lowland regions. The highland regions are the Appalachian Mountains in the east and the Cordillera in the west.

Between the Cordillera and the Appalachian Mountains are the central lowlands which are called the prairie and the eastern lowlands called the Mississippi valley.

The principal rivers of the USA are the Mississippi, the longest river in the world (7,330 km) and the Hudson River.

The climate of the USA differs greatly from one part of the country to another. The coldest climate is in the northern part, where there is heavy snow in winter and the temperature may go down to 40 degrees below zero. The south has a subtropical climate, with temperature as high as 49 degrees in summer.

The population of the United States of America is about 280 million people, who are called Americans. Most of the people live in towns and the population of the countryside is becoming smaller and smaller.

For many decades the USA has been the place where lots of people sought refuge from persecution for political or religious beliefs. That's why in America there are representatives of practically all racial and national groups. There are about 25 million Negroes in the country and a little over half a million Indians.

The capital of the USA is Washington. It is situated in the District of Columbia. Washington is a beautiful administrative city with practically no industry.

The USA is a highly developed industrial state. Its agriculture is also highly mechanized.

There are coal-mines in the Cordillera Mountains, in the Kansas City region. Iron is mined near the Great Lakes. The USA has rich oil-fields in California, Texas and some other regions. It occupies one of the first places among the countries of the world for production of coal, iron and oil.

The USA has a highly developed motor-car industry. It would be no exaggeration to say that cars have become the symbol of American way of life. The vehicles produced at such companies as Ford and the General Motors are known world-wide. The motor-car industry is concentrated in and around Detroit. Ship-building is developed along the Atlantic coast and in San Francisco. The textile industry is to be found in the north-east and in the south of the country.

The USA has a highly developed railway system. It also has the best network of roads in the world. They are called highways.

The USA is a federal country of 50 states and the District of Columbia. The political life of the country has always been dominated by the two major parties: the Democratic Party and the Republican Party. At an election time they contest presidency and the majority of seats in the Congress. The Congress is the highest legislative body of the country. It consists of two chambers — the House of Representatives and the Senate.

The President, elected by the whole nation for four years, is a head of the state and the Government.

- 1. What kind of state is the USA?
- 2. Where is it situated?
- 3. What is the USA washed by in the east and in the west?
- 4. What is the USA separated from Canada by?
- 5. What is the total area of the country?
- 6. What are the principal rivers of the USA?
- 7. What is the population of the country?
- 8. Where do most people live?

9. What did many people seek in the USA?

10. Why are there representatives of all racial and national groups in America?

- 11. Where is the capital of the country situated?
- 12. Is the agriculture in America highly mechanized?
- 13. What raw materials is America rich in?
- 14. What has become the symbol of American way of life?
- 15. Where is the motor-car industry situated?
- 16. Where is the textile industry to be found?
- 17. Has the USA a highly developed railway system?
- 18. How many states are there in the USA?
- 19. By what party has the political life in America been dominated?
- 20. What do the two parties contest at an election time?
- 21. What is the highest legislative body of the country?

## 4. Make up the plan and retell the text.





## 2.1 Traveling ... what for?

1. Write down and translate the words and phrases to the theme "Traveling" from the text bellow.

## 2. Read and translate the text.

Why do people travel today? Many people travel for pleasure. They travel to other cities and regions to visit their relatives and friends and see interesting places or to visit some famous museums and historical monuments. Many people go abroad to spend their holidays there. Most travelers carry a camera with them and take pictures of everything that interests them. Some years later they will be remained by the photos of the happy time they have had. Nowadays people travel not only for pleasure but also on business. You have to go to other countries to take part in different negotiations, to sign contact, to participate in different exhibitions, in order to push the goods produced by your firm or company. Traveling on business helps you to get more information about achievements of other companies, which will help you to make your own business more successful.

For some people traveling is their job, for example, for drivers, conductors, pilots, sailors, stewardesses. These are very interesting and useful professions which closely connect with traveling. There are also travel agents, guides, interpreters. They help people to make their holidays more comfortable, safe and unforgettable.

In the conclusion, I'd like to say, if we are fond of traveling we see and learn all sorts of things we can never see or learn at home. Though we can read and see about them in books, magazines, Internet. The best way to study geography is to travel and the best way to get to know and understand the people is to meet them in their own.

## 4. There are some different views on travelling. What is more: pros or cons?

Destroy ancient cultures and traditional ways of life; discover new places; help to become more educated person; improve knowledge of foreign language; miss your friends; wait at airports and railway stations; sometimes any tourist have no respect for countries, cultures, customs and people they visit; help to relax; to broaden your mind; meet interesting people; have to think about accommodation and food; can eat different delicious and unusual dishes from other cultures; see world wonders; beaches are always overcrowded; to know history, geography, art; many places have disappeared.

#### 5. Answer the following questions:

- a) Do you like to travel?
- b) Why do most travelers carry a camera with them?

c) Why do people travel?

d) What kinds of traveling do you know?

e) What professions are closely connected with traveling?



## 2.2. Means of traveling

## 1 .Read and translate the text. Give the title of each paragraph.

2. Write down and give Russian equivalents for the underlined words and phrases.

1) People began to travel ages ago. The main forms of transport were walking or riding a horse, donkey, camel and elephant, depending on where you

lived. The very first travelers were explorers who went on trips <u>to find wealth</u>, fame or something else. Their journeys were very dangerous but still people <u>keep on</u> <u>going</u> to the unknown lands.



2) There are many means of traveling nowadays. We can travel by train, by plane, by sea or by car. Many people like traveling on foot. Each of these kinds of traveling has its <u>advantages and disadvantages</u> and everybody chooses the way of traveling which seems the most comfortable, safe and interesting for him.

3) Those, who prefer speed and comfort, travel by plane. But there are some disadvantages in this kind of traveling. Some people can get airsick. The flights can sometimes be delayed due to the weather. Besides, the tickets are rather expensive.

