

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ  
Федеральное государственное автономное учреждение  
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**Программа дисциплины**

Иностранный язык для географов М2.В.2

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Программу дисциплины разработал(а)(и) заведующий кафедрой, к.н. (доцент) Уразметов И.А. кафедра географии и краеведения Отделение развития территорий , Ildar.Urazmetov@kpfu.ru

### 1. Цели освоения дисциплины

Курс "Иностранный язык для географов" направлен на расширение углубление лексики словарного запаса по основным разделам физической географии. Задачами дисциплины являются ознакомление с оригинальной географической литературой на английском языке, чтение, перевод, пересказ текстов, выполнение упражнений. Развитие речевых умений, аудирования, языковых знаний и умений (орфографии, фонетики, грамматики).

### 2. Место дисциплины в структуре основной образовательной программы высшего профессионального образования

Данная учебная дисциплина включена в раздел " М2.В.2 Профессиональный" основной образовательной программы 050100.68 Педагогическое образование и относится к вариативной части. Осваивается на 1, 2 курсах, 2, 3 семестры.

Данная учебная дисциплина включена в раздел М2 Профессиональный цикл, М2.2/1/0 модуль: Проблемы современной физической географии (общие) М22/1.8. Осваивается на 1 (5) курсе во 2 (10) семестре и на 2 (6) курсе в 3 (2) семестре.

### 3. Компетенции обучающегося, формируемые в результате освоения дисциплины /модуля

В результате освоения дисциплины формируются следующие компетенции:

Шифр компетенции	Расшифровка приобретаемой компетенции
ОК-6 (общекультурные компетенции)	готовностью работать с текстами профессиональной направленности на иностранном языке
ОПК-1 (профессиональные компетенции)	готовностью осуществлять профессиональную коммуникацию на государственном (русском) и иностранном языках

В результате освоения дисциплины студент:

1. должен знать:

Грамматические правила английского языка, общегеографическую лексику, правила фонетики и орфографии.

2. должен уметь:

Говорить (монологические и диалоговая речь), участвовать в беседе, осуществлять запрос информации, обращаться за разъяснениями, выражать свое отношение к высказыванию партнера, свое мнение на обсуждаемую тему, выступать с сообщениями, делать обобщение, содержащие наиболее важную информацию, передавать содержание полученной информации, рассуждать о фактах, явлениях, процессах и т.д.

3. должен владеть:

Навыками аудирования, понимания текстов на слух, чтение (ознакомительного, изучающего, просмотрового) навыками сообщения об отдельных простых, явлениях, процессах в письменной форме, навыками правильного произношения, соблюдения интонации и ударения.

4. должен демонстрировать способность и готовность:

читать и переводить специализированные тексты

### 4. Структура и содержание дисциплины/ модуля

Общая трудоемкость дисциплины составляет зачетных(ые) единиц(ы) 72 часа(ов).

Форма промежуточного контроля дисциплины отсутствует во 2 семестре; зачет в 3 семестре.

Суммарно по дисциплине можно получить 100 баллов, из них текущая работа оценивается в 50 баллов, итоговая форма контроля - в 50 баллов. Минимальное количество для допуска к зачету 28 баллов.

86 баллов и более - "отлично" (отл.);

71-85 баллов - "хорошо" (хор.);

55-70 баллов - "удовлетворительно" (удов.);

54 балла и менее - "неудовлетворительно" (неуд.).

#### 4.1 Структура и содержание аудиторной работы по дисциплине/ модулю

##### Тематический план дисциплины/модуля

N	Раздел Дисциплины/ Модуля	Семестр	Неделя семестра	Виды и часы аудиторной работы, их трудоемкость (в часах)			Текущие формы контроля
				Лекции	Практические занятия	Лабораторные работы	
1.	Тема 1. THE EARTH AS A PLANET The World in Space The planetary System	2	1	0	2	0	домашнее задание
2.	Тема 2. Proofs of the Earth' s Shape The Size of the Earth and the Method of Locating Places on its Surface	2	2	0	2	0	домашнее задание
3.	Тема 3. The Effect of the Earth's Revolution Twilight and Dawn Summer Time Measurement of Time Longitude and Time The Date Line	2	3	0	2	0	домашнее задание контрольная работа
4.	Тема 4. THE BUILDING OF THE CONTINENTS The Earth's Covering THE PRINCIPAL CLASSES OF ROCKS Sedimentary Rocks	2	4	0	2	0	домашнее задание
5.	Тема 5. Non-Sedimentary Rocks, or Unstratified Rocks The Chief Rocks in the British Isles	3	1	0	2	0	домашнее задание
10.	Тема 10. THE MAJOR LAND FORMS OF THE WORLD Mountains Plateaus Plains	3	2	0	2	0	домашнее задание

N	Раздел Дисциплины/ Модуля	Семестр	Неделя семестра	Виды и часы аудиторной работы, их трудоемкость (в часах)			Текущие формы контроля
				Лекции	Практические занятия	Лабораторные работы	
11.	Тема 11. Volcanoes and their Eruptions Distribution of Volcanoes Probable Origin of Volcanoes	3	3	0	2	0	контрольная работа домашнее задание
12.	Тема 12. Distribution of Land and Water THE OCEANS The Oceans Floor	3	4	0	2	0	домашнее задание
13.	Тема 13. The Atlantic Ocean The Pacific Ocean	3	5	0	2	0	домашнее задание
14.	Тема 14. The Covering of the Ocean Floor	3	6	0	2	0	домашнее задание
15.	Тема 15. The Salinity of the Ocean The Salinity of Partially-Enclosed Seas Temperature of the Ocean	3	7	0	2	0	контрольная работа домашнее задание
16.	Тема 16. The Movements of Ocean Waters. Currents and Tides	3	8	0	2	0	домашнее задание
	Тема . Итоговая форма контроля	3		0	0	0	зачет
	Итого			0	24	0	

