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Кафедра иностранных языков

Д.А. Васильева
Г.А. Ободин

В ПОИСКАХ НАУЧНЫХ ОТКРЫТИЙ

Часть I

Методические указания
к изучению теоретического курса,
к практическим занятиям
для студентов очной и заочной форм обучения.
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Уважаемые студенты!

Данные методические указания имеют профессионально ориентированную направленность и нацелены на подготовку к Интернет-тестированию после изучения базового курса английского языка на ИЭФ. Согласно европейскому стандарту они выводят Вас на уровень владения английским языком *B2*. Поскольку Интернет-тестирование имеет своей основной целью проконтролировать, в первую очередь, Вашу компетентность в различных типах «чтения» (изучающее, ознакомительное, поисковое) и «письма» (главным образом, делового), то в соответствии с этим и построена структура методических указаний. В них Вы получите исчерпывающую информацию по всем дидактическим единицам, связанным с «чтением»:

1) ознакомительным (определение истинности утверждения, ложности утверждения);

2) поисковым (определение наличия или отсутствия в тексте запрашиваемой информации);

3) изучающим (элементы анализа информации, аннотирования, сопоставления, а также выделения главных компонентов содержания текста.

В отношении «письма» (как одного из видов речевой деятельности) Вы ознакомитесь с оформлением делового письма, электронного сообщения, письма-уведомления, письма-запроса, резюме, письма-заявления, служебной записки, повестки дня.

Мы будем рады принять все Ваши замечания в устной или в письменной форме. Это поможет нам в дальнейшей работе по совершенствованию содержания обучения на втором курсе ИЭФ.

Unit 1. The World Around Us

I. Before you read

1. Discuss these questions with your partner:

- Have you heard about the biosphere?
- What is the biosphere?
- Are we a part of the biosphere?

2. Vocabulary

Biosphere	[ˊbaiəuˌsfiə]	the parts of the Earth's surface and atmosphere where plant and animal life can exist
Earth	[ɜ:Ɵ]	the planet on which we live
Earth's crust	[krʌst]	the thick outer surface of the Earth
Environment	[inˊvairənmənt]	the place in which people live and work
Destruction	[diˊstrʌkʃn]	damage that is so severe that something stops existing or can never return to its normal state
Pollutant	[pəˊlu:tnt]	a substance that is harmful to the environment
Fertile	[ˊfɜ:tail]	fertile land is able to produce good crops or plants
Rubbish	[ˊrʌbiʃ]	things that you throw away because they are no longer useful
Creature	[ˊkri:tʃə]	anything that lives except plants
Potable	[ˊpəutəbl]	potable water is safe to drink
Superficial	[ˌsu:pəˊfiʃl]	a superficial person does not think about serious or important things

3. Read and translate sentences. Pay attention to the translation of underlined words

1. Sarah is so <u>superficial</u> – she only cares about how she looks.
2. He writes about living in a greedy and <u>superficial</u> society.
3. The villagers drank from wells <u>polluted</u> with toxic chemicals.
4. The new agency is responsible for controlling air <u>pollution</u>.
5. The streets were littered with <u>rubbish</u>.
6. We need to create a safe working <u>environment</u> for all employees.
7. A dirty <u>environment</u> is a breeding ground (рассадник) for germs.

4. Read the sentences below. Use the words given in capitals at the end of each line to form a word that fits the space in the same line

1. The biosphere is the layer of the Earth in which all … exists.	LIFELESS
2. The … biosphere was coined in 1875.	TERMINOLOGY
3. The exact … of the biosphere on Earth is difficult to calculate.	THICK
4. The biosphere is … because it is all of life.	IMPORTANCE

II. Reading I

1. Read the text. Find out the sentences with the words given in vocabulary. Translate them

The World Around Us

The biosphere is the region of the Earth's crust and atmosphere where life exists. It includes our physical environment and a biological community of interacting organisms. We are among these organisms that cannot survive without the environment. The environment is an everyday topic in our schools and homes, but we aren't doing much about it.

There are many examples of our destruction of the planet. Thousands of lakes are already lifeless and we continue putting toxic substances into the atmosphere. These pollutants (acidic particles and solutes) end up on the land in the water and become part of our daily diet. Every year we lose about 7 million hectares of fertile land. We are also destroying millions of hectares of forests that produce the oxygen we breathe. Our cities consume and contaminate the natural environment – they are like enormous parasites that need to eat everything around them to survive. We produce rubbish, consume rubbish and are surrounded by rubbish. We don't know what to do with it: we bury it, throw it in the seas, and we even send it to outer space!

We continue ignoring these facts, or blaming one another. And every day we decide on the lives of millions of creatures that share the planet with us. According to the United Nations, by 2025 there will be around 8,300 million people on Earth (around 40% more than today).

We have the means and the technology to restore the ecological balance.

We also have the ability to research into ways of living without damaging our environment: energy sources, synthetic food, potable water and so on. To solve these problems we need to leave behind our superficial differences and lifestyles. The Earth is a unit of life. What we do to our planet and to others shows what we are doing to ourselves. Our collective future depends on how we assume our individual responsibilities.

2. Read the following statements and decide if they are true or false or they don't have that information

	True	False	No information
1. The biosphere is the region of the Earth's crust and atmosphere where life exists.			
2. The biosphere includes our physical environment and a biological community of interacting organisms.			
3. There are no examples of the destruction of the planet.			
4. Thousands of lakes are already lifeless.			
5. Every year we lose about 10 million hectares of fertile land.			
6. Russian and American spaceships produce a lot of rubbish.			
7. According to the United Nations by 2025 there will be around 9000 million people on Earth.			
8. Our collective future depends on how we assume our individual responsibilities.			

Reading II

3. Check you understand the key words

Origin, existence, scientist, chemicals, hydrosphere, definition, boundaries, layer, depth, evolution, mankind, human reason, noosphere, positive, future.

4. Read the text carefully and check your guesses

The Biosphere

To understand what a biosphere is, it is a good idea to look at the origin of the word. “Bios” is a Greek word meaning life and life is what a biosphere consists of. It is everywhere on Earth where life exists.

The term biosphere came into existence in the second half of the nineteenth century, when a Russian scientist, Vladimir Ivanovich Vernadsky, put forward the idea. He was interested in geochemistry – how chemicals were distributed in the Earth’s crust, hydrosphere and atmosphere. His definition of the boundaries of the biosphere said it contained the hydrosphere and some of the troposphere. That is, from the lowest layer of the atmosphere, the area of weather change, to the upper part of the Earth’s crust, which meant to a depth of up to three metres. He felt that since the Earth had existed, the biosphere had also been in existence and it had been continually developing. This evolution had produced the world we now know.

While some people may see impact of mankind on the biosphere as negative, Vernadsky did not.

He argued that man’s technological activities were actually a part of the biosphere’s evolution, which due to human reason and technological effort would result in a better future. He called this the noosphere, taking the term from the Greek word “noos” meaning mind.

If we take a look around us nowadays at the environmental destruction we have caused, we may find it hard to agree with Vernadsky’s positive picture. Let’s hope the future will prove him right.

5. Phrasal verbs

Read the phrasal verbs below. Find out these phrasal verbs in the text. Translate the sentences with them.

- End up
- Depend on
- Consist of
- Look at
- Put forward
- Result in
- Come into
- Make up
- Put into

6. Discuss these questions with your partner

- What do you understand by the term biosphere?
- How do we affect our environment?
- What do you think will happen to the biosphere in the future?