4) Traveling by train is not so fast as traveling by plane, but it gives you the opportunity to watch beautiful sights from the windows of the carriages, to read your favorite book or just to rest.

5) Many people like to travel by sea. It is a very comfortable kind of traveling. But some people can <u>get seasick</u> during the voyage especially when <u>the</u>

sea is rough. Besides, some can't stand seeing nothing from the portholes but water.

6) Traveling by car is popular nowadays too. Some people say, there is nothing better than traveling by car. You can drive as slowly or as fast as you wish. You don't have to carry heavy things. You can stop at any place and enjoy the picturesque views.

But sometimes the roads are not good enough and it is not pleasant to ride on them. Besides, it is rather tiring to drive a car for a long time if you don't have anyone to relieve you of the wheel.

7) Many people choose to travel by bicycle. The wind is blowing in their faces. They are <u>rotating pedals</u>. In impassable places they put the bicycle on a shoulder and <u>overcome obstacles</u> on foot .Traveling by bicycle it is a minimum of luggage but legs get tired very much.

8) Many people like traveling on foot. They <u>go on hikes</u>. Though you can't travel far on foot, and it's the slowest kind of traveling, it is very interesting and useful. You enjoy absolute freedom. You are active all the time and you are <u>close</u> to <u>Nature</u>.

## 3. Guess the means of transport.

a) It has got two wheels. It has not got any engine. It can carry one or two persons.

b) It can sail. But it is a very slow kind of transport.

c) A railroad vehicle, which carries people from one place to another.

d) It has got four wheels. It can carry four or five persons.

e) It has got wings and can fly. It is very fast and comfortable.

## 4. What advantages and disadvantages of each means of traveling do you know? Fill in the table.

Means of traveling	Advantages	Disadvantages

## Unit 3. Shopping

## 3.1 Recreational shoppers

#### 1. Learn new words

- 1) to own обладать
- 2) ordinary обычный
- 3) to go away заканчиваться, прекращаться



4) contemporary consumer society – современное общество потребителей.

#### 2. Read the article.

#### Addicted to the Mall.

What do you do for recreation? Do you swim, dance, and play cards, garden, or read? Many people today prefer to spend their free time shopping. These people are called recreational shoppers. Recreational



shoppers do not always buy something. They really enjoy the shopping experience. Of course, many people like going to indoor malls. However, for recreational shoppers, the mall is more than stores. For them, the mall represents happiness and fulfillment. For these people, a visit to the mall is an adventure. In fact, for many recreational shoppers the art of looking for and buying something is more fun than owning it. Recently, a group of psychologists studied recreational shopping. First, they used tests to identify recreational shoppers. Then they compared recreational shoppers with ordinary shoppers. The psychologists discovered that the two groups were different. Recreational shoppers were usually younger, less self-confident, and more often female. In addition, they were more interested in material things and had less self-control. The recreational shoppers also went shopping when they felt worried, angry, or depressed. Ordinary shoppers didn't. Most of the recreational shoppers said buying something helped them feel better-it made them happy. Their negative feelings went away. Many recreational shoppers also did something unusual while they were shopping. They pretended that they were

different people with different lives. Of course, shopping is an important part of our contemporary consumer society. We spend a lot of time in malls. In a recent study, people spent most of their time at home, at work, and in school. Shopping malls ranked fourth. However, in the future, will we think of recreational shopping as an addiction like smoking or drinking?

## 2. Read the statements and write true (T) or false (F).

- 1. All people who shop are recreational shoppers.
- 2. Recreational shoppers go shopping for fun.
- 3. Recreational shoppers love to own things.
- 4. Most shoppers dislike shopping.
- 5. Psychologists compared ordinary shoppers and recreational shoppers.
- 6. Recreational shoppers go shopping when they are sad.
- 7. Most recreational shoppers are men.
- 8. People spend more time in shopping malls than they do at work.

## 3. Find the words which describe recreational shoppers.

## 4. What is the author's purpose in the article?

- To teach readers how to do something
- To inform readers about something.
- To describe something to readers.

## 5. Answer the question.

1. Will we think of recreational shopping as an addiction like smoking or drinking?

2. Do you have an addiction to the malls?

#### 3.2 Shopping

#### 1. Read and translate the following words and word phrases:

Department store, grocery, butchery, greengrocery, to be composed of, a customer, a counter, to purchase, to vary, a check-out-counter, to weigh, to pack, to call round, a change, a self-service shop, to look through catalogues.

#### 2. Read and translate the text and be ready to work with it:

We cannot imagine our life without shopping. Shopping is a part of our daily life. And we have to deal with it whether we like it or not.

When we want to buy something we go to a shop or a market. There are many kinds of shops in every town or city. We have a food supermarket, a department store, men's and women's clothing stores, grocery, a bakery and butchery.

I like to do my shopping at big supermarkets or stores. It is very convenient to buy various goods under one roof. A department store, for example, true to its name, is composed of many departments: ready-made clothes, fabrics, shoes, sports goods, toys, electric appliances, cosmetics, linen, cameras and many others. You can buy everything you want there.

There are also escalators in big stores which take customers to different floors. The things for sale are on the counters so that they can be easily seen. In the women's clothing department you can find dresses, costumes, blouses, coats, skirts, beautiful underwear and many other things. In the men's clothing department you can choose suits, trousers, overcoats, ties and so on. In the perfumery they sell face creams, lipsticks, powder, lotions and shampoos.

In a food supermarket we can purchase many different things at once: sausages, sugar, macaroni, flour, cereals and tea. At the butcher's there is a wide choice of meat and poultry. At the bakery you buy brown and white bread, rolls and biscuits. Another shop we frequently go to is the greengrocery which is stocked with cabbage, potatoes, onions, cucumbers, carrots, beetroots, green peas

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and what not. Everything is sold here ready – weighed and packed. If you call round at a dairy you can buy milk, cream, cheese, butter and many other products.

