

**ТОВ «ТЕХНІЧНИЙ УНІВЕРСИТЕТ
«МЕТІНВЕСТ ПОЛІТЕХНІКА»**

**АНГЛІЙСЬКА МОВА ГІРНИКІВ
(ENGLISH FOR THE MINING INDUSTRY):**

методичні вказівки до виконання практичних робіт

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У методичних рекомендаціях наведені завдання до виконання практичних робіт процесі вивчення дисципліни.

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Вступ

Політика університету МЕТІНВЕСТ ПОЛІТЕХНІКА спрямована на підготовку всебічно розвиненого фахівця, що зможе успішно конкурувати на міжнародній арені та буде підвищувати коефіцієнт стабільності держави у світовому суспільстві. Засвоєння професійно-орієнтованої терміносистеми є запорукою успішної взаємодії з іноземними партнерами та інвесторами. Успішне володіння англійською мовою дозволяє знищувати бар'єри у спілкуванні спеціалістів, що залучені до видобування корисних копалин у різних країнах.

Програма курсу підготовки бакалаврів за спеціальністю «Англійська мова для гірників» спрямована на розвиток навичок читання професійних текстів, збагачення словникового запасу, а також вдосконалення комунікативних навичок усного та писемного мовлення на основі текстів гірничої тематики.

Методичні вказівки складаються з 4 тем, що відповідають програмі підготовки для 2 курсу 3 семестру, які студенти вивчають на практичних заняттях із англійської мови для гірників. Представлений курс є алгоритмом діяльності, що продовжує попередні етапи та готує студентів до подальшого засвоєння необхідного об'єму інформації. Оволодіння іноземною мовою – важка робота, що вимагає активності, зосередженості та самоконтролю.

Навчальний курс ґрунтується на поєднанні чотирьох видів мовленнєвої діяльності (читання, говоріння, аудіювання та письма) з використанням автентичних матеріалів з іншомовних джерел та вітчизняної навчальної і методичної літератури.

Кінцеві цілі дисципліни полягають у вмінні інтерпретувати зміст загальнонаукової літератури іноземною мовою; демонструвати вміння спілкуватися іноземною мовою в усній та письмовій формах; знати базовий технічний вокабуляр; розпізнавати та диференціювати складні граматичні явища і моделі за формальними ознаками; вести дискурс на ситуативно зумовлену та професійну тематику.



MODULE 1 Variety of mineral deposits

Theme 1 The role of mining in the world.

Before you read the passage talk about the questions.

1. What are some substances that come from mines?
2. Why is mining so important?

Read and translate the pamphlet.

Welcome to Jackson Mining Co! You are part of an important team. Together, we improve lives and industries. For example, we supply **power plants** with **fossil fuels**. We mine **coal** that generates electricity for homes and businesses, and we mine for metals, as well. They become **steel** for **manufacturing** and **construction**. But that's not all. We also improve **agriculture**. Many **minerals** make excellent **fertilizers**. So Jackson Mining even helps farmers. Finally, we improve people's lives. We mine for many **precious stones** and **precious metals**. Those products become valued gifts and important components of electrical circuits. So remember, you're not just mining. You're improving the world.

Mark the following statements as True (T) or False (F).

1. Jackson Mining Co. also owns a power plant.
2. According to the manual, farmers rely on mining for fossil fuels?
3. Precious metals are an important component of electrical circuits.

Read the sentence pairs. Choose which word or phrase best fits each blank.

1. ***precious metal / precious stone***

A. A diamond is a type of _____.

B. Gold is a type of _____.

2. ***minerals / fossil fuels***

A. _____ are often burnt to generate energy.

B. The rock contains many types of _____.

3. ***coal / steel***

A. _____ is a black substance which can be burnt.

B. _____ is a very strong metal used in construction.

Write a word or phrase that is similar in meaning to the underlined part.

1. The company built a factory which generates energy.

o _ r p_ _ _ t

2. Rita studies the art of raising crops and livestock at college.



a _ _ _ c _ _ t _ _ e

3. The farmer put minerals which make healthy soil on his field before planting the seed.

_ e _ _ _ _ _ z _ r

4. Mines provide a lot of materials for the industry of making products.

m _ _ _ f _ _ t _ _ _ _ _

5. Benny has a lot of experience working in an industry that builds structures.

_ o _ _ t r _ c _ _ o _

When speaking about *mining* which of the following statements is not true?

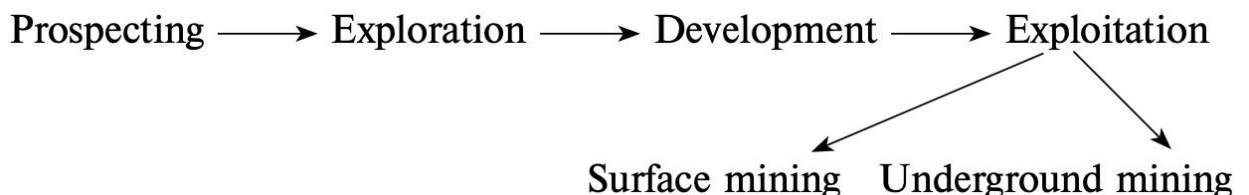
- the foundation of industrial civilization;
- the process of extracting metallic or nonmetallic formations from the earth;
- the branch of engineering involving the exploration and removal of minerals from earth;
- an extracting industry;
- the production of methane;
- the process of extracting minerals like gold, silver, copper and salt, potash, coal and oil formations that concentrate naturally in the earth;
- an operation that involves the removal of rock and earth.

Read the following extract and answer the question:

There are many different jobs in the mining industry: engineers and lab technicians, geologists, environmental specialists, accountants, lawyers, sales representatives and public relation specialists, not to mention thousands of men and women who manufacture the machines and equipment to mine minerals.

But who works underground every day?

What does the following scheme show?



Read and translate the following words:

process, mineral, indicate, collect, technique, method, progress, ventilation, tunnel, system, secret, mechanical, excavation, compress, electric locomotive, conveyor, machine, technology, operation, dynamite.



Read and translate the text

MINING

I. Mining is the process of extracting useful minerals from the surface of the Earth (including sea) usually from an ore body, vein or (coal) seam. Archeological discoveries indicate that mining was known in prehistoric times. The first mineral found was flint, which could be broken to pieces that were useful as knives and arrowheads. Gold was one of the first metals utilized. Gold was mined from streambeds of sand and gravel. Copper was probably the second metal discovered and used. Silver was also found and was valued more highly than gold. Other hard rock mined or collected for axes included greenstone.

The oldest known underground mine in the world was run more than 40,000 years ago in Swaziland to mine ochre used in burial ceremonies and as body coloring.

The book on mining “De re Metallica” (1556) by the German scholar Georgius Agricola is the best source of information on early mining techniques, many of which are still used or were used until recently: picks and hammers, ventilation and pumping systems and cart-like “tricks” for hauling minerals to name a few. Agricola describes detailed methods of drilling, shafts and tunnels, timber support systems, etc.

II. Great progress in mining was made when the secret of black powder reached the West, probably from China in the late Middle Ages. Gunpowder was replaced by dynamite in the mid-XIXth century. Since 1956 both ammonium nitrate and slurries (mixture of water, fuels and oxidizers) have come into use.