7. Write about the impact of human beings on the biosphere

Good effects	Bad effects
• Create air pollution devices • …… • …… • ……	• make many animals extinct • …… • …… ……

III. Speaking & Writing

1. Agree or disagree

a) The biosphere is made up of all living things and their environments.
b) The first living creatures on Earth were in the seas.
c) The biosphere creates a negative environment.
d) Many types of plants and animals have disappeared.
e) The biosphere is the layer of Earth where only minerals are found.

2. Model Envelope

Thesaurus
Addressee – the person to whom the letter is addressed.
Envelope – a flat paper case for a letter or document with a part that you stick down to close it before you write an address on it and send it through the post.
Writer (sender) – the person who is writing the letter.
Postcode = zip code - a group of numbers, or letters and numbers that you write at the end of a person's address to help the postman find the exact area where they live.
Stamp - a small official piece of paper that you buy and stick on an envelope to pay for the cost of posting a letter or parcel.

writer's full name writer's street address writer's city /zip code writer's country	stamp (title) addressee's full name addressee's street addressee's city/state zip code addressee's country

Note

The writer's name and address should appear in the upper left hand corner of the envelope.

On the envelope, the English post office requires the writer's and the addressee's name on the first line.

The street address is on the second line.

The city/state zip code is on the third line.

And the name of the country is on the last line.

3. Look at the envelope. Match the numbers 1-10 with the parts of the envelope

(1) Sue Scott ***(2) 18*** ***(3) Victoria Road*** ***Hartfield*** ***Berkshire*** ***(4) HA6 4BJ*** ***(5) UK***	***(6) Paul Wright*** ***(7) 165*** ***(8) Biscay Street*** ***(9) Preston*** ***Lancashire*** ***(10) P23 8KJ*** ***UK***

1) writer's (sender's) name
2) writer's (sender's) house number
3) writer's (sender's) street
4) writer's (sender's) postcode
5) writer's (sender's) country
6) addressee's name
7) addressee's house number
8) addressee's street
9) addressee's town/city
10) addressee's country

Unit 2. Energy and the Earth

I. Before you read

1. Discuss these questions with your partner

- What is energy?
- Where does energy come from?
- What is solar energy?

2. Vocabulary . Fill in the gaps

Fossil	[ ]	an animal or plant, or part of one, that lived many thousands of years ago and is preserved in rock or as a piece of rock
fossil fuel	[ ]	a fuel such us coal or oil, made from decayed material from animals or plants that hived many thousands years ago
petroleum	[pə´trəuliəm]	oil found under the ground or under the bottom of the sea and used for making petrol for cars and chemical products
combustion	[kəm´bʌstʃən]	the process of burning
windmill	[´wind ˌmil]	a tall building with sails that turn in the wind and produce power to produce electricity
manure	[mə´njuə]	solid waste from farm animals, often mixed with other substances and used on crops to help them grow
dam		a wall built across a river to stop the water from flowing, especially in order to create a lake or to help produce electric power
sand	[sænd]	a loose pale brown substance that you find at a beach or in the desert, formed from very small pieces of rock
to decay	[di´kei]	to be gradually destroyed as result of a natural process of change, or to destroy something in this way
sediment	[´sedimənt]	a layer of a substance that forms at the bottom of a liquid
to seep		To flow into or out of something through small holes, usually when this should not happen

to dissolve	[di´zɒlv]	If a solid substance dissolves in a liquid, it is mixed into the liquid so that it becomes included in it
outline	[´autlain]	An explanation that includes the general points about something, but not the details
mold	[´məuld]	To give something a particular shape or form
to roam	[rəum]	To move or travel with no particular purpose

3. Match the words to make phrases

1) solar	a) gas
2) fossil	b) power
3) natural	c) energy
4) chemical	d) generator
5) nuclear	e) fuels
6) sulfur	f) element
7) global	g) dioxide
8) hot	h) warming
9) electric	i) water

4. Read the sentences below. Use the words given in capitals at the end of each line to form a word that fits the space in the same line

1. Most animals that became fossils lived in (1) … .	WATERING
2. The hard parts that (2) … were buried under moist layers or mud or sand.	REMAINTS
3. Sometimes water seeped into the (3)… and dissolved the animal remains.	ROCKY
4. Scientists who study dinosaurs (4)… fossils to learn about the creatures of the past.	USEFUL

II. Reading I

1. Read the text and find out the words given in the vocabulary

ENERGY AND THE EARTH

1 Energy is the power we use for transportation for heat and light in our homes, and for the manufacture of all kinds of products. Energy comes in two types of sources: nonrenewable and renewable.

2 Most of the energy we use comes from fossil fuels, such as coal, natural gas and petroleum. Once these natural resources are used up, they are gone forever. Uranium, a metallic chemical element, is another nonrenewable source, but it is not a fossil fuel. Uranium is converted to a fuel and used in nuclear power plants.

The process of gathering these fuels can be harmful to the environment. In addition, to produce energy, fossil fuels are put through a process called combustion. Combustion releases pollution, such as carbon monoxide and sulfur dioxide, and may contribute to acid rain and global warming.

3 Renewable sources of energy can be used over and over again. Renewable resources include solar energy, wind, geothermal energy, biomass and hydropower. They generate much less pollution – both in gathering and production – than nonrenewable sources.

4 Solar energy comes from the Sun. Some people use solar panels on their homes to convert sunlight into electricity.

5 Wind turbines, which look like giant windmills, generate electricity.

6 Geothermal energy comes from the Earth's core. Engineers extract steam or very hot water from the Earth's crust and use the steam to generate electricity.

7 Biomass includes natural products such as wood, manure and corn. These materials are burned and used for heat.

8 Dams and rivers generate hydropower. When water flows through a dam, it activates a turbine, which runs an electric generator.

2. Read the text again. Choose the most suitable heading from the list (A-H) for each part 1-8 of the article

1	A. Wind turbines
2	B. Biomass
3	C. Energy
4	D. Hydropower
5	E. Renewable sources of Energy
6	F. Solar Energy
7	G. Nonrenewable Sources of Energy
8	H. Geothermal Energy

Reading II

3. Read the text about fossils and say how fossils form

FOSSILS

Fossils are the remains or imprints of prehistoric plants or animals. They are found in sedimentary rock (formed from sand and mud), coal, tar, volcanic ash or fossilized tree sap. Usually only the hard parts of plants and animals, like their bones and teeth, become fossils.

HOW FOSSILS FORM

Most animals that became fossils either lived in water or were washed into a body of water. After an animal died, its soft parts, such as its fur, skin, muscles and organs, decomposed. The hard parts that remained were buried under moist layers of mud or sand, where there was no oxygen or bacteria to cause them to decay. Over time, many of these bodies of water dried up. The sediment that covered the bones eventually turned into solid rock. Over millions of years, minerals in the surrounding rock partly or completely replaced the original animal material and formed a fossil.

Sometimes water seeped into the rocks and dissolved the animal remains. When this happened, the outline of the animal remained intact between the layers of rock, leaving a fossil in the form of a natural mold.

Paleontologists, or scientists who study dinosaurs, use fossils to learn about the creatures who roamed Earth millions of years ago.