The methods of shopping may vary. It may be a self-service shop where the customer goes from counter to counter selecting and putting into a basket what he wishes to buy. Then he takes the basket to the check-out –counter, where the prices of the purchases are read by the computer. If it is not a self-service shop, most small shops are of this kind, the shop assistant helps you to find what you want. You pay money to the cashier, keep back your change, take your products and go home.

But there is a very good service called On-line Market. It really helps you to save your time and get goods of high quality. You have to look through catalogues of any Internet shop, choose the things you want to buy, order them and wait until they get them to your home.

## **3.** Answer the questions to the text:

- a) What kinds of shops are there in your town?
- b) What can you buy in a food supermarket?
- c) What goods are sold in a greengrocery?
- d) Does a shop assistant help you to find what you want to buy?
- e) Why is On-line Market popular among people?
- f) What is your favourite shop and why?

4. Make up a short story about your favourite store and your last visit to the shop.



## Unit 4. Science 4.1 Science

1. Write down, read and translate the words and phrases in bold type from the text.



2. Read and translate the text about science and be ready to work with it:

Science is important to most people living in the modern world for a number of reasons. In particular, science is important **to world peace and understanding**, to the understanding of technology, and to our understanding of the world.

Science is important to world peace in many ways. On one hand, scientists have helped to develop many of the **modern tools of war**. On the other hand, they have also helped **to keep the peace** through research which has improved life for people. Scientists have helped us understand the problem of **supplying the world with energy.** They have begun to develop a number of solutions to the energy problem – for example, using energy from the sun and from the atom. Scientists have also analyzed **the world's resources.** We can begin **to share the resources** with the **knowledge provided to us by science**. Science studies **the Universe** and how to use its possibilities **for the benefit of people**.

Science is also important to everyone who is affected by modern technology. Many of the things that make our life easier and better are the results of advances in technology and, if the present patterns continue, technology will affect us even more in the future than it does now. In some cases, such as technology of taking salt out of ocean water, technology may be essential for our lives on the Earth.

The study of science also **provides people with an understanding** of natural world. Scientists are learning **to predict earthquakes**, are continuing to study many other natural events such as storms. Scientists are also studying various aspects of human biology and the **origin** and developments of the **human**  **race.** The study of the natural world may help improve life for many people all over the world.

A basic knowledge of science is essential for everyone. It helps people find their way in the changing world.

## 3. Translate the following sentences into English:

а) Наука помогла разработать современное оружие.

b) Наука находит все новые решения энергетической проблемы.

с) Наука помогла людям научиться использовать энергию солнца и атома.

d) Наука помогла научиться совместному использованию ресурсов.

е) Учёные предсказывают землетрясения.

f) Наука помогла улучшить жизнь людей.

## 4. Answer the questions using the information from the text:

a) Why is science so important in the modern world?

b) How does science help keep peace in the world?

c) How does science help solve the energy programme?

d) What facts prove that the study of science is important for understanding of the natural world?

5. Make up a small story (6-8 sentences) about the importance of science. Use the information from exercise 2.

## 4.2 Technological Civilization

## 1. Read the glossary:

silkworm - шелковичный червь mulberry seeds - семена шелковицы smuggle out - вывезти контрабандой hollow bamboo cane - полый бамбуковый посох movable type - печатный станок punch(ed) card - перфокарта stimulated emission - индуцированное (вынужденное) излучение data processing - обработка данных tissues - ткани человеческого организма corrective eye surgery - хирургическая коррекция зрения

## 2. Read and translate the text.

We are a technological civilization and culture. Technology has been with humans from the first use of a stone as a tool and it is impossible to separate technology from our life now. This tool use has developed to an advanced state,

where our human culture is dependent upon the technology that surrounds it. Here are some inventions to consider.



According to legend, the wife of Emperor Huangdi developed silk as an industry about 4,700 years ago. Her name was Xilingshi, and she may be the first ever recorded female inventor.

People did not bring silkworms to the West until 550 AD as it was a Chinese secret guarded with the threat of death. Eventually two monks smuggled out eggs and mulberry seeds in hollow bamboo canes. China still produces more silk than any other country.

At the end of the Middle Ages and the beginning of the Renaissance the German, Johan Gutenberg (1394/99-1467) invented printing with a movable type. His Gutenberg Bible of 1455 was the first known printed book. More books were published in the 50 years following Gutenberg than in the previous 1,000 years! So the first revolution in information technology began.

The building of ships seems to have begun in Egypt when the first models were designed 5,000 years ago and evolved to the sailing ships that could move easily with the help of wind. But there is still the mystery of how the first inhabitants of Australia were able to come to that continent 60,000 years ago since they had to cross a stretch of ocean of at least 70 kilometers. This most certainly required some means of ocean travel!

A Dutch optician, Hans Lippershey, built the first documented telescope. Galileo, an Italian astronomer built another one a year later and began his study of the sky. He proved that the Earth was not the centre of the Solar System, destroying existing beliefs of the time. Isaac Newton built a telescope that used a mirror, a design used by most modem optical research telescopes today.

In 1888, an American inventor, Herman Hollerith, developed the first successful computer, using punched cards and electricity. This was the first step in automated data processing. In 1951, the first commercially available computer was introduced. By the late 1960s, many large companies were using computers. Then in 1975, personal computers were finally introduced. Today we cannot function without them!

The principle of the laser was first known in 1917, when physicist Albert Einstein described the theory of stimulated emission. However, it was not until the late 1940s that engineers began to use this principle for practical purposes. These included Charles Townes at the Columbia University, Joseph Weber at the University of Maryland and Alexander Prokhorov and Nikolai Basov at the Lebedev Laboratories in Moscow. Townes and Prokhorov and Basov were later awarded the Nobel Prize for Science in 1964 for their inventions. Today lasers are used, for example, in corrective eye surgery, providing a precise source of heat for cutting tissue.