The invention of mechanical drills increased the capability to mine hard rock decreasing the cost and time for excavation by many times. The first rotary drill appeared in England in 1813. In Germany in 1853 a drill that resembled modern air drills was invented. Pistol drills were followed by hammer drills run by compressed air.

Later advances included improvements in loading methods, usage of electric locomotives and conveyors, steam-driven pumps to remove water from the deep mines. In 1930s battery-powered cap lamps began entering mines.

III. Modern mining is a costly and complicated business. It starts with the locating of probable mineral veins. Prospecting and exploration require a great deal of knowledge in the Earth sciences to find likely mining locations. Once the location is determined, mining engineers decide the best way to mine it. Mining can be done as a surface operation or it can be done by an underground method.

Sometimes a vein of ore runs from the surface deep into the ground. Ore that is found at the surface is mined from the open pit. More than two-

thirds of the world's annual mineral production is extracted by surface mining.

The openings made in the process of extracting ore are called stopes. There are two steps involved in stoping: development (preparing the ore blocks for mining) and production (stoping itself).

Technology has developed to the point where gold is now mined underground at depths of 40,000 m, and the deepest surface mines have been excavated to more than 700 m.

It is the machines that provide the strength and trained miners who provide the brains needed today to prevail in this highly competitive industry.

Essential words and phrases

battery-powered lamp	cap	шахтарська накидна лампа на батарейках
competitive		конкурентоспроможний
determine		визначати, встановлювати, вимірювати, обчислювати
discover		відкривати, знаходити (родовище)
excavate; excavation		виймати ґрунт, проводити земляні роботи, розробляти відкритим способом, виїмка/розробка ґрунту, земляні/екскаваторні роботи, відкрита гірничавиробка, кар'єрна розробка
extracting		видобуток (мінералів)
hammer		молоток, кувалда, геологіній/відбійний молоток
hard rock		міцна / тверда / скальна порода
improvements in loading methods		модернізація методів погрузки
invention		винахід, відкриття
location of probable mineral veins		визначення ймовірного розташування жил корисних копалин
open pit		відкритий кар'єр, відкрита розробка
ore body, vein or seam		рудне тіло, жила чи пласт / прошарок
prospect		проводити пошуки
prospecting		розвідка / рудошукальні роботи
explore		досліджувати, розвідувати
exploration		дослідження родовища
provide		забезпечити, наділяти, постачати
require		потребувати, вимагати, нуждатися
shaft and tunnel		шахта / ствол шахти та штольня

source of information	джерело інформації
steam-driven pump	паровий насос
stope	забій, виїмкова камера
surface of the earth	поверхня землі
surface operation	відкрита горна розробка, розробка відкритим способом
timber support system	система дерев'яного кріплення
underground method	розробка підземним способом
value	значення, величина, ціна, вартість
ventilation and pumping system	вентиляційна та насосна установка

Mark the following statements T (True) or F (False) according to the information in the text. Find the part in the text that gives the correct information:

1. The first mineral found was copper, which could be broken to pieces that were useful as knives and arrowheads.
2. Technology has developed to the point where gold is now mined underground at depths of 4,000 m.
3. The openings made in the process of extracting ore are called shafts.
4. Ore that is found at the surface is mined from the open pit.
5. The book on mining "De re Metallica" by Agricola is the only source of information on early mining techniques.
6. The first rotary drill appeared in Germany in 1813.
7. Hammer drills were followed by pistol drills run by compressed air.
8. Modern mining is a costly and complicated business.
9. Copper was also found in a pure state and at one time was valued more highly than gold.
10. It is the machines that provide the strength and trained miners who provide the brains needed today to prevail in this highly competitive industry.

Find answers in the text to the following questions:

1. What is mining, and which minerals were first extracted in prehistoric times?
2. What was flint used for, and why was it significant in early human history?
3. Why was silver valued more highly than gold in ancient times?
4. What is the oldest known underground mine, and what was mined there?
5. What role did the book De re Metallica by Georgius Agricola play in documenting mining techniques?



6. How did the introduction of black powder and later dynamite revolutionize mining practices?
7. What advancements in drilling technology were made in the 19th century, and how did they impact mining?
8. What modern technologies and tools have significantly improved safety and efficiency in mining?
9. What are the differences between surface mining and underground mining, and how is ore processed in these methods?
10. How deep are some of the modern gold mines, and what challenges do miners face at such depths?

Match left (1–7) and right (a–g):

1. Mining is the process	a) the second mineral discovered.
2. Mining was known	b) appeared in England in 1813
3. Prospecting and exploration require	c) a costly and complicated business.
4. Copper was	d) a great deal of knowledge in the Earth sciences.
5. The first rotary drill	e) of extracting minerals from the surface of the Earth.
6. Modern mining is	f) as a surface operation.
7. Mining can be done	g) in prehistoric times.

Finish the sentences in written form:

1. Mining is ...
2. Mining was known ...
3. The book on mining is ...
4. Great progress in mining was made ...
5. Modern mining is ...
6. Mining can be done ...

Find words in the text that go with the given nouns below (part III of the text).

- | | | |
|-----------------|-------------|-----------------|
| business | veins | locations |
| engineers | pit | mines |
|production |miners |industry |



Grammar Дієслово to be

Дієслово **to be** в Present, Past и Future Simple (Indefinite) має наступні форми:

Особовий займенник	Present	Past	Future
I	am ('m not)	was (wasn't)	will be (won't be)
He She it	is (isn't)	was (wasn't)	will be (won't be)
We You they	are (aren't)	were (weren't)	will be (won't be)

У питальній формі дієслово to be ставиться перед підметом

Are they students? Вони студенти?

Where **were** you yesterday? Де ви були вчора?

У заперечній формі після дієслова to be ставиться заперечна частка **not**:

They are not (aren't) in the laboratory. Вони не в лабораторії.

Впр. 1. Вставте дієслово *to be* у формі *Present, Past or Future Simple*.

1. Where ... your brother now? —He ... in his room.
2. ... she ... at work tomorrow? —Yes, she
3. When ... you at work yesterday? —I ... there at 8 o'clock.
4. My sister ... at school now. She ... not at home.
5. ... you ... a teacher in some years?
6. My pens ... not on the table. Where ... they?
7. His brother ... an engineer. He ... 27.
8. We ... pupils last year, but now we ... students.
9. My aunt ... in Paris now.
10. Where ... your grandmother? - She ... in Richmond.

Зворот *There + be* в Simple Active

число	Present	Past	Future
Однина	There is (isn't)	There was (wasn't)	There will (won't) be
Множина	There are (aren't)	There were (weren't)	There will (won't) be



Переклад речень зі зворотом **There + be** слід починати з обставини місця чи з присудка, якщо обставина відсутня. Слово *there* – вступна частка – на українську не перекладається, наприклад:

There are many methods of doing it. Існує багато способів зробити це.

Впр.2 Вставте *there is* або *there are*

1. lots of rooms in the Royal Hotel. It is very big.
2. twenty-five children in my class.
3. “..... any biscuits left?” “No, I’m sorry, I ate them all”.
4. It is winter now.any leaves on the trees.
5. “Can we listen to some music?” “No,..... a radio in this room”.
6. “Can I have some sugar in my coffee?” “No, I’m afraidany left.”
7. Look! a beautiful rainbow in the sky.
8. a business letter on your desk.
9. some people in the office.