#### 4.2 Содержание дисциплины

##### Тема 1. THE EARTH AS A PLANET The World in Space The planetary System

###### *практическое занятие (2 часа(ов)):*

People in ancient times believed that the earth was the centre of the universe, and that the sun and stars revolved around it. As the study of Astronomy grew, this idea was proved to be wrong, and for a long time it was thought that the sun was the centre of the universe. Modern knowledge, however, has revealed that the sun, while being the centre of the planetary system, is really one of a large number of suns, each with attendant planets, which make up the myriads of stars visible on a clear night. Away out in space, thousands of millions of miles beyond the distant stars of our group (known as the Galactic System, from Galaxy ? the Milky Way), are millions of similar groups of stars. These groups are known to astronomers as Nebulae, and each nebula contains in turn millions of suns, most of which have attendant planets or satellites. According to the great astronomer Sir Arthur Eddington, there must be at least 11,000 million million million suns in the universe. What an infinitely small fraction of the whole universe our planetary system must be!

##### Тема 2. Proofs of the Earth' s Shape The Size of the Earth and the Method of Locating Places on its Surface

###### *практическое занятие (2 часа(ов)):*

There are a number of reasons for the belief that the earth is spherical. (1) If the earth were flat the sun would rise and set at the same time for peoples in all countries. As we know, the times of sunrise and sunset vary in different parts of the world. This is due to the shape of the earth. (2) Spheres are the only geometrical shapes that appear to be round from whatever point they are observed. The sun, the moon, and all the stars always appear to be circular in outline. We can therefore conclude that they are spherical in shape. Why should the earth be the only exception? (3) The shadow of the earth always has a circular edge. This can be noticed by observation of the earth's shadow on the moon during eclipses. If the earth were a disc, then at times, if it were rotated, its shadow would be oval. (4) Viewed from the deck of a ship at sea, the horizon appears to be circular, and if one climbs the rigging the expanse of visible sea greatly increases, but the horizon still remains circular. This is apparent from Fig. 2. (5) An observer on a cliff watching the approach of a ship sees first the smoke, then the funnels, and lastly the hull. If the earth were flat the whole of the ship would be seen all the time, even through a telescope. (6) An experiment was made on the Bedford Level Canal, the surface of the water providing a horizontal level. Three vertical stakes rising to equal heights above the surface of the canal were set in the ground at intervals of three miles, and an observer looked through a telescope in such a way that the top of stake A appeared to be level with the top of stake B. It was found that this line of vision AB, instead of passing through the top of stake C, cut it at a point about 6 ft below the top. This could not happen if the surface of the earth were flat. Similar experiments in other localities give the same result. (7) We know that we can travel round the world in various directions, and come back to the starting point. (8) Photographs radioed back by artificial earth satellites show the circular outline of a hemisphere.

### **Тема 3. The Effect of the Earth's Revolution Twilight and Dawn Summer Time Measurement of Time Longitude and Time The Date Line**

#### ***практическое занятие (2 часа(ов)):***

The earth moves in two ways. Firstly, it rotates on its axis, making one complete rotation in twenty-four hours. This movement causes day and night. Secondly, it revolves around the sun, making one complete revolution in approximately days. Its path of revolution is known as its orbit. The plane surface in which it moves is called the "Plane of the Ecliptic". The earth's axis is not perpendicular to this plane, but is inclined at an angle of to it. Perhaps you will have noticed that globes are always made so that the line joining the North and South Poles is not vertical. The revolution of the earth around the sun and the inclination of the axis together: ? (a) Fix the Tropics and the Arctic and Antarctic Circles. (b) Are responsible for the change of the seasons. (c) Cause the varying lengths of day and night. Day and Night. ? The earth rotates on its axis NS, moving in the direction of the arrow from west to east. It is clear that only one-half of the globe can receive the rays of the sun at any given moment, and that the other half must be in darkness. A place P rotates round the circle PXY once in twenty-four hours, and it is obvious from the diagram that its journey will be partly through day?light and partly through darkness. The Seasons. ? The differences of temperature between spring, summer, autumn, and winter are largely the result of the difference in the elevation of the sun at different times of the year, which in turn is caused by the inclination of the earth's axis. "Summer Time" was introduced in a number of European countries so that, by putting the clocks forward one hour, sunrise and sunset occur one hour later, thus increasing the daylight period between tea-time and sunset. This scheme extends the possible time for outdoor activities during the summer. The time that it takes for a place to make one complete rotation and come back to its position directly beneath the sun is known as a Solar Day. The earth's orbit is not circular but elliptical, and the sun is not centrally placed within the ellipse.

### **Тема 4. THE BUILDING OF THE CONTINENTS The Earth's Covering THE PRINCIPAL CLASSES OF ROCKS Sedimentary Rocks**

#### ***практическое занятие (2 часа(ов)):***

The earth consists of a liquid core, probably composed mainly of iron, extending over half the distance from the centre to the surface, with, outside it, a solid mantle, a dense rock thought to be similar to the mineral olivine. Above the mantle is the lithosphere, or crust. The rather sharp transition from the crust to the mantle is known as the Moho. The crust is only about three miles thick under the ocean bed, but is over twenty miles thick under the continents. The earth's crust is composed of rocks. The term "rocks" includes not only the hard compact masses which may be seen in mountainous areas or in stone quarries, but also the finely disintegrated materials such as sand and soil. The study of rocks is known as Geology, and a knowledge of simple geological terms and of the chief classes of rocks is essential to the understanding of some branches of geography. Mainly according to the mode of their formation and their appearance, rocks may be classified as follows: Sedimentary Rocks, Non-Sedimentary Rocks, or Unstratified Rocks.