## 3. Do the test.

1. Technology has been with humans from ... as a tool.

a) the first use of a stone c) from the first use of an iron

b) from the first use of a clay d) the first use of a wood

According to legend, the wife of Emperor Huangdi developed ... about
4,700 years ago.

a) paper as an industry c) glass as an industry

b) silk as an industry d) powder as an industry

3. ... still produces more silk than any other country.

a) Brazil c) Japan b) China d) Egypt

4. At the end of the Middle Ages and the beginning of the Renaissance the German, Johan Gutenberg, invented ... with a movable type.

a) printing c) pottery b)manufacturing d) windmills

5. ... seems to have begun in Egypt when the first models were designed 5,000 years ago.

a) The building of castles c) The building of lighthouses

b) The building of ships d) The building of pyramids

6. A Dutch optician, Hans Lippershey built the first documented ...

a) steam engine c) telescope b) microscope d) generator

7. Galileo Galilei proved that the Earth ... of the Solar System, destroying existing beliefs of the time.

a) was on the very brink c) was the centre

b) was out d) was not the centre

8. In 1888, an American inventor, Herman Hollerith, developed the first successful ..., using punched cards and electricity.

a) computer c) generator b) transistor d) integrated circuit

9. The principle of the laser was first known in 1917, when physicist... described the theory of stimulated emission.

- a) Niels Bohr c) Max Planck
- b) Albert Einstein d) James Clerk Maxwell

10. Ch. Townes, A. Prokhorov and N. Basov were later awarded ... in 1964 for their inventions.

- a) the Kyoto Prize for Advanced Technology
- b) the Nobel Prize for Literature
- c) the Nobel Prize for Science
- d) the Nobel Prize for Physiology or Medicine

## 4. Make up the plan of the text and retell it.

Unit 5. Ecology 5.1 Ecological problems



1. If we are not worried about the Earth, some ecological problems appear.

What are these problems?

Water			damaged
Air			destroyed
Forests			disturbed
Animals	is	not	cared for
Wildlife	are		killed
Litter			polluted
Health			spoiled
			burnt
			cut down
			hurt
			put into the water

## 2. What are the results of our influence on the environment?

We leave a fire $\rightarrow$	We destroy the forest.
We pollute the air.	We damage nature.
We throw away plastic bottles.	We change the climate.
We leave litter in the forests.	We cut down trees to make
new paper	
We don't recycle paper.	We hurt animals.
We break trees.	We cause water pollution.
We throw litter in the river.	We disturb birds.
We leave glasses in the forest.	We hurt animals and people.

## 3. Read and translate the following words and phrases. Write down the pronunciation of the words.

Pollutant, invention, soil, environment, fertilizers, pesticides, enterprise, persuade, suffer, smog, harmful, destruction, interaction, crises, pass the laws.

## 4. Read and translate the text. Mind the important environmental problems.

Long ago people lived in harmony with nature. With the development of crowded industrial cities which put huge amounts of pollutants into surrounds, the problem has become more important. Many cities with thousands of smoky enterprises appear all over the world today. The by-products of their activity pollute the air we breathe, the water we drink, the land we grow grain and vegetables on. Automobiles and other new inventions make pollution steadily worse. Since the late 1960s people have become alarmed with the danger of pollution. Every year world industry pollutes the atmosphere with about 1000 million tons of dust and other harmful substances. Many cities suffer from smog.

Vast forests are cut and burn in fire. Their disappearance upsets the oxygen balance. As a result some rare species of animals, birds, fish and plants disappear forever, a number of rivers and lakes dry up. The pollution of air and world's ocean, destruction of the ozone layer is the result of man's careless interaction with nature, a sign of the ecological crises.

Air, water and soil are necessary for existence of all living things. But polluted air can cause illness, even death. Polluted water kills fish and other marine life. On polluted soil food cannot be grown. In addition environmental pollution spoils the natural beauty of our planet.

Pollution is as complicated as serious problem. Automobiles are polluting the air but they provide transportation for people. Factories pollute the air and water but they provide jobs for people and produce necessary goods. Fertilizers and pesticides are important for growing crops but they can ruin soil.

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Thus, people would have to stop using things if they want to end pollution immediately. Most people do not want that of course. Scientists and engineers must find the ways to reduce pollution from automobiles and factories. Government can pass the laws that would make enterprises take measures for reducing of pollution. Individuals and groups of people can work together to persuade enterprises to stop polluting activities.

Some progress has been made in this direction. International unions for example Greenpeace and other environmental protecting agencies are organized in the world.

#### 5. Answer the following questions to the text:

a) When did the environmental problem become serious?

b) What can pollution cause?

c) Can pollution be stopped immediately?

d) What can government and individuals do to prevent or to reduce pollution?

#### 6. Read and translate the text. Give your own title to it.

Global warming is sometimes referred to as the greenhouse effect. The greenhouse effect is the absorption of energy radiated from the earth's surface by carbon dioxide and other gasses in the atmosphere, causing the atmosphere to become warmer. The greenhouse effect causes the temperature to rise.

Today major changes are taking place. People are conducting an unplanned experiment by changing the face of the planet. We are destroying the ozone layer, which allows life to exist on the Earth's surface. All these activities are unfavorably changing the composition of the biosphere and the Earth's heat balance. If we do not slow down our use of fossil fuels and stop destroying the forests, the world could become hotter it has been in the past million years. Some areas, particularly in the Northern Hemisphere, will dry out and a greater occurrence of forest fires will take place. At the present rate of destruction, most of the rain forests will be gone by the middle of the century. This will allow manmade deserts to invade on once lush areas. Evaporation rates will also increase and water circulation patterns will change. Decreased rainfall in some areas will result in increased rainfall in others. In some regions river flow will be reduced or stopped completely. Other areas will experience sudden downpours that create massive floods.

If the present arctic ice melting continues, the sea could rise as much as two meters by the middle of the next century.

Large areas of costal land would disappear. Plants and other wildlife habitats might have not enough time to adjust to the rapidly changing climate. The warming will rearrange entire biological communities and cause many species to become died out.