Дієслово to have

Дієслово *to have* в Present, Past и Future Simple (Indefinite) має наступні форми:

Особовий займенник	Present	Past	Future
I	Have (got)	Had (got)	will have (got)
He She it	Has (got)	Had (got)	will have (got)
We You they	Have (got)	Had (got)	will have (got)

В розмовній мові (у британському варіанті) в значенні володіння вживається з формою **got**

В американському англійському заперечна та питальна форми вживаються з **do**:

Do I/we/you/they have...? We... don't have...

Does he/she/it have...? She... doesn't have...

У заперечному реченні часто вживається займенник **no**:

He has no textbook on Geology. - В нього нема (ніякого) підручника з геології.

(He has not got any textbook on geology.)

Короткі заперечні відповіді утворюються за допомогою частки **not**:

Have you got a map of the region? - **No, I have not. (I haven't.)**



Впр.3 Завершіть речення, використовуючи **have / has got** або **haven't / hasn't got** та одне з запропонованих слів та словосполучень.
a lot of pets, a headache, four legs, toothache, her glasses, a balcony, enough money, sharp teeth

1. I don't feel very well. I
2. It's a nice flat but it
3. Most animals
4. Katy likes animals. She
5. I'm going to call the dentist. I
6. Grandma can't read the letter. She
7. Sharks
8. We must go to the bank. We



Theme 2 Metallic and non-metallic ores

Before you read the passage discuss the questions

1. What are some non-metallic ores?
2. What are these non-metallic ores used for?
3. Why is the gravel mine a good option?

Read and translate the report summary

Mr. Anderson,

Here is the basic report on the available mines. I have more information on each, if you are interested.

L004, Marysville, Utah. This mine has mostly **sand** and **gravel** deposits. It is a good option because of its location. It is close to other deposits of **industrial minerals**, such as **gypsum**. So there are already good roads there.

34b, Turzeywood, Saskatchewan. There are large deposits of **potash** here. No roads exist on or to the site.

56CG, Frasertown, Alberta. There are deposits of **diamonds** here. Very little of the **ore** contains diamonds. So expect a large amount of **gangue**. Because of the **waste rock**, this mine is not valuable.

DL934, Louisberg, Ontario. Large coal deposits exist in this **petroleum** producing area. However, these deposits are very deep. The price of mining them is likely too high.

Choose the correct answers according to the report summary.

1. What is the main purpose of the passage?
A to advertise mines for sale
B to determine the value of several mines
C to report monthly production at mines
D to recommend improvements at mines
2. Which of the following deposits is *very deep*?
A sand
B diamonds
B potash
D petroleum
3. Which mineral deposit is most accessible?
A gravel
B potash
C coal
D petroleum



Read and translate the textbook excerpt

The Miner's Handbook. Types of Metals

Mining for metals is a major part of the mining industry. There are four types of metals:

1. Ferrous Metals

These metals contain iron. They are highly durable and are used in construction and engineering due to their strength. For example, stainless steel is a ferrous metal, known for its resistance to corrosion and high tensile strength. Cast iron, often used in machinery and construction.

2. Base Metals

These are non-precious metals that are more abundant and less expensive. They typically oxidize or corrode over time. Lead, zinc and copper are base metals. Copper is used in electrical wiring and plumbing due to its excellent conductivity it is essential in electronics and renewable energy technologies. Lead is known for its high density and use in batteries and shielding against radiation. Zinc is frequently used for galvanization to protect steel from rusting.

3. Precious Metals

Unlike base metals, these metals are rare and have high economic value due to their aesthetic appeal, conductivity, and resistance to corrosion. Examples include silver, gold, and platinum. Gold is known for its luster and malleability, used in jewelry and as a financial asset. Silver is used in industrial applications, photography, electronics and jewelry. Platinum is valued for its catalytic properties, used in automotive catalytic converters and jewelry also plays a role in medicine and fuel cells.

4. Radioactive Metals

These metals are unstable and emit radiation. They are highly dangerous and require careful handling. Uranium is used as fuel in nuclear power plants for energy production in nuclear reactors. It is also can be used for researches in nuclear medicine and radiography. Plutonium is primarily used in nuclear weapons and some power reactors.

Recycling metals is becoming increasingly important to reduce environmental impacts. Ferrous and base metals are commonly recycled due to their high usage. The demand for rare earth metals has surged due to their critical role in electronics, batteries, and renewable energy technologies.

Make the essential vocabulary using unknown words from the text

Find answers in the text to the following questions:

1. What is a characteristic feature of ferrous metals?



2. Why is stainless steel considered a ferrous metal, and what is it commonly used for?
3. Which metals are categorized as base metals, and what are their primary uses?
4. Why is copper important in electronics and renewable energy technologies?
5. What distinguishes precious metals from base metals?
6. How are silver and platinum used in both industrial and non-industrial applications?
7. What are the dangers associated with radioactive metals, and how are they utilized?
8. What role does uranium play in energy production and nuclear medicine?
9. Why is the recycling of ferrous and base metals essential in the modern mining industry?
10. What is the significance of rare earth metals, and why has their demand increased?

Match the words or phrases (1-8) with the definitions (A-H).

- | | |
|----------------------|-------------|
| 1 _ferrous metal | 5 _ gold |
| 2 _base metal | 6 _ cooper |
| 3 _radioactive metal | 7 _ lead |
| 4 _silver | 8 _ uranium |

- A** a precious metal that is always yellow
- B** a base metal that is red
- C** a type of radioactive metal
- D** the most common type of metal
- E** a toxic base metal that is white
- F** a type of metal that contains iron
- G** a type of metal that is radioactive
- H** a precious metal that is white

Mark the following statements T (True) or F (False) according to the information in the text.

1. Ferrous metals are used in construction because of their high tensile strength.
2. Copper is considered a ferrous metal because it contains iron.
3. Lead is a base metal often used in batteries and shielding against radiation.
4. Precious metals, such as gold and platinum, are common and inexpensive.
5. Silver is valued for its role in photography, electronics, and jewelry.
6. Radioactive metals, like uranium, are unstable and emit radiation.



7. Plutonium is primarily used in jewelry and decorative arts.
8. Stainless steel is an example of a ferrous metal known for its corrosion resistance.
9. Recycling metals helps reduce environmental impacts and conserves resources.
10. Rare earth metals have a declining demand due to limited industrial applications.

Read and translate the text. Write down the key words and main idea of the text.

The mining industry has been key to the development of civilization through the iron and bronze ages, the industrial revolution and today's information age. In 2001 the mining industry produced over 6 billion tons of raw product. Traditional mining countries such as the USA, Canada, Australia, South Africa and Chile dominate the global mining scene. These countries have become the traditional leaders in mining and exploration methods and technology. North America is the major producer of gold and silver. Europe is not a big mining center. Asia is a major producer of base metals, ferrous metals and coal. South America is a major producer of base and ferrous metals, in particular copper and iron ore. Africa produces cobalt, gold and diamonds, and Australia is a leading producer of iron ore, gold and base metals. The last decade of the twentieth century saw the creation of mega corporations that moved into the beneficiation area leaving exploration for new mineral deposits to small mining companies.