**Тема 5. Non-Sedimentary Rocks, or Unstratified Rocks The Chief Rocks in the British Isles**  
**практическое занятие (2 часа(ов)):**

Igneous Rocks (Latin Ignis, fire). ? Igneous rocks include all those rocks which have been formed by the cooling of molten rock. The origin of such material is beneath the earth's crust. If, as a result of volcanic action, molten rock reaches the earth's surface, it cools relatively quickly to form volcanic rocks. Metamorphic Rocks (Greek Metamorphosis, change). ? Metamorphic rocks are those which, as a result of subjection to intense heat or pressure, have changed from their former state. Originally, they may have been igneous or sedimentary rocks. Owing to heat and pressure, sedimentary rocks often become crystalline in appearance, and are sometimes difficult to distinguish from igneous rocks. The following is a table showing the chief rocks found in the British Isles. Some indication is given of their nature and the localities in which they may be found. The non-sedimentary rocks and the oldest sedimentary rocks are at the bottom of the table and the newest sedimentary rocks at the top. For convenience, the sedimentary rocks are divided into five groups according to their age.

**Тема 10. THE MAJOR LAND FORMS OF THE WORLD Mountains Plateaus Plains**  
**практическое занятие (2 часа(ов)):**

A good physical map of the world shows that, broadly speaking, there are three main types of land to be considered. These are: (1) Mountains. (2) Plateaus. (3) Plains. Most of the land surface of the earth can be included under one or other of these headings. Mountains are often classified according to their mode of formation, viz. (a) Fold mountains; (b) Block mountains; (c) Residual mountains; (d) Volcanic mountains. A plateau or tableland generally denotes a large stretch of highland which is practically the same height above sea-level, and which descends on all sides to lower ground. Some plateaus, however, such as those of Tibet and Bolivia, that are fringed by high mountain ranges which tower above the plateau level, are known as intermont plateaus. A plain is an expanse of low and nearly level land. Some plains, such as the Fens of England, large parts of Holland, and extensive areas of Russia, are almost perfectly flat; but generally an extensive plain consists of wide, gently sloping valleys separated by low hills. Such a plain is termed "rolling" or "undulating". Many plains look extremely flat when viewed from the top of the neighbouring hills, but on descending one finds numerous instances of steep gradients, the valley slopes of the streams which cross the plain.

**Тема 11. Volcanoes and their Eruptions Distribution of Volcanoes Probable Origin of Volcanoes**  
**практическое занятие (2 часа(ов)):**

A volcano is a hole in the earth's crust through which are ejected hot rocks, ashes, lava, steam, mud, and various gases. Such holes occur where there is a thinness or weakness in the earth's crust. The materials which are ejected, falling around the hole or crater, gradually build up a mountain that is roughly conical in shape, and has a crater at the top. Good examples of such mountains are Fuji Yama in Japan, Vesuvius in Italy, and Chimborazo and Cotopaxi in the Andes. Volcanoes are said to be active when eruptions occur frequently; dormant when no eruption has occurred over a long period of years; and extinct when no eruption has occurred during historic time. Vesuvius was thought to be extinct, and Krakatoa, too, had never been known to erupt, but both sprang into activity within historic time. Active volcanoes seem to have a well-defined distribution. Many of them are in mountainous areas, particularly in regions of "new fold" mountains. Many also occur near the sea, or actually in it, rising from submarine ridges, as in the Hawaiian Islands and the West Indies. On the other hand, some volcanoes are not in highland areas, and some are not near the sea (viz. Kilimanjaro in Africa). The most striking feature of their distribution seems to be the ring of volcanoes which surrounds the Pacific Ocean, extending from Mount Erebus in Antarctica, through the Andes, the Western Cordillera of North America (there is only one active volcano in the United States, viz. Mount Lassen in California), the Aleutian Islands, Kamchatka, Japan, the East Indies, and New Zealand. This girdle of volcanoes is often referred to as the "Fiery Ring of the Pacific". Outside this ring, active volcanoes are found (a) in the West Indies; (b) in close association with the African rift valley. There are also a large number of extinct cones throughout the central mountain system of Asia (e.g. Mount Demavend in Persia). A few volcanoes occur on islands, such as Mount Hekla in Iceland. The belief that volcanoes have their origin in a hot liquid interior of the earth is now considered to be wrong. From observations in mines, etc., it has been found that temperatures increase with depth, and that at a depth of sixty miles the temperatures would be high enough to liquefy rock. But the immense pressure due to the weight of the earth's crust raises the melting point, and it is probable that even at such high temperatures the rocks remain solid. It is now suggested that (1) there is a liquid layer between the solid crust of the earth and a solid and very hot central core; (2) subterranean heat is caused by pressure due to rock folding and to chemical action between the components of the rocks, and this heat helps to produce liquefaction of rock. The lighter lava would tend to rise above the solid rock until it came near to the surface, when lateral pressure might cause it to flow out at the surface in places where the earth's crust was weakest. Fissure eruptions, such as once occurred in Northern Ireland and the North-west Deccan, and the "quiet" type of eruptions which occur in the Hawaiian Islands are possibly due to this cause. On the other hand, the expansion and explosive forces of steam and other gases seem to be responsible for eruptions of the "Vesuvius" type.