The greenhouse effect causes the overheat of the air and as a result we have the global warming. As we see, greenhouse effect and global warming correspond with each other.

## 7. Find Russian equivalents to the following words and phrases:

- a) global warming -
- b) greenhouse effect -
- c) to cause the temperature to rise -
- d) ozone layer -
- e) evaporation rates -
- f) to slow down –
- g) massive floods -

h) water circulation patterns -

i) ice melting –

j) have (not) time to adjust to –

k) to correspond with -

8. Make a situation about consequences of global warming and greenhouse effect. Use words from exercise above.

9. Do you agree with the statement 'To hurt the Earth is to hurt yourself'?

Why? Why not?

10. What are you worried about?

I'm worried about ...

I'm worried that ...

I'm afraid of ...

I'm very concerned that ...

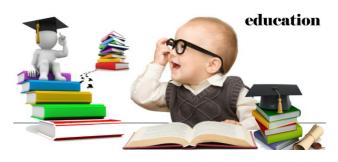
I'm very concerned about ...

## Unit 6. Education

6.1 Russian education system

1. Translate the words from the chart.

2. Answer the question using the information from the chart.



a) How many stages does the Russian

education system consist of?

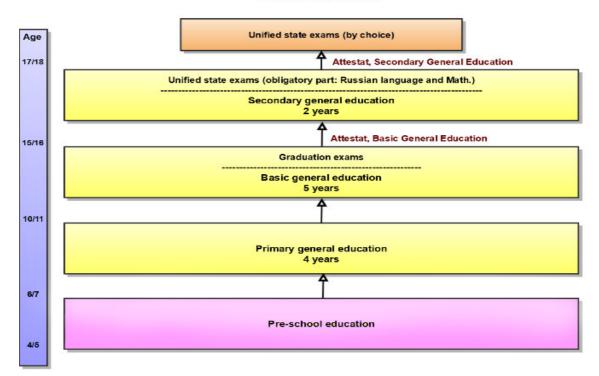
b) How many years does the basis general education last?

c) When do Russian children pass unified state exams?

d) What certificate do Russian pupils receive after graduating secondary general education?

e) What education is compulsory for all children in Russia?

#### Russian education system: General education



#### 3. Read and translate the text

Russia has one of the best mass-education systems in the world, producing a literacy rate of 98% (higher than most Western European countries). The system consists of compulsory general education and higher education.

Education in Russia is compulsory for children between the ages of 6 and 15. It consists of primary school education for ages 6-10, followed by senior school for ages 10-15. If a pupil of secondary school wishes to get further education, he or she must remain to complete secondary school for 2 more years, from ages 15-17.

Primary and secondary school includes 11 years of study. Every school has a core curriculum of academic subjects. After completing this stage, pupils are awarded the Certificate of Secondary Complete General Education.

At 15 years old, children may choose to enter a vocational school or nonuniversity institute. These educational establishments typically offer programmes of academic subjects and a programme of training in a technical field until students reach 17 or 18. Such institutions used to be called *technikums* but now most of them are known as colleges.

Classwork often means reciting and written and oral testing. If a student does not perform to standard, they will be 'left back' to remain another year.

The Russian school year is comprised of 4 terms with vacations in between; 1 week in November, 2 weeks in January, 1 week in March and nearly 3 months in summer. School is held from September 1 until the final week of May, with exams in June.

The school day normally starts at 8 a.m. and finishes at 1 or 2 in the afternoon. Students generally attend class 5 days a week, although some schools require extra study on Saturdays.

A typical lesson lasts 40 - 45 minutes with a 5 -15 minute break in between. In primary school students have 4 classes a day. Classes increase to 5 or 6 a day in secondary school, and 6 or 7 at a senior high school.

A normal class consists of 20-30 students. In primary school, pupils have one teacher for all the subjects taught.

Some subjects are mandatory such as Russian literature, Russian language, Russian history, world history and the maths and sciences. In addition, there are specialized schools that concentrate on specific subjects.

Students are normally graded on a scale from 2 - 5, with 5 being the top grade. Each student has his or her "diary"; a personal book of academic achievements in which teachers record the given grades.

#### 4. Make up the plan and retell the text

#### 6.2 British education system

## 1. Read and translate the text.

There are five stages of education in the UK: early years, primary, secondary, Further Education (FE) and Higher Education (HE). Education is compulsory for all children between the ages of 5 (4 in Northern Ireland) and 16. FE is not compulsory and covers non-advanced education which can be taken at further (including tertiary) education colleges and HE institutions (HEIs). The fifth stage, HE, is study beyond GCE A levels and their equivalent which, for most full-time students, takes place in universities and other HEIs and colleges.

British education is divided into state schools, which are free of charge, and private schools, which are paid for. There are 3 types of state secondary schools in Great Britain. They are:

1) comprehensive schools, which take pupils of all abilities without exams. In such schools pupils are often put into certain sets or groups, which are formed according to their abilities for technical or humanitarian subjects. Almost all senior pupils (around 90 per cent) go there;

2) grammar schools, which give secondary education of a very high standard. Entrance is based on the test of ability, usually at 11. Grammar schools are single sexed schools;

3) modern schools, which don't prepare pupils for universities. Education in such schools gives good prospects for practical jobs.

Also Great Britain has two different systems of education: one is used in England, Wales and Northern Ireland and the other is used in Scotland. The most popular schools in Britain are Boarding Schools. These are institutions where kids not only study, but live. In Britain, as in many other countries, there is a pre-school education, i.e. there are nursery schools for children from 2 to 7. After the nursery school, kids attend Junior Schools till they are 13. During these years children have to pass an obligatory exam, called SAT (Standard Assessment Tests) twice. In case, they pass it successfully, they can easily transfer to the next step, which is called Senior School. This school is for children aged 13 to 18, and it prepares its pupils for the special exam called GCSE (General Certificate of Secondary Education).