Find 14 more words connected with the theme of the lesson

D	E	V	E	L	O	P	M	E	N	T	V
A	B	O	L	E	B	R	I	R	O	N	A
N	I	D	I	A	M	O	N	D	Z	P	L
G	Q	A	S	D	X	D	E	V	M	R	U
E	R	T	Y	I	P	U	R	F	M	E	A
R	S	D	F	G	B	C	A	E	V	C	B
O	R	E	M	P	A	E	L	R	Y	I	L
U	A	T	C	N	T	R	A	R	E	O	E
S	T	E	E	L	N	R	G	O	M	U	X
V	T	Y	U	R	A	N	I	U	M	S	O
G	H	L	E	A	D	E	R	S	O	T	I
U	C	O	R	P	O	R	A	T	I	O	N



Grammar Personal Pronouns

PERSONAL PRONOUNS		POSSESSIVE ADJECTIVES
(before verbs as subjects)	(after verbs as objects)	(followed by nouns)
I	Me	My
You	You	Your
He	Him	His
She	Her	Her
It	It	Its
We	Us	Our
They	Them	Their

Choose the suitable pronoun or possessive adjective for each gap:

1. (She/her) doesn't live with (she/her) parents.
2. (He/Him) looks like (his/him) father.
3. (I/me) often see (him/his) at the university.
4. Do (you/your) know (my/me) brother?
5. (They/them) invited (our/us) to the party.
6. (We/us) like the car, (it/its) colour is too bright.
7. Where does (their/them) sister live?
8. (I/my) don't like (him/his).
9. John and Maria were late for school because (their/them) alarm clock didn't ring.
10. This is Sarah's notebook. I think this pen belongs to (she/her) as well.
11. The dog wagged (his/its) tail happily when it saw the owner.
12. Can (you/your) pass me (you/your) book, please? (I/me) left it on the table.
13. (I/my) friends love football, and (their/them) favorite team is Manchester United.
14. Tom is very proud of (him/his) achievements in the marathon.
15. Anna has a brother. (He/His) name is Mike.
16. These are my parents. Have you met (their/them) before?
17. I lost my pencil. Can I borrow (it/its) for a moment?
18. The team played well, and (their/them) coach was proud of them.
19. My sister and I are going to the party. Would you like to join (we/us)?
20. The teacher asked the students to bring (their/them) homework to class.



WORD ORDER IN A STATEMENT

Modifier (When, Where)	Subject (What, Who)	Predicate	Direct Object (What)	Prepositional Object (To whom)	Modifier of Place (Where)	Modifier of Time (When)
	I	have	three classes		at the University	on Monday
	We	answer	the questions			
	Student	gave	his notes	to his friend		
Last year	Our faculty	trained	500 students			

Make up sentences using the following words and word-combinations:

1. subject / engineering / is / diverse / a.
2. invent / engineers / types / new / hardware / of.
3. was known / mining / prehistoric times / in.
4. difficult task / teacher / his / to / gave / students.
5. in / rotary drill / appeared / England / the first / in 1813.
6. petroleum / geologists / in / Antarctic / found / a new deposit of.
7. dynamite / gunpowder / replaced / XIX century / in.
8. the mining industry / a crucial role / plays / in providing raw materials.
9. are used / manufacturing industries / and / copper and zinc / in construction.
10. are prized / ferrous metals / in / building infrastructure / for their strength / and / machinery.
11. of iron ore / Australia / one of / is / exporters / the world's largest.
12. is utilized / Plutonium / nuclear reactors / in.



NUMBER OF NOUNS

Більшість іменників утворюють множину додаванням закінчення **-s**.

- **dog** → **dogs** (собаки)
- **book** → **books** (книги)

Іменники, що закінчуються на "s", "x", "z", "ch", "sh": додавання "-es"

Якщо слово закінчується на ці звуки, додається **-es**.

- **bus** → **buses** (автобуси)
- **box** → **boxes** (коробки)
- **watch** → **watches** (годинники)

Іменники, що закінчуються на "o": додавання "-es"

- **hero** → **heroes** (герої)

Винятки: photo – photos, piano – pianos, studio – studios, radio – radios, video – videos

Іменники, що закінчуються на голосну + "y": додавання "-s"

- **boy** → **boys** (хлопці)
- **key** → **keys** (ключі)

Іменники, що закінчуються на приголосну + "y": зміна "y" на "i" та додавання "-es"

Якщо перед "y" стоїть приголосна, змінюється "y" на "i" та додається **-es**.

- **baby** → **babies** (діти)
- **city** → **cities** (міста)

Іменники, що закінчуються на "f" або "fe": зміна на "ves"

Деякі іменники змінюють **f/fe** на **ves**.

- **leaf** → **leaves** (листя)
- **knife** → **knives** (ножі)

Винятки: roof – roofs, proof – proofs, cliff – cliffs, giraffe – giraffes

Form plural from the following nouns:

Subject, heart, class, faculty, service, leaf, foot, bus, lady, roof, disco, man, window, tooth, mouse, lunch, child, sandwich, boy, country, church

PRESENT SIMPLE TENSE

I, we, you, they	V	Do not + V (don't)	Do (I, we, you, they) V ?
He, she, it	Vs	Does not + V (doesn't)	Does (he, she, it) V ?

Простий теперішній час використовується для вираження:

- Повсякденних дій, що повторюються (зазвичай з наступними маркерами: **every day, every week, every Monday, in the morning / afternoon / evening, at night, on Tuesdays, usually, always, often, sometimes** і т.п.). Наприклад: She usually plays tennis at the weekend.
- Постійних станів. Наприклад: He works in an office.
- Законів природи та істин, що не потребують доказів. Наприклад: the Sun sets in the west.

Put the verbs in brackets into the Present Simple form.

1. I ... (play) football with my friends on Sundays.
2. Tina ... (walk) to her office every day.
3. We ... (go) to bed at 11 o'clock every night.
4. Penguins ... (live) in the Antarctic.
5. Tony ... (study) Geology at university.
6. Water ... (boil) at 100⁰ centigrade.
7. Sally ... (not speak) Spanish.
8. Susan ... (not wash) her hair every day.
9. The sun ... (rise) in the east.
10. ... you ... (know) how to swim?
11. The train ... (leave) the station at 9:15 a.m.
12. Lisa ... (work) in a bank, and her brother ... (study) at university.

Write sentences based on the prompts using the Present Simple

1. (I/walk/to school)
2. (She/not/enjoy/cooking)
3. (They/visit/their grandparents/on Sundays)
4. (What/time/the train/arrive?)
5. (He/speak/three languages fluently)

Correct the mistakes in the following sentences.

1. They drinks tea every morning.
2. Does she plays the piano?
3. My dog bark loudly at night.
4. We doesn't go to the park on Mondays.



Theme 3 The Earth's crust and useful minerals.

Read and translate the text.

Sedimentary Rocks

The rocks of the Earth's crust are divided into three main groups: sedimentary rocks, which consist of fragments or particles of pre-existing rocks; igneous rocks which have solidified from magma and metamorphic rocks. Metamorphic rocks have been derived from either igneous or sedimentary rocks.