## **Тема 12. Distribution of Land and Water THE OCEANS The Oceans Floor**

***практическое занятие (2 часа(ов)):***



Land and water are not uniformly distributed over the earth. There is more than twice as much water (71 per cent.) as land (29 per cent.), but in the Northern Hemisphere the areas of land and water are nearly equal, while in the Southern Hemisphere there is nearly fifteen times as much water as land. A careful study of a globe reveals a number of outstanding points concerning the distribution of land and water. (1) In nearly every instance if there is land in one part of the globe then there is water opposite to it on the other side of the earth. Even the North Polar Ocean is opposite to the Antarctic land mass. (See Fig. 32.) (2) The greatest land masses form an almost complete girdle around the Northern Hemisphere in the temperate latitudes. (3) The land masses are narrowest in the Southern Hemisphere. (4) The Antarctic land mass has three protruding areas, one extending towards South America, a second towards South Africa, and a third towards Australia. The following important facts may be said to arise from this distribution of land and water: (1) The development of a Northern Hemisphere "girdle" of communications: viz. North Atlantic sea route, North American transcontinental railways, North Pacific routes, and the Trans-Siberian railway. (2) East to west routes are important in the Northern Hemisphere, in contrast to the importance of north to south routes in the Southern Hemisphere. There is no important east-west route linking South America, South Africa, and Australia. (3) The southern continents, especially Australia, are more isolated than the northern land masses. (4) The development of world airways is easier in the Northern Hemisphere than in the Southern Hemisphere. (5) The interior of continents of the Northern Hemisphere have greater variations in summer and winter temperatures than the climates of the Southern Hemisphere. (6) Because the southern continents do not extend beyond 55° S., there is a complete "circle" of ocean between the southern continents and Antarctica. (7) The southern land masses are relatively narrow in temperate latitudes, so that there is less land in the Southern Hemisphere than in the Northern suitable for white settlement. The sea fills all the hollows of the earth's surface that lie below "sea-level" with the exception of a few landlocked depressions, such as the land surrounding the Caspian Sea, the polders of Holland, and the valley of the River Jordan. Whereas the average height of the land above sea-level is 2,750 ft, the average depth of the oceans is 12,300 ft. The greatest depth of the ocean at present known is 36,960 ft (the Mariana Trench, south-west of the island of Guam). On a globe of 16 in. diameter this deep abyss would only be shown by a scratch 1/100 in. deep, showing that the mountain heights and ocean deeps make very little difference to the spherical shape of the earth; in fact, no more than the irregularities on the skin of an orange. The ocean floor is often referred to as being composed of four parts: (a) The continental shelf, a shallow area surrounding the land masses and never more than 600 ft (100 fathoms) deep. The boundary of the continental shelf is known as the continental edge. (b) The continental slopes, the steep slopes descending from the continental edge to the deep sea plains. (c) The deep sea plains, a monotonous undulating area usually more than two miles below sea-level, and comprising the greater portion of the ocean floor. In some places the oceanic plain plunges to great depths known as the ocean deeps. (d) The ocean deeps, which are usually long, narrow, trough-like depressions. These four divisions are shown on the section of the Atlantic Ocean

### **Тема 13. The Atlantic Ocean The Pacific Ocean**

***практическое занятие (2 часа(ов)):***

In shape, the Atlantic Ocean is somewhat like a letter S. The coastlines of the Americas, and Europe-Africa being approximately parallel. In the north, where extensive plains reach down to the sea, there are wide areas of continental shelf on both the eastern and western sides; viz. (a) round the British Isles; (b) around Newfoundland and North-Eastern U.S.A. In contrast, the continental shelf in the South Atlantic is much narrower, especially where the plateaus of Africa and Brazil drop steeply to the coast. Running southwards in the middle of the Atlantic, half-way between the two continental masses and roughly parallel to their coasts, is a submarine ridge. This ridge, known as the Dolphin ridge in the North Atlantic and the Challenger ridge in the South Atlantic, occasionally rises above sea-level. Where this occurs are islands such as the Azores, St Paul's Rocks, Ascension, and Tristan da Cunha. Such islands as these are known as oceanic islands because they rise from the depths of the ocean; in contrast, islands like Newfoundland and the British Isles which rise only from the shallow floor of the continental shelf are known as continental islands. On each side of the Central Atlantic ridge are the great deeps, but the deepest Atlantic sounding yet taken is that of the Nares deep (27,972 ft) just north of Porto Rico. In contrast to the Atlantic Ocean, the Pacific Basin is almost everywhere surrounded by high mountain chains (e.g. Andes) or volcanic islands (Japan). The results of this are twofold: (1) There is relatively little continental shelf. (2) The sea floor drops very steeply from the continental margins so that the great ocean deeps are very near to the eastern and western margins of the ocean, e.g. the Tuscarora deep (off East Japan), the Mindanao deep (off the Philippines), and the Russell deep near to the coasts of Chile. A well-marked line of deeps extends from Japan south-wards, keeping just to the east of the Ladrone, Marshall, Tonga, and Kermadec Islands. These islands seem to form the outer edge of a platform, 2,000-4,000 ft deep, which extends eastwards from Asia and Australia. A similar platform stretches westwards from South and Central America. Between these two platforms the ocean bed sinks to the deep sea plain. From the Pacific submarine platforms rise plateau-like areas which are topped by volcanic and coral islands, e.g. Hawaii.