It is also the time for future profession choice. The main subjects at British schools are English, Mathematics, Geography, Art, Science, History, Physical

Education, Information Technology, Music, Religious education and others. According to the classification of schools by gender, education in Britain can be divided into three types of institutions: mixed schools, schools for girls and schools for boys.

Higher education in Great Britain is quite expensive, especially for foreign students. However, there are sometimes tuition grants for talented students. After leaving secondary school young people can apply to a university, a polytechnic or a college of further education.

There are 126 universities in Britain. They are divided into 5 types:

The Old ones, which were founded before the 19th century, such as Oxford and Cambridge;

The Red Brick, which were founded in the 19th or 20th century;

The Plate Glass, which were founded in 1960s;

The Open University It is the only university offering extramural education. Students learn subjects at home and then post ready exercises off to their tutors for marking;

The New ones. They are former polytechnic academies and colleges.

The best universities, in view of "The Times" and "The Guardian", are The University of Oxford, The University of Cambridge, London School of Economics, London Imperial College, London University College.

Universities usually select students basing on their A-level results and an interview.

After three years of study a university graduate get the Degree of a Bachelor of Arts, Science or Engineering. Many students then continue their studies for a Master's Degree and then a Doctor's Degree (PhD).

## 2. Answer the questions:

1. When do British boys and girls begin to go to school?

- 2. What subjects do they study at school?
- 3. How long does secondary education last?

- 4. What subjects are called "core" subjects?
- 5. At what age do children have their exams?
- 6. What's the difference between modern and grammar schools?
- 7. What are private schools?
- 8. Would you like to study in Britain? Why?
- 9. What types of British universities do you know?
- 10. Compare British and Russian education.

## 3. Tell about educational system in the UK.

Unit 7. Railways

7.1 Siberian railways

1. Write down the meaning and transcription of the following words and word combinations



Signed a prescript for, one third of the globe, the main obstacle, on ferries, to bridge the gap, was ordered, the whole extent, breast walls, terro-concrete galleries, is paved with, was turned into the dead-end.

## 2. Read and translate the text.

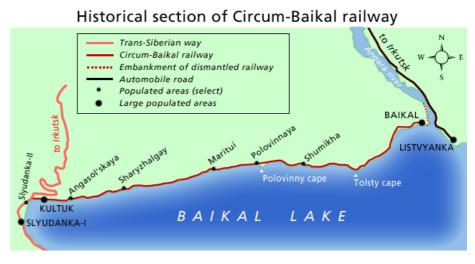
I want to call your attention to the fact that roads play a very important part in the development of our republic: for example, the Trans-Siberian Railway.

The construction of the Siberian railway – is the second discovery of Siberia after Cossacks. The question of the construction of the railway was often raised by Siberian governor-generals, merchants and industrial workers. In 1891 Czar Alexander the Third signed a prescript for building the Great Siberian railway. So the construction of the line was begun. The Great Siberian main line is the longest

one in the World. It covers one third of the globe. The total length of the line is nearly 9600 km. It had been built for 13 years. In 1900 the line from Moscow to Vladivostok became operational.

But there was no railway that time to bridge the gap between the middle Siberia and the Trans-Siberian railways. The main obstacle was Lake Baikal, especially during winter. So, until 1904 passengers crossed Lake Baikal on ferries. For the transportation of carriages a specially designed icebreaker named Baikal was ordered. It was the largest icebreaker in the world built by Armstrong Company in England.

However, the ferry system was not a great success and in 1901 it was decided to construct "The Circum Baikal railway". So, another very important step was the construction of the Round-Baikal Railway.



One hundred years ago human hands were able to create such a unique monument without any usage of equipment. Even an ordinary visitor can estimate the whole extent of titanic work and difficulties of this stone miracle had to face: 38 tunnels with the total length 9063, 18 stone and terro-concrete galleries, 248 bridges and viaducts, 268 breast walls, hundreds of chutes and wave breaking barriers, dozens of embankment kilometers and a great number of all structures is not all estimated. The Round-Baikal Railway line is paved with due regard for terrain relief, rocks, depth of the water.

You know that the Round-Baikal Railway is a precious buckle in the steel belt of Russia. The most important section of Transsib was turned into the dead-end 50 years ago. Now it is a complex museum taken under the State protection. This unique nature and history reserve attracts a lot of tourists from the world. The construction of the Round-Baikal Railway served a new stimulus for further study of Lake. For example a large scientific expedition worked there in the 19<sup>th</sup> century composed a detailed atlas of the Baikal's depths which is still used nowadays.

The East-Siberian railway plays a very important part in the economy of our republic and of course in Russia because it carries a large volume of passengers and traffics (50% of the world's rail traffic). Besides, it runs international container service between Europe and Japan. Most experts believe that greater changes will take place in Buryatia in the future due to the strategical plan of railway development. It's assumed that new mineral resources will be found and new instrumental branches will be set up. The facts speak for themselves as many new railways routes will be opened. Additional freight and passenger trains will go through the border with China, Mongolia and other countries.

### 4. Answer the following questions:

1. Which railway played a very important part in the development of our republic?

2. Who initiated the construction of the Trans-Siberian Railway?

3. When was the construction of Transsib and the Round-Baikal Railway begun?

4. Why was the construction of the Round-Baikal Railway titanic work?



#### 7.2 The history of BAM

1. Read and translate the text. Be ready to answer the questions to the text:

1. What does the word "BAM" mean?

- 2. When was the work on the construction of BAM actually started?
- 3. Where does BAM start?
- 4. Why do we call BAM "the railway of the twentieth century"?
- 5. What is the total length of BAM?

BAM is the Russian abbreviation of Baikal-Amur Railway. Traversing Eastern Siberia and the Russian Far East, the BAM main line is 3100 km long. The Baikal-Amur Mainline runs the north of and parallel to the Trans-Siberian railway.