Sedimentary rocks represent one of the three major groups of rocks that make up the crust of the Earth. Most sedimentary rocks have originated by sedimentation. They are layered or stratified. Thus, stratification is the most important characteristic of sediments and sedimentary rocks. It is necessary to note that the processes which lead to the formation of sedimentary rocks are going on around us.

Sediments are formed at or very near the surface of the Earth by the action of heat, water (rivers, glaciers, seas and lakes) and organisms.

It should be noted that 95 per cent of the Earth's crust is made up of igneous rocks and that only 5 per cent is sedimentary. On contrast, the amount of sedimentary rocks on the Earth's surface is three times that of igneous rocks.

Strictly speaking, sedimentary rocks form a very small proportion by volume of the rocks of the Earth's crust. On the contrary, about three quarters of the Earth's surface is occupied by sedimentary rocks. It means that most of sedimentary rocks are formed by sediments, accumulations of solid material on the Earth's surface.

The thickness of the layers of sedimentary rocks can vary greatly from place to place. They can be formed by the mechanical action of water, wind, frost and organic decay. Such sediments as gravel, sand and clay can be transformed into conglomerates, sandstones and clay schists as a result of the accumulation of materials achieved by the destructive mechanical action of water and wind.

Mechanical sediments can be unconsolidated and consolidated. For example, gravel, sand and clay form the group of unconsolidated mechanical sediments, because they consist of loose uncemented particles (grains).

On the Earth's surface we also find consolidated rocks, which are very similar to the loose sediments that particles are firmly cemented to one another by some substance. The usual cementing substances are sand, clay, calcium carbonate and others. Thus sandstones are consolidated rocks composed of round or angular sand grains, more or less firmly consolidated. Like sand, sandstones can be divided into fine-grained, medium-grained and coarse-grained.

On the other hand, chemical sediments are the result of deposits or accumulations of substances achieved by the destructive chemical action of water. The minerals such as rock salt, gypsum and others are formed through sedimentation of mineral substances that are dissolved in water.

Sediments can also be formed by the decay of the remains of organisms, by the accumulation of plant relics.² They are called organic sediments. Limestones, peat, coal, mineral oil and other sediments may serve as an example of organic sediments.

The most principal kinds of sedimentary rocks are conglomerate, sandstone, siltstone, shale, limestone and dolomite. Many other kinds with large practical value include common salt, gypsum, phosphate, iron oxide and coal.

As is known, water, wind and organisms are called external forces, because their action depends on the energy which our planet receives from the Sun.

Essential words and phrases

cause	спричиняти, причина, підстава
clay	глина, глинозем
consolidate	твердіти, затвердіти, укріпляти, syn. solidify
crust	кора, земна кора
decay	гнити, розлагатися, вивітрювання, розпад
derive from	походити від, наслідувати
destroy	знищувати, руйнувати,
destructive	руйнівний
dissolve	розчиняти
rock, igneous-, sedimentary-	гірська порода, вивержена, вулканічна, осадкова
sandstone	пісчаник
fine-grained, medium- grained, coarse- grained	дрібноозернистий, середньозернистий, крупнозернистий
sediment, sedimentary, sedimentation	осадкова порода, осадковий, утворення осадкових порід
Shale, clay -, combustible -, oil-	сланець, сланцева глина; глинистий сланець, горючий сланець
grain, angular grains, grained	зерно, вугловаті зерна (мінералів), зернистий
iron	залізо
layer	шар, пласт
like	схожий, подібний, syn. similar

lime, limestone	вапно, вапняк
loose	вільний, рихлий
make up	утворювати, склад речовини
particle	частка
peat	торф
stratification	нашаровування, залягання
stratified	шаровий
substance	речовина
vary	змінюватись, відрізнятись

Find answers in the text to the following questions:

1. What are the three main groups of rocks that make up the Earth's crust?
2. How are sedimentary rocks formed, and what is their most important characteristic?
3. What processes contribute to the formation of sediments?
4. What percentage of the Earth's crust is made up of igneous rocks, and how does this compare to the percentage of sedimentary rocks?
5. What is the most important characteristic feature of sediments?
6. How do mechanical sediments differ from chemical and organic sediments?
7. What are some examples of unconsolidated mechanical sediments, and how do they differ from consolidated rocks?
8. What are the usual cementing substances in consolidated rocks? Provide examples of such rocks.
9. How are chemical sediments formed, and what are examples of minerals that result from this process?
10. What are some examples of organic sediments, and how are they formed?

Find in the right column English equivalents for the following words and word combinations.

- | | |
|-------------------------|--------------------------------|
| 1. земна кора | a) sandstone |
| 2. розчинятися у в воді | б) fine-grained sand |
| 3. пісчаник | в) the Earth's crust |
| 4. ущільнені осади | г) exposed rocks |
| 5. вивержені породи | д) to dissolve in water |
| 6. мілкозернистий пісок | е) like gypsum |
| 7. затвердіти | ж) consolidated sediments |
| 8. подібні до гіпсу | з) igneous rocks |
| 9. оголені породи | и) to solidify, to consolidate |



Find in the right column Ukrainian equivalents for the following words and word combinations

- | | |
|------------------------------------|--------------------------|
| 1. coarse-grained sand | а) руйнуюча сила води |
| 2. siltstone and shale | б) пластові родовища |
| 3. the destructive action of water | в) дольодовиковий період |
| 4. existing rocks | г) крупнозернистый пісок |
| 5. chemical decay | д) частки речовини |
| 6. sedimentary rocks | е) алеврит и сланець |
| 7. stratified deposits | ж) існуючі породи |
| 8. pre-glacial period | з) осадові породи |
| 9. particles of a substance | и) хімічний розпад |

Decide if these sentences true or false

1. The rocks of the Earth's crust are divided into two main groups.
2. Igneous rocks are composed of particles of pre-existing rocks.
3. Sedimentary rocks are stratified.
4. Sediments are formed by the action of glaciers.
5. Igneous rocks make up 75 per cent of exposed rocks.
6. Conglomerates are formed as a result of the accumulation of materials caused by the destructive mechanical action of water.
7. Sandstones are consolidated rocks.
8. Clays are unconsolidated mechanical sediments.
9. Chemical sediments are formed by the destructive chemical action of water.
10. Peat and coal are the organic sediments which are of great practical value.
11. Clay schist was formed at the beginning of the sedimentation period and clay was formed later.

Fill in the gaps with the appropriate words

a) consolidate consolidation consolidated unconsolidated

1. ... is the process of cementation of loose fragments of sedimentary rocks.
2. As is known, sedimentary rocks ... under the pressure of overlaying beds.
3. Limestone, for example, is the ... rock which occupies vast areas of the Earth's surface.
4. Gravel, sand and clay form the group of... mechanical sediments, because they consist of loose uncemented particles.

b) stratify stratification stratified

1. Bedding or ... is the most characteristic feature of sedimentary rocks.
2. Coal is a ... deposit that has been developed from plant remains.
3. Coals ... by the decay of organic material.



4. As a result of physical, chemical or biochemical changes vegetable remains are ... and changed into peat or coal, micro-organisms remains changed into mineral oil, bones into phosphorite, etc.