#### **Тема 14. The Covering of the Ocean Floor**

***практическое занятие (2 часа(ов)):***

The floor of the ocean is covered with muds, oozes, and clays. The muds and clays are derived from land and are often termed Terrigenous (land-derived) deposits, but the oozes are formed by the deposition of the skeletons of minute sea organisms, and are termed Pelagic (ocean-derived) deposits. (1) MUDS. These include all gravels, sands, and silt carried out to sea by rivers, and material broken by waves from the sea coasts. It is usually dull blue in colour (blue mud), and extends over all areas of shallow water surrounding the land masses. Where there are very strong river currents (e.g. the mouth of the Amazon) blue mud may be found 400-500 miles from land, but its usual limit is 200-300 miles out to sea. On the "continental slopes" these muds are finer in texture and are often green or red, varying in colour according to their chemical constituents. (2) OOZES. Living in the ocean waters are countless millions of microscopic organisms. For the most part these are in suspension. As these organisms die they descend to the ocean floor and one may imagine a constant "rain" of them on the bottom of the ocean, resulting after very long periods of time in the formation of deposits composed of the tests or skeletons of these organisms. It will be realised that these deposits grow extremely slowly. These accumulations are known as oozes, and are found on the ocean floor far away from the continents. The general colour is light grey, and when dry an ooze is rather like flour in texture. There are four principal types of ooze: (a) Globigerina (b) Pteropod } Composed of Calcium Carbonate (c) Diatom (d) Radiolarian } composed of Silica. Globigerina ooze is very widespread. It covers most of the floor of the Atlantic Ocean and much of the Indian and South Pacific Oceans. Pteropods live only in warm oceans, and as they dissolve before they reach the deep sea plains, pteropod ooze occurs only in shallower waters (less than 1,000 ft deep). Thus this ooze is found in patches on the Atlantic ridge and on the submarine elevations of the Pacific and usually within the tropics. Diatoms flourish in the cooler oceans, and diatom ooze is found in a wide belt encircling Antarctica. Radiolarians, in contrast to diatoms, and like pteropods, live in the warmer seas. As the siliceous skeletons do not dissolve easily, radiolarian ooze is found at great depths, in the inter-tropical areas of the Indian and Central Pacific Oceans. It is obvious that the remains of sea organisms will also accumulate on the sea floor near to the continents. Here, however, it will be mixed with such a large amount of land-derived material that the percentage of "ooze" is negligible. (3) RED CLAY. This is a stiff brownish-red clay found over very large areas in the Pacific Ocean, and in the great deeps of the Atlantic and Indian Oceans. The chalky and siliceous remains of sea organisms completely dissolve before they reach these great depths, hence oozes are absent. Red clay is thought to be the accumulation of dust particles which have been blown out to sea after volcanic eruptions, and which, being insoluble, have gradually sunk to the ocean floor. Red clay therefore accumulates very slowly. Such particles would also reach the sea floor in the shallow areas, but there the other oozes predominate.

### **Тема 15. The Salinity of the Ocean The Salinity of Partially-Enclosed Seas Temperature of the Ocean**

**практическое занятие (2 часа(ов)):**

The average salinity of the ocean is 3-5 lb. of salt to 100 lb. of water, or 35 lb. to 1,000 lb. of water (written 35‰). These salts include sodium chloride (common salt), of which there is 27 lb. to 1,000 lb. of sea water, and also compounds of magnesium, potassium, and calcium. The rain water flowing over the land surface or sinking into the soil and into the crevices and pores of the rock, perhaps eventually reappearing as a spring, carries away certain minerals in solution. All river water contains dissolved minerals which are eventually carried to the sea. It might reasonably be thought that the composition of sea water should be similar to that of river water, but this is not so. Calcium carbonate is not, however, the principal salt contained in sea water, because sea organisms are constantly absorbing it to build their shells and skeletons. The salinity of sea water is not uniform, and it depends mainly on two factors, viz.: (1) The amount of fresh water added by rivers and rainfall. (2) The rate of evaporation. Excluding certain partially-enclosed seas which will be discussed later, the salinity of the oceans varies in marked east to west-trending belts. Since warm water will dissolve more of a given substance than cold water, it would be expected that the areas of greatest salinity would be near the equator. This is not so. (a) In the equatorial areas, the rainfall is heavy and occurs almost daily, and the relative humidity of the atmosphere is high so that there is little evaporation. In addition, there are rivers of large volume (e.g. Congo and Amazon) which constantly supply fresh water. As a result the salinity is not high but below normal, i.e. below 35‰. The approach by sea to the mouth of the Amazon is sometimes determined by the presence of relatively fresh water (b) North and south of the equatorial area are the Trade Wind belts. It will be shown later that Trade Winds are drying winds. Therefore evaporation is rapid in these latitudes (about 20° to 30° N. and S. of the equator). On the land in these latitudes are the great deserts, so that there are relatively few rivers to add a supply of fresh water. In these belts the salinity rises to 37‰ and over. The map shows that the great deserts and the areas of high salinity form two parallel belts around the earth. Where really large rivers enter the sea in these belts the salinity is lowered, viz. at the mouths of the Zambesi, the Ganges, the Mississippi, and the rivers of Indo-China. (c) Proceeding polewards from the Trade Wind belt, the salinity gradually decreases until, in the poleward sections of the Arctic Ocean, it is only from 20‰ to 30‰. Here there is less rapid evaporation, more rain, more rivers, and a large supply of fresh water from melting ice. In general, the temperature of ocean water decreases from the equator, where the surface temperature is over 25° C. (77° F.), to the polar regions where the water is icy cold. The decrease in temperature polewards is not regular because of the occurrence of warm and cold currents. For instance, in the North Atlantic (about lat. 30° N.) the water on the western side, where there is a surface warm current (the Gulf Stream), will be warmer than on the eastern side, where there is a cold current.