The idea of BAM construction appeared in the 80s years of the 19th century, but only in the 70s of the 20th century it found its realization. The BAM was built as a strategic alternative route to The Trans-Siberian Railway, especially along the vulnerable sections close to the border with China. The route of the present-day BAM was the first considered in the 1880s as an option for the eastern section of the Trans-Siberian railway.

On December 22, 1973 the first group of builders arrived to Ust-Kut from the newly built railroad Khrebtovaya – Ust-Ilimsk. The construction of the century started in the frosty morning of January 9, 1974. Only three months passed after this, and all the country started to talk about the BAM. Brezhnev famously stated that "BAM will be constructed with clean hands only!" and firmly rejected the suggestion to use prison labor again.

On the 27th of April, 600 Komsomol team members went ahead to the BAM constructions. When they arrived at Taishet station, the team was split into 2 parts. One part went to the North, the second half headed to the North of Amur region to start the construction in the western direction. Each part of the team received halves of the silver symbolic key of BAM. 10 years passed. On October 1, 1984 the two tracklayers met. The halves of silver key became one again!

The rates of the railroad construction of BAM determined the fantastic speed of track laying – 320 km annually on the main track of BAM. The builders had to make a great number of underground pipes and bridges. The railroad traverses 7 mountain bridges.

Severomuisk Tunnel was opened only on the 5th of December in 2003. It is 15343 meters long and up to 1.5 km deep. Construction took 27 years to complete. The conditions of the construction of these tunnels were extremely unfavorable.

The building of the BAM Railway was carried out in very hard topographical and geological



conditions. Roughly half of all the soil works in BAM zone was connected with the processing of rock and permafrost soils.

The railway will bring an economic and social revolution to the area. There will be a lot of new jobs on the railway alone, with its numerous stations (some of them large). Then there will be new towns and communities near the stations, built to up-to-date standards, tall buildings with all modern comforts.

The construction of the Baikal-Amour Railway was of great importance for the economic development of our country.

The building of BAM Railway was written about as "the project of the 20 century".

### 2. Make a short story about BAM.

#### 7.3 BAM - Artery of life

#### 1. Read and translate the text

Mikhail Lomonosov, a famous Russian scientist, once said that the increase of Russia's power will come from Siberia. That these words said more than 300 years ago were true is quite evident today. Siberia is extremely rich in natural resources; the potential of Siberia power generation is truly unique: cheap coal and powerful rivers are in abundance there. One of the main objects of the programme of Siberia development is to transform the region info the major national fuel and energy base.

Among the strategic ways for accelerating economic growth of Siberia was the Baikal-Amur Railway, known as BAM, and the development of the lands around it. The construction of the BAM main line was completed in 1984. Great difficulties had to be overcome during the construction of the railway. It runs through the taiga, huge marshes and rivers. Though the BAM main line lies in approximately the same latitude as Moscow, Copenhagen and Glasgow, the winter here lasts for eight months with temperatures of down to -60°C and snow of up to one meter deep.

About 130.000 people of 108 different nationalities were engaged in building. The BAM main line is 3100 km long, there are over 2000 bridges on it, and the total length of the tunnels is 32 km. The most powerful electrical locomotives draw freight trains on the BAM.

BAM is a truly unique economic, social and scientific project. The influence it has on the local economy is already impressive. It enables large timber, chemical and metallurgical complexes to be built in the new economic zone, permits to start up industrial regions with really good conditions for people to work and live in.

The BAM zone stretches over a million and a half square kilometers. Several large territorial-production complexes are being set up in the area. Coking coal and iron ore, oil and gas, copper, nickel, cobalt, and some other minerals are being extracted here; first large enterprises have already begun working thanks to the railway which is called here an "artery of life".

#### 2. Find English equivalents for the following phrases:

Для ускорения экономического роста, обилие, широта, действительно впечатляет, продолжительность зимы 8 месяцев, первые крупные предприятия, болото, топливо, приблизительно, влияние.

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#### 3. Fill in the table.

Hard conditions	Great possibilities
1.	1.
2.	2.

4. Match the synonyms.

1. development	a) speed
2. way	b) building
3. construction	c) route
4. town	d) evolution
5. fast	e) railroad
6. main line	f) city

## 7.4 Electrification of Russian Railways

1. Write down the meaning and transcription of the following words and word combinations:



Enormous volume, network, to reach, to take interest in, freight and passenger trains, to put forward the idea of, traffic, railway engineering, railway exhibitions, telecommunication systems, to attract attention, railway equipment

## 2. Read and translate the text.

The Soviet Union was often spoken of as a great rail power because it had the largest railway system in the world. The total length of Soviet railways was over 143.000 km by 1988. Soviet Railways (SZD) carried an enormous volume of home traffic – nearly 66 per cent of freight and 37 per cent of passengers.

In the First World War the railway network was greatly. By 1917 the railway network was 70,000 km long and most of it (85 per cent) was in the European part of the country. The freight trains ran at a speed of 30 km/h and the passenger trains reached 40-50 km/h.

After the Great October Revolution the Soviet State took steps to reconstruct the railway of the country. The engineers of our country always took interest in railway electrification. As is known, it was V. I. Lenin who put forward the idea of the country's electrification. To realize this idea 200 outstanding Russian scientists, engineers and economists set to work. As a result, the GOELRO Plan was worked out in 1920. According to the plan the first railways to be electrified were the ones carrying heavy freight and passenger traffic as well as the suburban railways near big cities, such as Moscow, Leningrad and Kiev. Since that time railway electrification advanced rapidly. In 1926, an electric train started its first run on the suburban line between Baku and Sabunchi. Another very important step was the development of the diesel locomotive. It was Russia where the world's first main-line diesel locomotive was built and put into service on November 6, 1924.