4. Read the text again and say if the following sentences are true or false or they don't have that information

	True	*False*	*No information*
1. Fossils are the imprints of prehistoric plants or animals.			
2. They are found only in sedimentary rock.			
3. Usually only the hard parts of plants and animals become fossils.			
4. After an animal died, its soft parts didn't decompose.			
5. Richard Owen studies fossils of several huge animals found in England.			

5. Phrasal verbs

Read the phrasal verbs below. Find out these phrasal verbs in the texts above. Translate the sentences with them.

- Dry up
- Turn into
- Use up
- Come from
- Put through

III. Speaking & Writing

1. Discuss with your partner the following topic. How would life be different without electricity?

Talk about:

- things we use electricity for
- places that use electricity
- Can you live without a TV, a CD - player, a fridge, a computer? Why? Why not?

2. Write a short essay to answer the question: « How to make our environment cleaner? »

* First read text 1 again.

Then plan essay. (Some people worry that most of fossil fuels are harmful to the environment. However, there are ways to lessen their harm. Renewable sources of Energy are used throughout the European countries.)

3. Addresses in English

Thesaurus

ZIP Code (AmE) = Postcode (BrE) – a group of numbers; or letters and numbers, that you write at the end of the person's address to help the post man find the exact one where they live.

Title –a word or abbreviation that is used before someone's name to show their profession, social status etc. (ex. 'Doctor', 'Mrs', etc.)

Match the parts of the address (a-h) and their names (1-8)

a) Mr.	1) title
b) John	2) first name
c) Black	3) surname
d) 10,	4) house number
e) Oxford Street	5) street name
f) London	6) town/city
g) WI 9FL	7) postcode (ZIP code)
h) UK	8) country

Unit 3. Are you a saver or an energy waster?

I. Before you read

1. Discuss these questions with your partner

1. What planet do you live on?
2. Do you know how many people live on our planet?
3. What are you doing to help the planet?

2. Vocabulary

Match the words with their translations

1	to pick up speed	[spi:d]	a) нехватка, недостаток
2	drastic	[dræstik]	b) недоедание, недостаточное питание
3	shortage	[ˊʃɔ:tiʤ]	c) мусорная свалка
4	malnutrition	[ˌmælnjuˊtriʃn]	d) злоупотреблять, слишком долго использовать
5	to overuse	[ˌəuvəˊju:z]	e) набирать скорость
6	to replace	[riˊpleis]	f) мусор, отходы
7	brainpower	[ˊbreinˌpauə]	g) решительный, крутой
8	landhill	[ˊlændhil]	h) отравлять
9	garbage	[ˊga:biʤ]	i) выхлопные газы
10	to gobble up	[gɒbl]	j) мыслительные способности, интеллект
11	precious	[ˊpreʃəs]	k) пополнять, восстанавливать
12	to poison	[ˊpɔizn]	l) заглатывать, захватывать
13	to clog up	[klɒg]	m) драгоценный
14	fumes	[fju:mz]	n) набивать, забивать, запруживать

3. Read the sentences. Choose the right word, given in brackets.

1. Feel crowded? But in 2150 the population of our (planet, country) will be 694 billion people!
2. Growing cities gobble up precious natural resources, (destroy, damage) and poison huge areas of land, along with the plants and animals that live there.

3. The smoky landscapes of Shenyan, China, one of the world's ten dirtiest (cities, towns). "Living here is like living in hell," its (inhabitants, citizens) say.
4. Millions of cars are (clogging up; occupying) our roads; competing for free space. Car (garbage, fumes) are choking our cities and towns.
5. As a result of human (work, activity) 50 million acres of forest disappear each year.

4. Match the words to make phrases

1) world's	a) water
2) medical	b) health
3) drastic	c) population
4) clean	d) demands
5) many	e) care
6) poor	f) step
7) food	g) countries
8) huge	h) resources
9) planet's	i) shortages

II. Reading I

1. Read the text. Find out the sentences with the words, given in vocabulary. Translate them

What shall we do with our packed planet?

Do you know how many people live on our planet? The official number is 6,000,000,000. Six billion! Some experts believe that by the middle of the century our tiny planet will become overcrowded.

The world's population is indeed growing very quickly. It adds up to 184 people every minute, 11,040 every hour, 264,960 every day and 97 million every year! Just imagine how many people there will be on our planet by the year 2050 if the present trend continues.

Of course, the world's population hasn't always expanded so quickly. In fact, the number of people on the planet started off growing very slowly. That's because people didn't live as long as they do today.

As time passed, better medical care and nutrition and cleaner water helped people live longer. Population growth began to pick up speed. Before long, the world's population doubled − and it has kept doubling!

In China a very drastic step was taken to slow population growth: a policy, started in 1979, does not allow most parents to have more than one child. Imagine a land where most kids have no brothers or sisters!

Every new person added to the planet needs food, water, shelter, clothes and fuel. More people mean more cars, roads, schools, hospitals and shops.

The trouble is our planet's riches are limited. Take water, for example: although water covers most of the planet, less than 1% of it can be used for drinking and washing. One out of every 13 people around the world does not always have enough clean water. Food shortages are even more common. In many countries, there is simply not enough food to feed the growing population. Each day 40,000 children die from malnutrition. 150 million children in the world suffer from poor health because of food shortages. Worldwide, 1 of every 7 people does not get enough to eat.

Huge demands for food have forced farmers to overuse their land. When the land is replanted too often, nature has no time to replace the soil's nutrients.

As more people drive more cars, use more electricity, throw away more litter, and cut down more trees, our planet becomes more and more polluted.

Although every person uses the planet's resources, some people use a lot more than others. The richest billion people - especially Americans - use the most resources. They also produce the most waste.

Of course, having 6 billion people also means that there is more brainpower around to find a way out.

2. Read the text again and say if the following sentences are true or false or they don't have that information

	True	False	No information
1. The world's population adds up 97 million every day.			
2. In fact, the number of people on the planet started off growing very slowly.			
3. People in ancient times lived as long as they do today.			
4. Population growth began to pick up speed in the 18 th century.			
5. In China a very drastic step was taken to slow population growth in 1979.			
6. Chinese policy, started in 1979, does not allow most parents to have more than two children.			
7. Our planet has a lot of problems to survive.			
8. The richest people use the most recourses and produce the most waste.			
9. The people of the Russian Federation don't produce a lot of waste.			

3. Phrasal verbs

Read the phrasal verbs below. Find out these phrasal verbs in the text. Translate the sentences with them.

1. Cut down
2. Throw away
3. Add up
4. Start off
5. Pick up

Reading II

4. Read Sun quiz and find out if you are a super saver or an Energy Waster?

Are you a super saver or an energy waster?

▲ I walk, cycle or use public transport whenever possible.

● If I remember, I turn off the TV, lights and heaters when I'm not using them.

▲ I take old newspapers, bottles and cans to the recycling center regularly.

■ I love fast food so I get my parents to buy pizzas and hamburgers instead of locally-grown food.

▲ I encourage my parents to buy energy-efficient products.

● I sometimes put on an extra sweater if I'm feeling cold but it's easier to turn the heating up.

■ I get my parents to drive me to school and the shops whenever possible.

▲ I prefer reading a book to playing computer games or watching TV.

■ I like to leave all the lights in the house − it looks much cosier.

● I sometimes buy energy-efficient batteries for my Discman and computer games.

■ I throw empty drink cans in the bin.

▲I always have a shower, not a bath, to save water.