## **Тема 16. The Movements of Ocean Waters. Currents and Tides**

***практическое занятие (2 часа(ов)):***

OCEAN CURRENTS. The regular movements of water from one part of the ocean to another are called "Ocean Currents". Ocean Currents are due to a number of much-debated causes, viz.: - (a) Temperature differences and convection. (b) Winds. (c) The shape of the land masses. (d) The rotation of the earth. It is impossible to separate these factors as they are very much interrelated, but a careful study of the map in conjunction with the following explanation will show how and when any one of these factors operates. Because the water at the equator is warmer and less dense than that in the polar areas, convection currents are set up in the oceans, resulting in a poleward flow of warm, light, surface water and a compensating creep of heavy, cold water through the ocean depths towards the equator. This convective effect is similar to that which produces currents of air (winds) in the atmosphere. Just as the winds are deflected by the rotation of the earth, so are the Ocean Currents.

TIDES. During a month's holiday at the seaside it can be observed that the level of the sea varies from day to day and week to week. Twice a day the level of the sea rises and the tide "comes in", and twice a day the level of the sea falls and the tide "goes out". The difference in level between high and low water is known as the amplitude of the tide. In the open ocean the difference between high and low water is only 2 to 3 ft, so that oceanic islands such as the Azores, Mauritius, Hawaii, etc., only experience a very small rise and fall of the tide. Our islands lie on the continental shelf where the sea is comparatively shallow. Because of this shallowness the lower part of the tidal wave is retarded, and there is a "piling up" of water resulting in very high tides. Tidal effects are rendered more spectacular by shelving shores. The estuaries of British rivers would be mere creeks were it not for the tides. The length of our estuaries accounts for the inland position of many British ports. Teddington (Middlesex) is literally the "Tide end town". In gulfs and very shallow estuaries this "piling up" is further accentuated. The oceanic tidal wave approaches our Atlantic coasts from the south-west, so that the time of high water gets later and later as one goes eastwards along our southern coast or north-wards along our western coast. The average amplitude of the tide around the British Isles is 10 to 20 ft, but in the Bristol Channel it is as much as 30 ft.

#### 4.3 Структура и содержание самостоятельной работы дисциплины (модуля)

N	Раздел Дисциплины	Семестр	Неделя семестра	Виды самостоятельной работы студентов	Трудоемкость (в часах)	Формы контроля самостоятельной работы
1.	Тема 1. THE EARTH AS A PLANET The World in Space The planetary System	2	1	подготовка домашнего задания	4	домашнее задание
2.	Тема 2. Proofs of the Earth's Shape The Size of the Earth and the Method of Locating Places on its Surface	2	2	подготовка домашнего задания	4	домашнее задание
3.	Тема 3. The Effect of the Earth's Revolution Twilight and Dawn Summer Time Measurement of Time Longitude and Time The Date Line	2	3	подготовка домашнего задания	2	домашнее задание
				подготовка к контрольной работе	2	контрольная работа
4.	Тема 4. THE BUILDING OF THE CONTINENTS The Earth's Covering THE PRINCIPAL CLASSES OF ROCKS Sedimentary Rocks	2	4	подготовка домашнего задания	4	домашнее задание

N	Раздел Дисциплины	Семестр	Неделя семестра	Виды самостоятельной работы студентов	Трудоемкость (в часах)	Формы контроля самостоятельной работы
5.	Тема 5. Non-Sedimentary Rocks, or Unstratified Rocks The Chief Rocks in the British Isles	3	1	подготовка домашнего задания	4	домашнее задание
10.	Тема 10. THE MAJOR LAND FORMS OF THE WORLD Mountains Plateaus Plains	3	2	подготовка домашнего задания	4	домашнее задание
11.	Тема 11. Volcanoes and their Eruptions Distribution of Volcanoes Probable Origin of Volcanoes	3	3	подготовка домашнего задания	2	домашнее задание
				подготовка к контрольной работе	2	контрольная работа
12.	Тема 12. Distribution of Land and Water THE OCEANS The Oceans Floor	3	4	подготовка домашнего задания	4	домашнее задание
13.	Тема 13. The Atlantic Ocean The Pacific Ocean	3	5	подготовка домашнего задания	4	домашнее задание
14.	Тема 14. The Covering of the Ocean Floor	3	6	подготовка домашнего задания	4	домашнее задание
15.	Тема 15. The Salinity of the Ocean The Salinity of Partially-Enclosed Seas Temperature of the Ocean	3	7	подготовка домашнего задания	2	домашнее задание
				подготовка к контрольной работе	2	контрольная работа
16.	Тема 16. The Movements of Ocean Waters. Currents and Tides	3	8	подготовка домашнего задания	4	домашнее задание
	Итого				48	

## 5. Образовательные технологии, включая интерактивные формы обучения

Освоение дисциплины "Иностранный язык для географов" предполагает проведение практических занятий с использованием методических материалов, учебных пособий, словарей и т.п., так и инновационных образовательных технологий с использованием в учебном процессе активных и интерактивных форм проведения занятий, включающих подготовку и выступление студентов на практических занятиях с фото, - аудио, видеоматериалами по темам занятий.