Match the words from the column A to their synonyms from the column B

A to consist of
to differ
bedded
consolidated
to change
substance
to be similar (to)
to complete
to understand

B. solidified
stratified, layered
to realize
to transform
matter
to be like
to finish
to vary
to be composed of

Match the words and word combinations with their definitions

1. Sedimentary rocks	a) A type of rock that forms from molten material, either magma or lava, as it cools and solidifies.
2. Igneous rocks	b) The outermost solid layer of the Earth, consisting of rocks, minerals, and soil.
3. Consolidated sediments	c) The process or arrangement in which sediments or rocks form distinct layers.
4. Stratification	d) A type of rock formed by the compaction and cementation of mineral and organic particles over time.
5. Layer	e) A solidified and compacted mass of sediments.
6. Sandstone	f) A sedimentary rock primarily composed of sand-sized mineral particles or rock fragments.
7. Earth's crust	g) A thin sheet or section of material that forms part of a larger structure, often visible in sedimentary rocks.

GRAMMAR IN USE

Present continuous tense

Present continuous			
Form	statement	negative	question
	I am ('m) playing ...	I am not ('m not) playing ...	Am I playing ...?
	He/she/it is ('s) playing ...	He/she/it is not (isn't / 's not) playing ...	Is he/she/it playing ...?
	You/we/they are ('re) playing ...	You/we/they are not (aren't / 're not) playing ...	Are you/we/they playing ...?
Use	Example		Helpful hints
Actions happening now	Jan is watching a DVD upstairs.		The present continuous is often used with the following words and phrases: <ul style="list-style-type: none"> • now • right now • at the moment • today • this week/month/etc
Temporary situations	She is working at the museum until the end of the month.		
Annoying habits (usually with <i>always</i>)	My brother is always borrowing my CDs without asking!		

Теперішній подовжений час використовується для вираження:

- Дій, що відбуваються у момент мовлення. Наприклад: He **is reading** a book right now.
- Тимчасових ситуацій, що відбуваються у теперішній час, але не обов'язково під час мовлення. Наприклад: He **is living** in a hotel these days.
- Дій, що відбуваються занадто часто і через які ми висловлюємо своє незадоволення або роздратованість (зазвичай зі словом *always*). Наприклад: You're always interrupting me!
- Дій, що заплановані на майбутнє. Наприклад: He **is flying** to Milan in an hour

Complete the sentences with the correct form of the verbs in brackets, using *the present continuous tense*.

1. She ... (study) for her exams right now.
2. We ... (build) a treehouse in the backyard.
3. The children ... (play) football in the park.
4. He ... (not, listen) to music at the moment.
5. ... you ... (watch) the new TV series tonight?
6. They ... (prepare) dinner in the kitchen.
7. My dog ... (bark) because it sees a cat outside.
8. I ... (not, work) on my project at the moment.
9. ... Sarah ... (take) the bus to school today?
10. The teacher ... (explain) the lesson to the students.

Rewrite the sentences to make them grammatically correct:

1. They is going to the mall.
2. She are not cooking dinner now.
3. Am you coming to the party tonight?
4. He writing a story about his adventure.

5. We play basketball outside.

Stative verbs

Form

Stative verbs do not usually describe actions. They describe states (feelings, thoughts, etc). They are not normally used in continuous tenses.

✓ I **like** reading books in my free time.
x I **am liking** reading books in my free time.

Some common stative verbs:

appear	include	see
be	know	seem
believe	like	taste
belong to	love	think
hate	need	understand
have	prefer	want

Watch out! Some of these verbs (such as *be*, *have* and *think*) are used in continuous tenses when they describe actions.

✓ What **do** you **think** about his new song?
✓ I'm **thinking** about last night's match.

Fill in the blanks with the correct form of the verb in brackets (present simple or present continuous). Pay attention to whether the verb is a stative verb or an action verb.

1. I _____ (think) about the project right now, but I _____ (think) it's a good idea overall.
2. She _____ (love) ice cream, but she _____ (prefer) cake at the moment.
3. They _____ (know) how to solve the problem.
4. Why _____ you _____ (look) at me like that? Do I have something on my face?
5. He _____ (have) a new car, but he _____ (have) trouble starting it today.
6. I _____ (see) the doctor tomorrow because I _____ (feel) unwell.
7. She _____ (understand) the lesson now because the teacher _____ (explain) it well.
8. This perfume _____ (smell) amazing! What brand is it?
9. I _____ (hear) strange noises from upstairs. Can you check?
10. He _____ (appear) in a new movie soon, but he _____ (appear) a bit nervous about it now.
11. We _____ (believe) that honesty is the best policy.
12. The soup _____ (taste) delicious, but why _____ you _____ (taste) it again?

Possessive and reflexive pronouns

● Possessive pronouns		
mine / yours / his / hers / ours / theirs		
Form	Use	Example
	To show who owns or has something	That car is ours .
		● Helpful hints
		• Possessive pronouns are not followed by a noun. x <i>This is hers car.</i>
● Watch out! There is no possessive pronoun for <i>it</i> .		

● Reflexive pronouns		
myself / yourself / himself / herself / itself / ourselves / yourselves / themselves		
Form	Use	Example
	To describe actions where the subject and object are the same	My computer turns itself off after half an hour.
		To emphasise who does something
		Nobody helped me. I did it myself!

Fill the gaps with reflexive pronouns **myself, yourself, himself, herself, itself, ourselves, yourselves, themselves**.

- I taught _____ how to play the piano.
- Did you make this cake _____?
- He introduced _____ to the new neighbors.
- He hurt _____ while climbing the tree.
- She looked at _____ in the mirror before leaving.
- She prepared the entire meal _____.
- The cat cleaned _____ after eating.
- We enjoyed _____ at the party last night.
- You should be proud of _____ for working so hard.
- Did you all complete the project _____?
- They decorated the house _____ for the celebration.



Theme 4 Fossil fuels

Before reading the text define the meaning of the following words and word combinations

natural gas; atomic energy; geologic past; the two main groups of rocks; the different categories of solid fuels; the basis of practically all natural fuels; the small amount of other elements; to be associated with water and gas; porous sedimentary rocks; geological formations; the most efficient fuel and raw materials; gaseous fuel; high thermal efficiency; to be derived from petroleum.

Read and translate the text

Fossil Fuels

The chief sources of energy available to man today are oil, natural gas, coal, water power and atomic energy. Coal, gas and oil represent energy that has been concentrated by the decay of organic materials (plants and animals) accumulated in the geologic past. These fuels-are often referred to as fossil fuels.

The word *fossil* originally referred to anything that was dug from the ground, particularly a mineral. Today the *term fossil* generally means any direct evidence of past life, for example, the footprints of ancient animals. Fossils are usually found in sedimentary rocks, although sometimes they may be found in igneous and metamorphic rocks as well. They are most abundant in mudstone, shale and limestone, but fossils are also found in sandstone, dolomite and conglomerate.

Most fuels are carbon-containing substances that are burned in air. In burning fuels give off heat which is used for different purposes.

Fuels may be solid, liquid and gaseous. Solid fuels may be divided into two main groups, natural and manufactured. The former category includes coal, wood, peat and other plant products. The latter category includes coke and charcoal obtained by heating coal in the absence of air.