Quiz interpretations

to do one's bit- вносить свою лепту
heater ['hi:tə]- обогреватель
recycling center [ri:'saikliŋ ,sentə]- пункт утилизации (переработки) отходов
locally-grown ['ləukəli ,groun]- местного производства

to encourage [in'kʌriʤ]- поощрять, поддерживать

energy-efficient [ˊenəʤiˊfiʃənt]- энергосберегающий

extra ['ekstrə]- лишний, дополнительный
cosy ['kəuzi]- уютный
bin [bin]- урна, мусорный бак
pollution [ˌpəˊluʃn] – загрязнение окружающей среды

to supply [səˊplai] - снабжать
there's room for improvement [im'pru:vment]- над этим надо ещё поработать
dedicated [ˌdediˊkeitid] - убежденный

to be keen -быть заинтересованным, стараться

opportunity [ˌɒpə'tju:niti]**-** возможность

to keep up- продолжать

■ If you ticked mainly - squares.
Oh, dear! You're not a Super Saver at all yet! Just stop to think how much pollution you're creating to supply your energy needs. Start NOW! Help stop dangerous climatic change.
● If you ticked mainly - circles.
Hmmm, you know all about the problems of wasting energy, but there's still room for improvement. With just a little more effort, you could really be a Super Saver and help cut pollution. Together we can make a difference.

▲ If you ticked mainly – triangles.
You are a dedicated Super Saver, that's for sure! You're keen to save energy at every opportunity. Keep up the good work, and tell your friends about what you do!

- ***Are you a super saver ?***
- ***Are you an energy waster?***

III. Speaking and Writing

1. Discuss these questions with your partner

- What can we do about overpopulation? Is there a way out?
- Do you believe that we can solve all our environmental problems?
- Is it possible to save the Earth's resources? How to do it? Your ideas.
- Some people say that the Chinese government is right: the population should be limited. What is your point of view?
- Others say that no government should make rules about family size. What do you think?

2. Envelope (Готовимся к Интернет-экзамену)

Here is an envelope. Match numbers ***1 – 6*** with the names of the parts of the envelope.

(1) Hanston Electrics, 48 (2) Golden Road, Manchester (3) M11 4NS England (4) The Music Shop, 45 (5) Winston Road, London (6) WC2 10 H

- The ZIP Code in the return address
- The addressee's company name
- The sender's name
- The street name in the mailing address
- The ZIP Code in the mailing address
- The street name in the return address

Unit 4. Watersheds

I. Before you read

1. Discuss these questions with your deskmate

- What places can you see water?
- Where does it come from there?
- What is a watershed?

2. Vocabulary

Tributary	[ˊtribjut(ə)ri]	A small river that flows into a larger river
funnel	[ˊfʌnl]	To move, or make something move, from one place to another through a narrow tube, pipe, or passage
glacier	[ˊglæsiə]	A very large mass of ice that moves very slowly
melt	[melt]	To change a solid substance into a liquid
spring	[spriŋ]	Water that flows up from under the ground and forms a small stream or pool
waterfall	[ˊwɔ:təˌfɔ:l]	A place where water flows over the edge of a cliff, rock or other steep place onto another level below
downstream	[ˌdaunˊstri:m]	In a position further along a river or stream as it flows in the direction of the sea
surface	[ˊsɜ:fis]	The top layer of water or land
reservior	[ˊrezəvˊwa:]	An artificial or natural lake where water is stored so that it can be supplied to the houses in an area
ditch	[dit∫]	A long narrow hole dug along the side of a road or field, usually so that water can run into it
wetlands	[wetlændz]	Low land that is often covered with water from the lake, river, of sea next to it
pore	[pɔ:]	1) Gone of the vary small holes in your skin that can pass through sweat 2) a very small hole in the surface of a plant
impermeable	[imˊpɜ:miəbl]	Something that is impermeable does not let liquid or gas pass through it
drain	[drein]	A pipe or passage through which water or waste liquid flows away

saturate	[ˊsætjəˌreit]	To make something completely wet
aquifer	[ˊækwif ə]	A layer of earth or rock that contains water or that water can pass through
sediment	[ˊsedimənt]	A layer of substance that forms at the bottom of a liquid
fertilizer	[ˊfɜ:təˌlaizə]	A natural or chemical substance added to soil in order to help plants grow
lawn	[lɔ:n]	An area of grass that is cut short, especially in someone's garden

3. Phrasal verbs

Run out – to use all of something so that you do not have any left
Feed into – to provide a supply of something for a machine
Fall over – if something falls over, it falls so that its front is on the ground
Pick up – to lift someone or something up from a surface
Wind up – to be in a particular place or situation.

4. Read the phrasal verbs and their definitions above. Fill in the missing phrasal verbs

1. Rainwater and snowmelt which had collected below ground _____ as a spring and _____ the river.
2. A waterfall occurs where a stream or river _____ a rocky ledge.
3. As water flows through a watershed it _____ sediments from the land.
4. Eventually some of the particles _____ in a stream or aquifer.

5. Read the sentences below. Choose the right option.

1. Reservoir is an artificial lake in which (water, waters, watershed)_____ is being stored for later use.
2. All rives have many features in (commonly, common, uncommon)_____.
3. Each watershed (function, functions, functioned) _____ that water like a giant funnel.
4. As water flows through a watershed, it picks up sediments and other (materials, material, materially) _____ from the land
5. Most of the (parts, particles, particular) _____that water transports are not pollutants.

II. Reading I

1. Read the text. Find out the sentences with phrasal verbs given in ex. 3 Translate them

WHAT IS A WATERSHED?

If you wanted to track your water from its source to your kitchen sink, what would you have to do? You'd need to explore a watershed.

A watershed is the land area drained by an entire river system or by a river and its "branches" or tributaries. It's an area in which water flows from high land to lower land. A large watershed contains many smaller watersheds. Each watershed functions like a giant funnel, channeling water in a specific direction. Although no two river systems are exactly alike, all rivers have many features in common.

High in the mountains, a glacier melts and the water flows down the mountainside. Rainwater and snowmelt, which had collected below ground, run out as a spring and feed into the river. Above ground, water that has collected in the lake flows into a tributary. A waterfall occurs where a stream or river falls over a rocky ledge. As the river winds downstream, the land levels out and the river flows slowly to the sea.

At any point in a watershed, water flows along the surface of the land as surface water, and. underground as groundwater. Surface water collects in streams, rivers, lakes, wetlands, and man-made reservoirs, ditches, and storm drains. Flowing beneath the earth's surface, groundwater comes primarily from water that seeps through the soil and into pores and cracks in rock. When water encounters an impermeable layer and can move down no farther, it forms an aquifer−a zone saturated with water. The water in an aquifer flows very slowly, like a huge, slow-moving underground lake. As water flows through a watershed it picks up sediments and other materials from the land. For example, when water flows down a mountain, it takes soil and rock particles along for a ride. Eventually some of the particles .wind_ up in a stream or aquifer. Most of the particles that water transports are not pollutants−but some are. Water that flows through a suburban area is likely to pick up chemical fertilizers and pesticides used on lawns. Water that flows through a mining area or construction site may pick up heavy metals, minerals, and sediments.