## 6. Оценочные средства для текущего контроля успеваемости, промежуточной аттестации по итогам освоения дисциплины и учебно-методическое обеспечение самостоятельной работы студентов

### Тема 1. THE EARTH AS A PLANET The World in Space The planetary System

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 2. Proofs of the Earth's Shape The Size of the Earth and the Method of Locating Places on its Surface**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 3. The Effect of the Earth's Revolution Twilight and Dawn Summer Time Measurement of Time Longitude and Time The Date Line**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

контрольная работа , примерные вопросы:

контрольная работа по темам: THE EARTH AS A PLANET, The World in Space, The planetary System, Proofs of the Earth's Shape, The Size of the Earth and the Method of Locating Places on its Surface. Ответить на вопросы: 1) What did people think about the earth in ancient times? 2) What has modern science discovered about the universe? 3) What is the Milky Way? 4) What are Nebulae? 5) What does each nebula consist of? 6) What is the Universe and its structure? 1) What does the Planetary System consist of? 2) What is an orbit? 3) How big our Solar System is? 4) Can you compare the size of Earth and Sun? 5) Is life similar to that on earth likely to develop on any other planet of the Solar System? 6) What do you know about the structure of the Solar system? 7) Characterise general peculiarities of the planets of the Solar system. 8) What two groups are the planets of the Solar system divided into, what is characteristic of each of them? 9) What new data concerning the Solar system have been obtained while exploring it with the help of spaceships and other modern devices? 10) List the kinds of objects existing in the Solar system. 11) Which factors are vital for the presence of life on this or that planet? 12) Suppose that the Earth suddenly happens to be on the orbit of Mars. What impact would it have on the climate of the earth? 13) What would happen to the surface of the earth and atmosphere if the Earth were on the orbit of Mercury?

## **Тема 4. THE BUILDING OF THE CONTINENTS The Earth's Covering THE PRINCIPAL CLASSES OF ROCKS Sedimentary Rocks**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 5. Non-Sedimentary Rocks, or Unstratified Rocks The Chief Rocks in the British Isles**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 10. THE MAJOR LAND FORMS OF THE WORLD Mountains Plateaus Plains**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 11. Volcanoes and their Eruptions Distribution of Volcanoes Probable Origin of Volcanoes**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

контрольная работа , примерные вопросы:

контрольная работа по темам: The Effect of the Earth's Revolution, Twilight and Dawn, Summer Time, Measurement of Time, Longitude and Time, The Date Line, THE BUILDING OF THE CONTINENTS, The Earth's Covering, THE PRINCIPAL CLASSES OF ROCKS, Sedimentary Rocks, Non-Sedimentary Rocks, or Unstratified Rocks, The Chief Rocks in the British Isles. Ответить на вопросы: 1) What is the structure of the Earth? 2) How is the geography of the Earth influenced by its shape and size? 3) How is geography of the Earth effected by space (cosmos)? 4) In what ways does the earth move? 5) What causes day and night? 6) What is called the orbit of the earth? 7) What is called the ?plane of the Ecliptic?? 8) Is the earth?s axis perpendicular to the plane of the ecliptic? 9) What is responsible for the change of the seasons? 10) What is the reason of different length of day and night? 11) How does the length of daylight differ in summer? 12) Why and how was ?Summer Time? introduced in some countries? 13) In what countries is it more effective? 14) Do you find that introduction of ?Summer Time? reasonable? Why? 15) How can the spread of a layer of silt over the sea floor be explained? 16) What gradually happens to the layer of silt? 17) Is it the only cause of the hardening of the sea floor? 18) What is strata? 19) What changes have taken place during 500 million years? 20) What are sedimentary rocks formed of? 21) How are deposits of coal formed ? 22) What is loess?

## **Тема 12. Distribution of Land and Water THE OCEANS The Oceans Floor**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 13. The Atlantic Ocean The Pacific Ocean**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 14. The Covering of the Ocean Floor**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема 15. The Salinity of the Ocean The Salinity of Partially-Enclosed Seas Temperature of the Ocean**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

контрольная работа , примерные вопросы:

контрольная работа по темам: THE MAJOR LAND FORMS OF THE WORLD, Mountains, Plateaus, Plains, Volcanoes and their Eruptions, Distribution of Volcanoes, Probable Origin of Volcanoes.

Ответить на вопросы: a) Fold mountains 1) How are mountains classified? 2) How are fold mountains formed? 3) What has caused such mountains as the Himalayas, Andes, Alps or Rockies to be raised? 4) How can you illustrate this process visually? 5) What is called anticlines and synclines? 6) What explanation was given to the fact of folding? 7) What is more recent explanation of mountain building? 8) What do new fold mountain ranges consist of? 9) Where are most of active volcanoes located? 10) What are the mountains of this type characterized by? 11) Can you prove that mountains are effective climatic barriers? 12) What are the great mountain systems important for? Can you give any examples? b) Block mountains 1) What is called a ?Block Mountain?? 2) What do the mountains of this type look like? c) Residual Mountains 1) What kind of mountain is called ?residual?? 2) How else are such mountains called? 3) Find mountains of this kind on the map. Plateaus: 1) What is called a plateau? 2) What are the plateaus, fringed by mountain ranges which tower above the plateau level, called? 3) Why are some plateaus named dissected? 4) Why do rivers of the Deccan of India flow eastwards? 5) How were the plateaus of basalt formed? 6) What are ancient plateau lands valuable for? 7) Why are plateaus in tropical areas preferable for settlements?