Liquid fuels are derived almost from petroleum. In general, natural petroleum, or crude oil, as it is widely known, is the basis of practically all industrial fuels. Petroleum is a mixture of hundreds of different hydrocarbons — compounds composed of hydrogen and carbon — together with the small amount of other elements such as sulphur, oxygen and nitrogen. Petroleum is usually associated with water and natural gas. It is found in porous sedimentary rocks where the geological formation allowed the oil to collect from a wide area. Petroleum is one of the most efficient fuels and raw materials.

Of gaseous fuels the most important are those derived from natural gas, chiefly methane or propane. Using gaseous fuels makes it possible to obtain high thermal efficiency, ease of distribution and control. Gas is the most economical and convenient type of fuels. Today gas is widely utilized in the home and as a raw material for producing synthetics.

Scientists consider that a most promising source of natural resources may be the floor of the sea, a subject which now has become an important field of research.

Generally speaking, all types of fossil fuels described in the text are of great economic importance as they represent the sources of energy the man uses today.

Essential words and phrases

accumulate	накопичувати
ancient (ant. modern)	стародавній
associate (syn. connect, link)	пов'язувати, з'єднувати, асоціюватися
burn (burnt-burnt)	горіти, спалювати
charcoal	деревне вугілля
convenient	зручний, підходящий
crude	сирий, неочищений
dig (dug – dug)	копати, видобувати
digger	вугільний екскаватор, землерийна машина, копальник
divide (from)	ділити, відділяти від, розділяти
evidence	доказ, ознака
fossil	скам'янілий, викопний, копалина, скам'янілість
heat	нагрівати, теплота
liquid (ant. solid)	рідина, рідкий
manufacture (syn. produce)	виготовляти
purpose (syn. aim, goal)	ціль, намір
shale	глинистий сланець



Read the following words and translate them

The equipment available for scientific observations, fossil fuel, solid fuel, crude oil, abundant in mudstone and limestone, small amounts of charcoal, to be composed of ancient rocks, mine safety, liquid fuel, manufactured fuel, any direct evidence of the deposit, carbon-containing substances, plant products, peat accumulation, sources of fuel, shale and limestone.

Mark the following statements as true (T) or false (F)

1. Coal, water power and atomic energy are the only sources of energy available to man today.
2. Coal, wood and peat represent natural group of solid fuels.
3. As a rule fossil fuels are found in sedimentary rocks.
4. Crude oil is widely used for producing solid fuels.
5. Petroleum can be found in porous sedimentary rocks.
6. Gas is used to produce synthetic materials.
7. Not all types of fossil fuels burn.

Answer the questions to the text:

1. What are the main sources of energy available to humans today?
2. How are fossil fuels formed?
3. What does the term "fossil" originally mean, and how has its meaning changed over time?
4. In what types of rocks are fossils most commonly found?
5. What are the main types of fuels, and how are they classified?
6. What are some examples of natural solid fuels?
7. How are manufactured solid fuels, such as coke and charcoal, produced?
8. What is crude oil, and why is it significant?
9. What elements, besides hydrogen and carbon, are present in petroleum?
10. How is petroleum found in geological formations?
11. Why is petroleum considered an efficient fuel and raw material?
12. What are the key gaseous fuels, and from what are they derived?
13. What are the advantages of using gaseous fuels?
14. How is natural gas utilized in homes and industries?
15. What do scientists consider to be a promising source of natural resources for the future?

Find in the right column Ukrainian equivalents for the following words and word combinations

- | | |
|-----------------|--------------------------------|
| 1. fossil fuel | а) дерево та торф |
| 2. raw material | б) невелика кількість аргіліта |
| 3. crude oil | в) органічне топливо |

4. the chief sources of energy
5. to refer to
6. any direct or indirect evidence of the deposit
7. shale and limestone
8. carbon-containing materials

9. wood and peat
10. the small amount of mudstone

- г) сланець та вапняк
- д) сировина
- е) матеріали, що містять вуглець

- ж) головні джерела енергії
- з) будь-які прямі чи опосередковані ознаки родовища
- и) сира (неочищена) нафта
- к) відноситись до будь-чого; посилатися на щось.

Find in the right column English equivalents for the following words and word combinations

- | | |
|--------------------------------|---------------------------------|
| 1. деревне вугілля та кокс | а) to collect data |
| 2. рідке паливо | б) charcoal and coke |
| 3. накопичувати | в) to be composed of limestones |
| 4. збирати дані | г) liquid fuel |
| 5. походити від | д) to accumulate |
| 6. отримувати гарні результати | е) to derive from |
| 7. багатий горючими сланцями | ж) to obtain good results |
| 8. складатися з вапняків | з) abundant in oil shales |

Determine what part of speech the highlighted words belong to. Translate the sentences:

1. Mineral fuels such as oil, oil shale, gas and coal are commonly called **fossil** fuels.
2. These **fossils** are organic materials accumulated in the geologic past.
3. As a rule oil **deposits** are usually associated with water and natural gas.
4. Rivers often **deposit** sediment along their banks during floods.
5. **Liquid** is one of the states of matter.
6. **Liquid** fuels are derived from petroleum.
7. Coke **manufacture** depends on certain (визначений) grades of coal.
8. Chemical plants **manufacture** synthetic materials from natural gas.

Fill in the gaps in the sentences using the given words.
accumulation accumulated accumulate

1. Fossil fuels were formed as a result of the ... of vegetable matter.
2. These fossil fuels are organic materials that ... in the geologic past.
3. Coal, for example, deposited from vegetable remains ... in swamp (болото) areas millions of years ago.
4. As is known, any natural ... of mineral of some volume in the Earth's crust is a mineral deposit.



Translate the sentences, paying attention to the translation of the highlighted words:

1. Electricity is a source of light *as well as* of heat.
2. *As* igneous rocks and their veins are rich in mineral deposits, they are very important to man.
3. *As is known*, fossils are found in sedimentary rocks although they may be found in igneous rocks *as well*.
4. Mine cars are unloaded (разгружать) *as* they pass through a loading point.
5. *As far as* petroleum is concerned it is associated with water and natural gas.
6. Nowadays natural gas is utilized *as* a raw material for manufacturing synthetics.
7. *As a rule* open-cast mining is used when the deposit lies near the surface.

Complete the sentences with suitable words from the text.

1. As for the origin of fossil fuels they have been formed by
2. According to the latest information the main sources of energy are
3. As is known fossil fuels are mostly associated with
4. As far as petroleum is concerned, it can be found in
5. Generally speaking, all types of fuel are important....