2. Read the text again. Match the words with their description.

Body of water	Description
1. Stream	***a***) water collected in a depression in the land, fed by run of underground springs.
2. River	***b***) a large body of salt water
3. Lake	***c***) a channel formed by water draining from the surface of the ground or flowing from underground

4. Ocean	***d***) an artificial lake in which water is being stored for later use
5. Reservoir	***e***) streams joined together to form a larger body of flowing water

Reading II

3. Read the text. Discuss with your partner the question «What is water in your life? »

WATER

Without water, life could not exist. Because water is essential to all life, we must manage it intelligently and carefully. We think there's plenty of it—in oceans, lakes, rivers, and streams. It may even seem as though we have more water than we need.

Water is essential to people in more ways than you might think. We need water for cooking, bathing, transportation and recreation. We eat aquatic plants and animals. We use water to irrigate our crops, and to manufacture products.

Most of the water on earth – 97 percent – is saltwater stored in oceans. Only about three percent of the earth's water is fresh water – and most of that is locked up in ice caps and glaciers.

There will never be any more water on earth than there is now. The same water is simply recycled over and over again. Just think – the water we are using now is the very same water that the dinosaurs used millions of years ago.

4. Read the text again and say if the following sentences are true or false or they don't have that information

	True	False	No information
1. Life could exist without water for more than two months.			
2. There is plenty of water in lakes, rives, and streams.			
3. People don't need water for transportation and recreation.			
4. Most of the drinking water is in Russia.			
5. We eat aquatic plants and animals.			
6. We can't recycle water.			
7. The author states that the water we are using now is the very same water that the dinosaurs used millions of years ago.			

III. Speaking and Writing

1. Read the idioms and phrases below. They are related to water, water vessels, and bodies of water. Guess what they mean

1. He is up the river without a paddle.
2. She is a big fish in a little pond.
3. This is a watered down version of her speech.
4. They are just trying to keep their heads above water.
5. They are just two ships passing in the night.
6. You are in hot water now!
7. That idea won't hold water.
8. Still waters run deep.
9. She poured cold water on my honeymoon plans.

2. Envelope (Готовимся к Интернет-экзамену)

Here is an envelope. Match *1 – 6 with* the names of the parts of the envelope.

(1) Foreign Language Institute 555 (2) Deer Run Lane Aurora, (3) CO 80014 (4) Sandberg Educational Inc (5) Orchard Ridge Corporate Building Two, Fields Lane (6) Brewster, NY 10509

- The street name in the mailing address
- The addressee's company name
- The sender's company name
- The street name in the return address
- The town in the mailing address
- The ZIP Code in the return address

Unit 5. What is our water?

I. Before you read

1. Discuss these questions with your partner

- What is water?
- What colour is water?
- What smell does water have?
- Do you think water we drink has aquatic animals?

2. Vocabulary

tap	[tæp]	An object for controlling how much water or liquid comes out from a pipe or container.
rural	[ˊruərəl]	Relating to the countryside or in the countryside.
basin	[ˊbeisin]	A large area of land whose surface water all flows into a particular river or lake.
aqueduct	[ˊækwiˌdʌkt]	A structure like a bridge that takes water across a valley
sewage	[ˊsu:iʤ]	Waste substances, especially waste from people's bodies, removed from houses by a system of large underground pipes called sewers
detergent	[diˊtɜ: ʤ (ə)nt]	A liquid or powder used for washing clothes or dishes.
glacier	[ˊglæsiə]	A very large mass of ice that moves very slowly.
excess	[ikˊses]	More than is usual or necessary A lager amount of something than is usual or necessary.
algae	[ˊælʤi:]	Plants that have no roofs, stems or leaves and grow in water or in other wet places.
sink	[siŋk]	A large open container for water, usually fixed to a wall and connected to pipes that bring the water and carry it away.

3. Match the words to make phrases

1) nitrogen-rich	a) algae
2) surrounding	b) matter

3) green	c) substances
4) industrial	d) pipes
5) decaying	e) soil
6) underground	f) waste

4. Read the sentences below. Use the words given in capitals at the end of each line to form a word that fits the space in the same line

1. Greenish colour may indicate that the water (1…) different kinds of waste.	Container
2. Orange-red colour may indicate that the water contains (2…)	Chemistry
3. Milkiness may indicate that the water contains (3…) waste from pulp and paper wills.	Industry
4. Muddiness may indicate that the water contains an excess of soil (4…)	Partly
5. In some small communities people get their water from (5…) well and carry it home in pots or buckets.	Publication

II. Reading I

1. Read the text and find out information about the following water sources: public well, public reservoir; private well; river or lake

WHERE DOES OUR TAP WATER COME FROM?

Drinking water starts as rainwater. It's collected underground or on the earth's surface, and then it's piped to our taps. Most big cities have complicated water supply systems that pipe water to many thousands of people. In rural areas, the water in each house may come directly from an underground well. Where does the tap water in your university come from? It may come from one of the sources below.

A public well pumps water from underground and distributes it to entire communities.

A private well is built on private property and shared by only a few people, such as the members of a family. A farmer may own many wells that provide both drinking water and irrigation water.

A public reservoir is a specially built basin in which water is stored. (A natural lake may be modified to serve as a reservoir.) A small reservoir may provide water for just one community. Large reservoirs may supply many communities with water. Underground pipes or aqueducts may transport water hundreds of miles from a reservoir to a community.

A river or lake can provide water to a public facility that distributes the water. Or the water from a river or lake can be piped directly to the tap without going through a public facility.

2. Read the text again and say if the following sentences are true or false or they don't have that information

	True	False	No information
1. Most large cities have complicated water supply systems			
2. The Russian Federation has a lot of water sources.			
3. A public well pumps water from underground.			
4. A private well distributes water to entire communities.			
5. A public reservoir is a specially built basin in which water is stored.			
6. The Russian Federation has got a state programme for the development of water supply systems.			
7. A river or lake can not provide water to a public facility that distributes the water.			

Reading II

3. Read the text. Find out the sentences with the phrases from ex.3

INDICATORS OF POLLUTANTS

How can we tell if our water is at risk?

I. Water is considered "at risk" when it contains materials that can harm people and other organisms. These harmful materials are called pollutants. Pollutants may be chemicals, industrial waste, small particles of soil or sewage.

II. The colour and clarity of water can tell you a lot about whether it is polluted. Here are some sings to look for:

Greenish colour – may indicate that the water contains fertilizers, sewage, or animal waste. The greenish colour comes from green algae that eat nitrogen-rich substances (such as fertilizers, sewage, or animal waste), which makes them multiply like crazy.

Orange-red colour – may indicate that the water contains oil, blood from meat-processing plants, or chemicals from mines. But don't be fooled – orange-red water mainly contain a lot of natural tannin from nearby trees and shrubs or iron from surrounding soil.

Multicolour – may indicate that water contains oil. Dark-red, purple, blue and black might mean that dyes from a textile mill or leather-tanning factory have got into the water.

White foam – may indicate that water contains detergent.

Milkiness – may indicate that the water contains industrial waste from pulp and paper mills or dairies. But keep in mind that the meltwater from some glaciers is naturally milky looking.

Muddiness – may indicate that the water contains an excess of soil particles, sewage, algae, plankton, or industrial waste. Some water, however, is just naturally muddy looking.

III. The smell of water is another good indicator of pollution. Here's what some odors might mean:

Rotten-egg smell – may indicate that the water contains sewage or industrial waste.

Rank or foul smell (like the smell of barnyard or manure) – may indicate that the water contains sewage, livestock waste, too much algae, or decaying matter.

Harsh, bitter, or acrid smell (like the smell of drain cleaner or ammonia) – may indicate that the water contains industrial waste.