## **Тема 16. The Movements of Ocean Waters. Currents and Tides**

домашнее задание , примерные вопросы:

чтение, перевод текста, упражнения, словарь.

## **Тема . Итоговая форма контроля**

Примерные вопросы к зачету:

Вопросы к зачету:



- 1) In what ways does the earth move?
- 2) What causes day and night?
- 3) What is called the orbit of the earth?
- 4) What is called the "plane of the Ecliptic"?
- 5) Is the earth's axis perpendicular to the plane of the ecliptic?
- 6) What is responsible for the change of the seasons?
- 7) What is the reason of different length of day and night?
- 8) What is called a Solar Day?
- 9) What shape is the earth's orbit?
- 10) What are the seasons determined by?
- 11) What is called Perihelion/Aphelion?
- 12) Why do solar days vary in length?
- 13) What is called Apparent Time/ mean solar day/ the Equation of Time?
- 14) What do Igneous rocks include?
- 15) How are they formed?
- 16) What do such rocks look like?
- 17) What is a graphic example of Igneous rocks?
- 18) What are Metamorphic rocks?
- 19) Why is it often not easy to distinguish Metamorphic rocks from Igneous ones?
- 20) Can you give any examples of this process?
- 21) How does magma originate?
- 22) Speak about the stages that magma undergoes while cooling and crystallizing.
- 21) Speak about the importance of structure for classifying Igneous rocks.
- 22) What kinds of texture occur in Igneous rocks?
- 23) Explain in your own words what geology is.
- 24) What branches of science are related to geology?
- 25) What makes research in geology different from research in biology and chemistry?
- 26) List the ways by means of which the processes, taking place in the inside the Earth influence the life and culture of mankind.
- 27) Is a plain just low and level land? What does it consist of?
- 28) What four types of plains do you know? How is each type formed? Can you give example of each one?
- 29) Why have the plains of the world become the highly-developed and populated areas?
- 30) What is hydrosphere? What is the origin and evolution of water in nature and its most significant qualities?
- 31) What parts is World ocean divided into? What is the origin of ocean water? What are the reasons of changes of its level? What changes have taken place in the recent 100 years?
- 32) What do you know about the main types of change of the temperature of water of the World Ocean?
- 33) How does salinity change in different zones of the World Ocean?
- 34) How can you classify ocean tides? What is the range of changes of tides? In which regions of the Earth are tides at their maximum?
- 35) How are ocean currents classified?
- 36) What genetic types are ocean currents divided into? Give examples of ocean currents of different origin.
- 37) What are peculiarities of ocean currents in different latitudes?
- 38) Give brief characteristics of nature zones of the World Ocean.
- 39) Give brief characteristics of natural resources of the Ocean. How are they used nowadays?

### 7.1. Основная литература:

1. Уразметов, Ильдар Анварович. Physical geography: учеб. пособие / И. А. Уразметов ; ТГГПУ; под ред. А. Г. Мусина. - Казань: Отечество, 2007. - 136 с. - р.35.00.
2. Комарова, Анна Игоревна. Английский язык для географических специальностей = English for geographers: учеб. для студентов вузов, изучающих дисциплину "Иностр. яз." и обучающихся по спец. "География" / А.И. Комарова, И.Ю. Окс, Ю.Б. Бадмаева. - Москва: Academia, 2005. - 299, [2] с.; 22 см. - (Высшее профессиональное образование, Естественные науки). - Парал. загл.: English for geographers.. - Алф. указ.: с. 273-289. - Библиогр. в конце кн.. - ISBN 5-7695-2194-5((в пер.)), 3000 экз.

### 7.2. Дополнительная литература:

1. Практический курс английского языка. 3 курс: Учеб. для студентов пед. вузов по спец. "Иностранные языки" / ; В.Д.Аракин, И.А.Новикова, О.В.Афанасьева и др.; Под ред. В.Д.Аракина. - 4-е изд., перераб. и доп.. - М.: ВЛАДОС, 1999. - 431 с.: 4 л. ил.: ил.. - ISBN 5-691-00046-2: 53.20.

[ Детальная информация ]

2. Выборова, Галина Евгеньевна. Easy English. Базовый курс: Учеб. для учащихся сред. шк. и студентов неязык. вузов / Г.Выборова, К.Махмурян, О.Мельчина. - 2-е изд., испр. и доп.. - М.: АСТ-Пресс, 1999. - 379 с.: ил., табл.. - (Школьнику, абитуриенту, студенту). - ISBN 5-7805-0248-[: 17.10.

[ Детальная информация ]

3.

### 7.3. Интернет-ресурсы:

- английский для географов - <http://www.twirpx.com/file/974185/>  
географическое общество США - <http://geographyworldonline.com/teach.html>  
учебник - <http://www.chtivo.ru/book/797616/>  
учебник - <http://rudocs.exdat.com/docs/index-44159.html?page=20#2011557>  
ЭОР Общее землеведение. Атмосфера -  
<http://bars.kfu-elearning.ru/user/view.php?id=1480&course=517>

### 8. Материально-техническое обеспечение дисциплины(модуля)

Освоение дисциплины "Иностранный язык для географов" предполагает использование следующего материально-технического обеспечения:

1. Аудитория с мультимедиапроектором, ноутбуком и экраном.
2. Компьютерный класс доступом в Интернет.

Программа составлена в соответствии с требованиями ФГОС ВПО и учебным планом по направлению 050100.68 "Педагогическое образование" и магистерской программе Географическое образование .

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