When reconstructed, RZD became a highly-developed and a safe means of transport in the country. Nowadays, Russian Railways carry about 50 per cent of the world's rail traffic. Most traffic is carried by powerful diesel and electric locomotives. Automation and computers are introduced into many branches of railway engineering. Particular attention is paid to high-speed running. Speeds of 120-150 km/h are practical for the express trains. In the near future Russian trains will run at 200kp/h. The first high-speed train in the in the USSR was developed in Riga. It was this train that was designed to run the high-speed service between Moscow and Leningrad.

The international railway exhibitions held in Russia usually attract the attention of railway specialists and businessmen from abroad. The Russian

equipment exhibited includes telecommunication systems, powerful cranes and other railway equipment.

### 2. Answer the following questions:

a. Why was the Soviet Union often called a great rail power?

b. Could railways in early years of the young Soviet Republic carry heavy traffic?

c. What did GOELRO Plan mean for the further development of rail transport?

d. Where and when was the first main-line diesel locomotive constructed?

e. Why do the international railway exhibitions held in our country attract the attention of specialists from abroad?

f. What lines were electrified first?

#### 3. Find the English equivalents for the following words and phrases:

Крупнейшая железнодорожная система; общая протяженность; объем перевозок; разрабатывать план; великая железнодорожная держава; сеть железных дорог; пригородная линия, привлекать внимание специалистов из-за границы; железнодорожное оборудование; системы дистанционной связи.

4. Make a plan and try to tell about electrification of Russian railway, use the words from the exercises above

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#### 7.5 Tunnel under Channel

1. Read and translate the text, be ready to work with it:

Connecting the Isles of Great Britain to mainland Europe



is a fantasy that can be dated back nearly 200 years.

There were few projects against the construction of the tunnel. The objections have been cultural, political and, of course, military. The British government objected to the scheme mainly because they thought the enemy could easily invade England through such a tunnel.

The first suggestion to construct a tunnel came from Napoleon in1800. His engineers even drafted a tunnel plan, but Britain and France were at war at that time.

In 1988 the question of a Channel Tunnel was studied afresh by a group of French and British engineers and the work actually began. They agreed to start boring for the Eurotunnel on both English and French coasts.

The tunnel runs under the sea through a layer of dense chalk which is known to be free of cracks and allows water to penetrate it slowly.

The work proceeded very quickly and was successfully completed in about six years. The tunnel was opened to traffic on May 7, 1994.

The New tunnel (ready in 1993) is, in fact, three tunnels – two for trains and a "service" tunnel for ventilation and for men who maintain the tunnels. The tunnels are fifty km long, forty metres under the water. Forty km of the tunnel are under the sea itself. They are the longest undersea tunnels in the world. Trains travel through the tunnels at 160 mph. Each train takes 1500 people and there are trains every ten minutes. Original estimate was 7.2 billion dollars at current exchange rates, but cost to date is 13.1 billion dollars shared between Britain France and other investors. So far the project is not profitable and still needs more investments.

Cars and trucks carried by rail make crossing in 35 minutes, about an hour less than by ferry. Passengers remain in their vehicles.

The tunnel personnel does its best to make passengers feel comfortable and safe during the crossing. A special radio station called "Channel Channel" has started, because it is impossible to receive normal radio signals when you are under the sea. The station broadcasts news to keep people up-to-date with the "world outside" while they are in the tunnel.

But it was mentioned by the commercial director of the Tunnel, they still have many serious problems and one of them is security. Nevertheless, the authorities are sure to be able to solve all the problems successfully.

### 2. Translate the following words and phrases into Russian:

- a) a mainland –
- b) to object –
- c) to suggest -
- d) to draft a plan –
- e) to run under the sea –

f) to travel through the tunnel –

- g) to feel comfortable and safe -
- h) to need more investments –

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

- a) Why did the people want to build the Channel Tunnel?
- b) When did the Tunnel begin to work?
- c) How many tunnels does the new Tunnel consist of?
- d) Describe the advantages of the Channel Tunnel?

e) Are there any problems about the Tunnel today? What are they?

# 4. Finish up the following sentences:

a) The first idea to build the Tunnel was offered by ...

b) Most people were against the tunnel construction because ...

c) The duties of the personnel are ...

d) The Tunnel consists of ... tunnels. They are ...

c) Trains travel through the Tunnel at ... 160 km\h, and they pass every ...minutes.

# 5. Describe the Tunnel using the text.

# Unit 8. Choosing a career

# 1. Read and translate the following words:

To choose, to enter an institute, to start a working career, to go into business, questionnaires, quizzes, to take into consideration, occupation, to support, to make a decision.



# 2. Read and translate the text and mind the words from exercise above:

Before people leave school, they understand that the time to choose their future profession has already come. It is not an easy task to make a right choice. Someone goes further in his education and enter an institute, university or college. Other can start a working career, go into business.

Choosing a career and getting a job are two things any person passes through in his life. Young people learn about professions in magazines and advertisements. Magazines for teenagers often offer questionnaires, quizzes to help young people to find out their interests and abilities more clearly and to make a decision concerning their future occupation. While choosing a career one should take into consideration all possibilities that his future profession might provide. The profession must be interesting. One has to be sure of his future that means that one will be able to find a job after his graduation from the college or university. The profession must be well-paid; otherwise you won't be able to support yourself and your family.

There are many professions in the world, so it is quite difficult to choose and make a decision. Some follow their own choice; some follow parents' advice, because they can help concerning future plans.

It is a great advantage of choosing our future career being a school pupil. It gives us a goal and enables us to choose a right, suitable course of study. It gives us time to be prepared. Also, I'd like to mention that if you we don't think about our future, nobody will think, so we just have one way. We must work hard to realize our wishes, because future is purchased by the present.

If you want something be done well, do it yourself, make a right decision.

### **3.** Answer the questions using the text:

a) What do young people do after leaving school?

b) Where can young people learn about professions?

c) What should you take into consideration while choosing a career?

d) Who can help young concerning future plans?

e) What is a great advantage of choosing our future career being a school pupil?

f) What should we do if we want something be done well?

#### 4. Make a short story about your plans for the future?

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