Chlorine smell (like household bleach) – may indicate that the water contains overtreated sewage.

IV. The presence of animals in water can also reveal a lot about the quality of the water. Generally, the greater variety of animals in water, the cleaner that water is likely to be.

V. Where in our watershed does your drinking water come from? Some folks depend on surface water, such as lakes and rivers; others use the water that collects underground. In some small communities people get their water from a public well and carry it home in pots or buckets. Many big cities rely on a network of pipes, pumps, and other equipment that cleans and carries water from watershed to kitchen sink.

4. Read the text again. Answer the questions in your own words

1. What does the colour of the water tell us?
2. What does the smell of the water tell us?
3. What does the presence of aquatic animals tell us?
4. What are the sources for pollutants in the watershed?

III. Speaking and Writing

1. Discuss these ideas with your partner

1. How has the topic of water been presented:

In scientific literature?

2. At the lessons of different school subjects? University courses?
3. In fiction literature?
4. In poetry?
5. In folklore (traditional stories, sayings, beliefs, music, art, etc.)
6. In programmes of local water authorities
7. In programmes of local health officials

2. Memos

Thesaurus

Memo is a short note that you send to someone you work with.

A ***memo*** is an internal company document that is normally impersonal and formal in style. It can be sent to one person or a number of people within the organization and may be put on a notice board. It should :

- state who it is to
- state who it is from
- have a title explaining what it is about,
- and a date
- state the purpose in the opening paragraph
- be as brief as possible.

3. Read the memo and answer the questions

1. What is the purpose of the memo?
2. How will apprentices be chosen?
3. What should the team leaders in the Maintenance Department do now?

KEY STONE ENGINEERING

122 -128 Highland Street
Newby

Tel: 0044 547 222234
email: enquiries@keystone.co.uk

Memo

To: Maintenance Department

From: Training Manager

Subject: Six Apprenticeship places starting September 2010
Date: 14 May 2010

A decision has been made by senior management that apprenticeships for six Maintenance Technicians will be made available to start in September 2010. Advertisements inviting applicants will be placed in national newspapers in June. Interviews will be arranged for the week beginning 3 July.

The apprenticeships will be for three years and will consist of on-the-job training under supervision in the Maintenance Department and day release one day a week to the local college.

Would team leaders please attend a meeting in room D on Thursday 17 May at 9 a.m. to discuss possible skilled supervisors for the apprentices and the apprentices' work rotation.

Unit 6. The Food Chain

I. Before you read

1. Discuss these questions with your partner:

- Have you heard about food chain?
- What is a food chain?
- What are your eating habits?

2. Vocabulary

Consumer	[kən´sju:mə]	someone who buys and uses goods and services
Eagle	[´i:gl]	a large bird that kills other birds and animas for food
Producer	[prə´dju:sə]	a person, or company, or a thing that produces something
Seed	[´si:d]	a small hard part produced by a plant that can grow a new plant of the same type
Herbivore(s)	[´hɜ:bi˛vɔ:]	an animal that eats only plants
Carnivore(s)	[´ka:ni˛vɔ:]	an animal that eats other animals
Fungi	[´fʌŋʤi:]	a type of plant without leaves, flowers or green colour that grows especially in wet conditions or on decaying matter (mushrooms, yeasts, etc.)
Decomposer	[˛di:kəm´pəusə]	a destroyer
Link	[´liŋk]	a connection
Human	[´hju:mən]	or human being – a person
Climate change	[´klaimit]	the changes that affect our weather
Consume	[kən´sju:m]	to eat something
Damage	[´dæmiʤ]	to harm something
Destroy	[di´strɔi]	to kill something
Organism	[´ɔ:gənizm]	a living thing
Moisturize	[´mɔistʃə˛raiz]	to make your skin less dry
Floss	[flɒs]	to clean between your teeth with dental floss
Pasta $_{n}$	[´pæstə]	an Italian food made from flour and water, and sometimes eggs

Sauce $_{n}$	[sɔ:s]	a liquid food that you put on other foods to give them a particular flavour
Inhabit $_{v}$	[in´hæbit]	to live in a particular place
Survive $_{v}$	[sə´vaiv]	to stay alive despite an injury, illness, war, etc.
Vulture(s) $_{n}$	[´vʌltʃə]	a large bird that eats the bodies of dead animals

3. Match the words to make phrases

- food
- own
- first-level
- big
- important
- natural
- seat
- crossword
- orange

1) puzzle
2) juice
3) chain
4) causes
5) energy
6) animals
7) consumers
8) organisms
9) belt

4. Read the sentences below. Use the words given in capitals at the end of each line to form a word that fits the space in the same line

1. The earliest forms of (1)… were very simple organisms- similar to (2)… bacteria.	LIFELESS MODERNIZM
2. Over millions of years more complex organisms evolved to (3)… the land, the sky and the oceans.	INHABITANT
3. They all depended on each other to (4)… .	SURVIVAL
4. This ladder is (5)… as the food chain.	KNOW
5. The first step of the ladder is made up of (6)… .	PLANTFUL
6. Animals (7)… the plants, bigger animals eat the smaller animals, and so on.	EATABLE

II. Reading I

1. Read the text. Find out the sentences with the underlined words. Translate them

The Food Chain

Link 1

A <u>food chain</u> begins with a plant. It takes its energy from the sun. Plants also need water, oxygen and carbon dioxide to grow. Plants are <u>producers:</u> they produce their own energy.

Link 2

Some animals eat plants or seeds to get their energy. Examples of these <u>herbivores</u> are deer, giraffes, zebras, mice and some birds. They are first-level consumers.

Link 3

Some other animals are carnivores: they eat other animals, such as the first-level consumers. Examples are lions (killing and eating a zebra), snakes (eating a mouse), or a cat (eating a bird). These are second-level consumers.

Link 4

There can be third-level consumers, too. Who eats the snake? Perhaps an eagle. What about cat? A bigger animal, like wolf. And the lion? Does anything eat a lion? And what about vultures? They eat a lot of different dead animals. Ugh! But, in fact, this cleans up the environment!

Decomposers

There are other important organisms in the food chain. Examples are fungi and bacteria. These consume dead plants and animals, and then this food returns to the earth.

Why are Food Chains Important

_____ They remind us that, if we damage or destroy one link in the chain, this affects the next one. So if humans damage plants, the producers, there is no food for the first-level consumers. This can affect the second-level consumers and the third-level consumers, too. The damage to plants can be from natural causes (flood, drought, or climate change), or from human causes (pollution or destruction). The result will be the same. Ultimately, there will be no food for humans, either.

2. Read the following statements and decide if they are true or false or they don't have that information

	True	False	No information
1. A food chain begins with an animal.			
2. Plants are producers: they produce their own energy.			
3. Some animals eat grass to get their energy.			
4. Deer, zebras, giraffes are carnivores.			
5. Some animals eat other animals.			
6. There are decomposers in the food chain.			
7. Any link can't exist without other ones.			
8. No one can eat a lion.			
9. Vultures eat a lot of different dead animals.			

Reading II

3. Complete the gaps with the words from the box below

walking, energy, water, muscles, floss, calcium, moisturize, wear, listen, read

Simple Ways to Improve Your Health

1. Eat breakfast. Breakfast gives you … for the morning.
2. Go for a walk. … is a good exercise, and exercise is necessary for good health.
3. … your teeth. Don't just brush them. Flossing keeps your gums healthy.
4. Drink eight cups of water every day. … helps your body in many ways.
5. Stretch for five minutes. Stretching is important for your … .
6. … a seat belt. Every year, seat belts save thousands of lives.
7. Do something to challenge your brain. For example, do a crossword puzzle or … a new book.
8. … your skin and use sunscreen.
9. Get enough … . Your bones need it. Yogurt and milk have calcium. Or drink orange juice with calcium added.
10. Take a "time-out" – a break of about 20 minutes. Do something different. For example, get up and walk. Or sit down and … to music.

4. Find the opposites to the words below

Morning –
Good –
Big –
Clean –
Destroy –
Dead –
Difficult –
Different –
New –

5 .Complete this survey about the foods you eat. Compare your eating habits with your deskmate

Eating Habits

Things I eat …	**every day**	**two/three times a week**	**about once a week**
meat			
fish & seafood			
fruits			
vegetables			
eggs			
bread			
cakes/sweets			
pasta			
cereals			

III. Speaking & Writing

1. Do you agree or disagree?

- A food chain takes its energy from the sun.
- A food chain begins with herbivores.
- Plants are producers: they produce their own energy.
- A food chain contains some links.
- These links all depended on each other to survive.
- The first step of the food chain can't exist without other links.
- Fungi and bacteria are the most important organisms in the food chain.
- If you want to be healthy you should drink 10 litres of water every day.

2. Memo. Готовимся к Интернет-экзамену

Complete the memo by putting the information ***a – f*** in the correct place:

a) all transport vehicles will be fitted with GPS navigation system equipment
b) Short briefing courses
c) Would all drivers please sign up
d) Memo
e) so improve the efficiency of our delivery service
f) Transport Department

KIRBY COMPONENTS

Kirby North Industrial Estate
Kirby
_____(1)

To: _____(2)

From: General Manager

Subject: GPS vehicle navigation system for all delivery vehicles

Date: 24 November 2010

As part of the company efficiency programme, _____ (3) over the next few weeks. This equipment will allow drivers to find their way to delivery addresses more quickly and _____(4). _____(5) on how to operate the equipment will be run on Monday 4, Tuesday 5 and Thursday 7 December at 8.30 a.m. _____(6) for one of these dates with their group manager.

Keys

Unit 1. The World Around Us (Biosphere)

I. Ex. 4: 1-life; 2-term; 3-thickness; 4-important;
II. Ex. 2: 1-T; 2-T; 3-F; 4-T; 5-F; 6-No; 7-F; 8-T;

Unit 2. Energy and the Earth

I. Ex. 4: 1-water; 2- remained; 3-rock; 4-use;
II. Ex. 2: 1-c; 2-g; 3-e; 4-f; 5-a; 6-h; 7-b; 8-d;
Ex. 4: 1-T; 2-F; 3-T; 4-F; 5-No;

Unit 3. Are you a saver or an energy waster?

I. Ex.2: 1-e; 2 -g; 3-a; 4-b; 5-d; 6-k; 7-j; 8-c; 9-f; 10-l; 11-m; 12-h;13-n; 14-i;
Ex. 3: 1-planet; 2-destroy; 3-cities; 4-fumes; clogging up; 5-activity;
II. Ex. 2: 1-F; 2-T; 3-F; 4-No; 5-T; 6-F; 7-T; 8-T; 9-No;
III. Memo: 1-g; 2-l; 3-d; 4-c; 5- ;

Unit 4. Watersheds

I. Ex.3: 1-run out; feed into; 2-falls over; 3-picks up; 4-wind up;
Ex.4: 1-water; 2-common; 3-functions; 4-materials; 5-particles;
II. Ex.2: 1-c; 2-e; 3-a; 4-b; 5-d;
III. Ex.4: 1-F; 2-T; 3-F; 4-No; 5-T; 6-F; 7-No;

Unit 5. What is in our water?

Ex.4: 1-contains; 2-chemicals; 3-industrial; 4-particlas; 5-public;
Ex.2: 1-T; 2-No; 3-T; 4-F; 5-N; 6-No; 7-F;
Addresses in English.

Unit 6. The Food Chain

Ex.3:
Ex.4:
Types of formal letters

Grammar references

Active Voice

1. Present Simple

We use the present simple tense to:
- describe regular events

e.g. We produce rubbish.
- describe general truths and facts.

e.g. The biosphere is the layer of the Earth in which all life exists (unit1)
- describe states

e.g. We don't know what to do with the rubbish.

Time markers in the present simple tense are adverbs of frequency.
They tell how often an action is repeated: always, usually, often, sometimes, occasionally, seldom, rarely, hardly ever, never.
The word ever is used in questions.

2. Present progressive

We use the present progressive tense to:
- say what is happening at the moment of speaking

e.g. The water we are using now is the very same water.
- describe a temporary state (situation, action)

e.g. We are also destroying millions of hectares of forests.
- describe a future arrangement.

e.g. He is coming to visit our new production centre
e.g. Next week, he is starting a new job in a company (unit22)

*** Note**
- We can also use present progressive for repeated actions (with always) to emphasise that the action is annoying or unexpected.

e.g. You are always complaining.
- We can also use present progressive for changing situations (usually with more and more; better and better; worse and worse, etc.)

e.g. The weather is getting worse and worse every day.
e.g."Teleworking" is becoming more and more popular in Britain.
Time markers in the present progressive tense are: right now; at the moment, now, etc.

3. Present Perfect.

We use the present perfect.

- When we are interested in the present result of a past action.

e.g. A village in Sweden has had four elements named after it (unit 10.)

- When we are referring to a time frame that comes up to the present.

e.g. Scientists have been able to work out the structures of living substances. (unit 11).

- When a situation or activity started in the past and continues in the present.

e.g. We have lived for two years.

Time markers in the present perfect tense are:
just, already, yet (with negatives and questions), ever/never;
still (with negatives), so far; before, for (+ period of time); since (+ time when it started)

***Note.**
We often use present perfect with the superlative and with ordinal numbers (first, second, etc.)
e.g. It is the first time I have been to South Africa.
It is the best film I have ever seen.

4. Past simple

We use the past simple to describe

- a completed action at a specific time in the past.

e.g. He died on 20th January, 1907, from pneumonia (unit 10)
e.g. The term biosphere came into existence in the second half of the 19th century (unit 1)

- a completed action in the past

e.g. He called this the noosphere (un1)

- completed situations and actions in the past.

e.g. The term biosphere came into existence in the second half of the 19th century (un 1)

- a repeated action in the past.

e.g. He argued that man's technological activities were actually a part of the biosphere's evolution. (un1)

- the main events and situations in a story.

e.g. I ran out of the house, crossed the road and jumped on the bus.

The markers in the past simple tense are.:
yesterday, combinations with last (last night, last week, etc), combinations with ago (two days ago; three weeks ago, etc.), specific points in time with the prepositions: in, on and at.

5. Past progressive

We use past progressive to describe:

- an action or situation in the past which was already happening when another action or situation happened.

e.g. Watson was returning from London one day when he had a great idea of experimenting with different parts (DNA)

- an action or situation in the past which is interrupted or stopped by another action or situation.

e.g. I was riding my bike when I had an accident.

- background information and description of the events in a story.

e.g. We got to the beach at half past two. Hundreds of people were sunbathing on the golden sand.

- two unfinished situations or events in progress at the same time.

e.g. I was doing my homework while Dan was playing his computer games.

☐ The time market while introduces clauses in the past progressive tense.
The time market when introduces clauses in the past tense.
e.g. I was walking down the street when I had a great idea.
e.g. I was watching TV while my mum was reading a newspaper. To describe an event that accrued before another event in the past.

6. Past Perfect

We use past perfect.

- To show that something in the past happened before something else in the past.

e.g. The week before I wrote to the company, I had called them.

- We also use the past perfect in reported speech.

e.g. Phil said he had sent me an e-mail.

- Third Conditional sentences.

e.g. If you had come to the party, you would have met Bill.

- Wishes about the past.

e.g. I wish I had met him in London.

☐ Time markers in the past perfect simple are:
before; after; just; already; when; for; since;
It was the first + noun; It was the best + noun.

7. Future simple with will

We use the future simple with will.

- to make predictions or general statements about the future.

e.g. Let's hope the future will prove him right

- to express a decision made at the moment of speaking.

e.g. I will let you have replacement by return.(unit4)
e.g. I will do a short introduction to the subject. (unit 15).

- in the main clause of a first conditional.

e.g. You will get some fantastic insights if you make this a habit (unit 23).

☐ Time markers in the future simple with will are:
combinations with next (next week, next Monday etc)
with in (in the future, in two weeks; in 2011)
with from now (ten years from now; six centuries from now, etc)
tomorrow, the day after tomorrow.

8. Future progressive

We use future progressive.

- to show that an action is in progress at a certain time in the future.

e.g. I will still be packing at five o'clock.

- To set up a background activity that is in progress when another action takes place.

e.g. I will be listening to the lecturer when my boyfriend calls me.

- To show two activities which are happening during the same period of time in the future.

e.g. The family will be thinking about their farm while they are sitting in the storm cellar.

☐ Time markers in future progressive are.
Combinations with at (at 5 o'clock);
with next (next week etc.);
and in (in two days, in a month, etc.)

***Note**
Notice that the tense in the when-clause does not agree with the time; although we mean future time, we use the present simple tense.

9. Future perfect simple.

We use future perfect simple.

- to show a completed action which happens before the second action in the future.

e.g. I will have written letters before you come.

- to show that a situation will finish at or before a certain time in the future.

e.g. I will have packed all the suitcases by six o'clock.

- can describe a state, an activity, or a period of time before the second action in the future.

e.g. He will have run for 3 hours by the time he finishes.

- can also be used for the description of repeated actions within a period of time before the second action in the future.

e.g. He will have clocked a different finishing time every few minutes for two hours when the last runner finishes.

Passive voice

Form

We make the passive with the verb to be and a Past Participle.

Present – English is spoken in many countries.

e.g. Fossils are found in sedimentary rock. (unit 2)

Past –My bag was stolen.

e.g. The hard parts were buried under moist layers of mud or sand. (unit 2)

Future – The weather will be affected by the volcano.

Present progressive – It is being made.

Present Perfect – Three people have been injured.

Past Progressive – It was being made.

Past perfect – It had been made.

Use

- The passive is very common in English.
- We use it when we are more interested in the action than in who or what did it.
- If we want to show who or what does the action, we use by.

e.g. The term was coined by Vernandsky (unit 1). The evidence is examined by forensic scientists.

- We usually use with when we talk about the thing we use to do the action (such as tools and equipment)

e.g. The wall was painted with a special paint.

When we talk about materials, we usually use of

e.g. That table is made of wood.

Look at this sentence

Sandy broke the window yesterday.

subject verb object

A sentence like this with subject +verb +object is called an active sentence or a sentence in the active voice.

- But we can turn it round, so the window comes at the beginning of the sentence. To do this we have to make it a passive sentence or put it into the passive voice.

There are five main steps
1. Take the object of the first sentence and make it the subject our new sentence:
The window …
2. Add the verb to be in the same tense as in the active sentence (broke = past simple):
The window was…
3. Add the past participle of the verb in the active sentence
(broke → broken):
The window was broken…
4. Add by + the subject of the first sentence (Sandy)
The window was broken by Sandy…
5. Finish off the sentence in the appropriate way.
The window was broken by Sandy yesterday.
- The passive is: noun/pronoun +be + past participle (by/with/of +noun)

Phrasal verbs
There are three basis types of phrasal verbs which take an object.

Type1: not separable
Verb + particle + object
e.g. The research group looked into it quite thoroughly.
Can you look after the kids while I go to the shops?

Type 2: Separable

1. Verb + object + particle.
e.g. Water may pick them up. (unit 4).
He finished the sandwich off in a single mouthful.
2. Verb+ particle + object
e.g. He finished off the sandwich in a single mouthful
Water picks up sediments and other materials from the land. (unit 4).

Note*
- If the object is a pronoun, only the first order in possible:

Verb + object pronoun + particle.
e.g. I am trying to sort it out.
- The second order is favoured if the noun phrase is particularly long.

e.g. He bottled up all his negative feelings against his mother + in-law until he could stand it no longer.
e.g. If you don't know how to distinguish type 1 and type 2, a good dictionary will tell you.

Type 3. Two particles
Verb + particle + object.
In this type of phrasal verb the particles are not separable.
e.g. I had to come up with a solution quickly.

Modals (ability, obligation, advice, permission)

The modals are:

Can (can't/ cannot)	Could (couldn't / could not)
May (may not)	Might (mightn't / might not)
Will (won't/ will not)	Would (wouldn't / would not)
Shall (shan't / shall not)	Should (shouldn't / should not)
Must (mustn't/ must not)	

The semi- modals are:

have to
It has a similar meaning to must, but it does change its form depending on person and tense.
e.g. He has to go. He doesn't have to go.
He had to go. He didn't have to go. etc.

Ought to (oughtn't to / ought not to)
It has a similar meaning to should. It doesn't change its form depending on person and tense.

Ability
can
e.g. Electrons can't go through it (unit 18).
e.g. A river or lake can provide water to a public facility. (unit 5)

**** Note***
For future ability we usually use will be able to.

Could
Obligation.
Must (personal obligation)
have to (external obligation)

****Note***
- when talking about the past for personal or external obligation, use had to.
- It is very unusual to use must for questions. Use have to.
- Must cannot be used as an infinitive. Use have to.

Advice
We can use should and ought to ask for and give advice. There is very little difference in meaning between should and ought to. However, should is more common in spoken and written English (both formal and informal) than ought to.

Permission
We can use can, could and may to ask for and give permission. They mean the same thing, but could is more polite than can, and may is more polite than could.

**** Note***
- To talk about past permission in reported speech, use could.
- To talk about past permission (but not in reported speech) we don't use a modal:

e.g. I was allowed to go.
They / you let me go.

Prepositions of time: in, on, at.

In is used with	years centuries parts of the day decades seasons months	in 2010 in the 19th century in the morning in the 1960s in summer in November
On is used with	dates days of the week 'special days	on 19 July on Monday on Sunday evening on my birthday on Christmas day
At is used with	times holidays	at 7.00 at midnight at Christmas at Easter at the weekend
No preposition is used	with	expressions with ago, tonight, this morning, this afternoon, etc. tomorrow, tomorrow evening, etc. yesterday, yesterday morning, etc. expressions with last or next.

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УНИВЕРСИТЕТ
УГЛТУ

Д.А. Васильева
Г.А. Ободин

В ПОИСКАХ НАУЧНЫХ ОТКРЫТИЙ

Часть I

Екатеринбург
2011