GRAMMAR IN USE

Past simple tense

Past simple		
Form	statement I/you/he/she/it/we/they played ...	negative I/you/he/she/it/we/they did not (didn't) play ...
		question Did I/you/he/she/it/we/they play ...?
	Use	Example
	Completed actions	<i>I saw the new James Bond film yesterday.</i>
	Repeated actions in the past	<i>I went to the theatre four times last month.</i>
	General truths about the past	<i>Fifty years ago, people didn't spend as much on entertainment as they do today.</i>
	Main events in a story	<i>Josh pushed the door open and looked inside the room.</i>
		Helpful hints The past simple is often used with the following words and phrases: <ul style="list-style-type: none"> • yesterday • last week/summer/year/etc • in January/2001/etc • an hour/a week/a year ago

Past simple tense використовується для вираження:

- Завершених дій, що відбулися у конкретний час у минулому (вчора, минулого тижня, у 1990 році тощо). Наприклад: *He visited London last year.*
- Послідовність дій у минулому. Наприклад: *I woke up, brushed my teeth, and had breakfast.*
- Використовується для опису повторюваних дій у минулому. Наприклад: *He went to the theatre four times last month.*
- Коли річ іде про людей, яких більше немає в живих. Наприклад: *Claude Monet painted lots of beautiful pictures in his lifetime.*

Fill in the blanks with the correct form of the verb in brackets

(Past Simple):

1. Fossil fuels ... (form) millions of years ago from decaying plants and animals.
2. Scientists ... (discover) that petroleum is usually found in sedimentary rocks.
3. Last year, researchers ... (explore) the ocean floor for new energy resources.
4. Coal ... (play) a major role in the Industrial Revolution.
5. People ... (use) natural gas for heating and cooking many years ago.
6. Petroleum ... (become) one of the most efficient fuels in the modern world.
7. Engineers ... (develop) new ways to distribute gaseous fuels.
8. The company ... (extract) large amounts of crude oil from the new site.



Rewrite the sentences in the negative form:

1. Scientists discovered natural gas in sedimentary rocks.
Scientists did not discover natural gas in sedimentary rocks.
2. Fossil fuels gave off heat when burned.
3. They used petroleum to produce synthetic materials.
4. The company found methane in the gas field.
5. Engineers developed new methods of controlling fuel distribution.

Make questions using the Past Simple tense:

1. Scientists studied the sea floor for new resources.
What did scientists study for new resources?
2. They burned fossil fuels to produce heat.
Why _____ they _____ fossil fuels?
3. Petroleum became an efficient fuel.
When _____ petroleum _____ an efficient fuel?
4. The company extracted crude oil from sedimentary rocks.
Where _____ the company _____ crude oil?
5. Engineers created new methods for heating homes.
Who _____ new methods for heating homes?


Correct the mistakes in the sentences:

1. Fossil fuels was formed millions of years ago.
2. The scientists didn't discovered any natural gas in the area.
3. Petroleum finded in porous sedimentary rocks.
4. They burned fuels to generate heat, didn't they?
5. Engineers doesn't use coal as much as they used to.

used to		
Form	used to + bare infinitive	
	statement	negative
	I/you/he/she/it/we/they used to ...	I/you/he/she/it/we/they never used to ... I/you/he/she/it/we/they didn't use to ...
	question	Did I/you/he/she/it/we/they use to ...?
Use	Example	
Distant past habits and states	When I was four, I used to eat ice cream every day.	

Complete the sentences with the correct form of *used to* and the verb in brackets.

1. I ... (not/watch) the news, but now I watch it every day.
2. My aunt ... (drink) a lot of coffee, but now she prefers to drink tea.
3. We ... (live) in a flat, but we live in a big house now.

- 
4. ... (you/go) to school on foot?
 5. We ... (not/like) each other, but now we're good friends.
 6. I ... (not/eat) vegetables. Now I eat them every day.
 7. My sister ... (play) the piano, but now she doesn't.
 8. They ... (spend) their weekends in the countryside. They don't anymore.

Use the words in parentheses to complete each sentence.

1. Coal ... (be) one of the main sources of energy before renewable energy gained popularity.
2. People ... (burn) wood and peat as their primary fuel for heating homes.
3. Fossils ... (be found) mainly in sedimentary rocks like shale and limestone.
4. Scientists ... (think) that petroleum was an unlimited resource.
5. Natural gas ... (not/be) widely used until modern technologies made its extraction easier.
6. People ... (rely) on coal much more than oil for industrial purposes in the past.
7. Oil ... (be considered) the most efficient fuel before environmental concerns grew.
8. Sea floors ... (not/be explored) as potential sources of natural resources.

Complete using the correct form of the verbs in brackets

1. Fossil fuels like coal and oil _____ (form) millions of years ago from decayed organic material.
2. People _____ (rely) on wood as their main source of energy before discovering coal.
3. Scientists _____ (believe) that petroleum could not be extracted from the ocean floor, but now it's a major area of research.
4. Fossils _____ (appear) mainly in sedimentary rocks, but they can also be found in igneous rocks occasionally.
5. Coal _____ (provide) most of the energy during the Industrial Revolution.
6. Natural gas _____ (not/be) as widely used as it is today for heating homes and producing synthetics.
7. People _____ (heat) their homes using wood and peat before liquid fuels became common.
8. Crude oil _____ (remain) unused until scientists discovered its potential as an industrial fuel.
9. Early civilizations _____ (not/know) about the existence of fossil fuels deep underground.
10. Humans _____ (burn) plant products like wood for energy before the discovery of fossil fuels.

Choose the correct answer


1. Jacques Cousteau ... the oceans.
A explores **B** explored **C** is exploring
2. Toby a bicycle, but now he drives a car.
A is riding **B** used to ride **C** rides
3. I ... an interesting book at the moment.
A don't read **B** read **C** am reading
4. He ... home early yesterday because he felt ill.
A went **B** is going **C** used to go
- 5 Mr Jones ..., but he does now.
A used to travel **B** didn't use to travel **C** travelled
6. I ... a noise, so I went to see what it was.
A heard **B** hear **C** am hearing
7. Bobby how to use a computer at present.
A learnt **B** is learning **C** learns
8. My parents ... to a party tonight.
A used to go **B** goes **C** are going
9. The ferry boat ... every day at quarter past two.
A leaves **B** leave **C** is leaving
10. I ... getting up early in the morning.
A likes **B** don't like **C** doesn't like

Past continuous tense

Past continuous			
Form	statement	negative	question
	I/he/she/it was playing ... You/we/they were playing ...	I/he/she/it was not (wasn't) playing ... You/we/they were not (weren't) playing ...	Was I/he/she/it playing ? Were you/we/they playing ?
Use	Example	Helpful hints	
Actions happening at a moment in the past	At nine o'clock last night, I was watching TV.	The past continuous is often used with the following words and phrases: <ul style="list-style-type: none"> • at that moment • at one/two/etc o'clock • while 	
Two actions in progress at the same time	I was reading a book while you were doing the washing-up.		
Background information in a story	It was raining so Wendy decided to go to the cinema.		
Watch out! <ul style="list-style-type: none"> • When one action in the past happens in the middle of another, we use the past simple and the past continuous together. ✓ The phone rang while I was watching a DVD. • We do not use the past continuous for regular or repeated actions in the past. ✗ Last year, I was going to the cinema every weekend. 			

Past continuous tense використовується для вираження:

- Тимчасових дій, що відбувалися у конкретний момент у минулому.
Наприклад: *He was driving his car to London at three o'clock yesterday afternoon.*
- Тимчасової дії, що відбувалася в минулому (longer action) в момент, коли відбулася інша дія (shorter action). Для вираження



другої дії використовують Past simple. Наприклад: *He was watching the news when somebody knocked at the door.*

- Двох і більше тимчасових дій, що відбувалися одночасно. Наприклад: *The people were watching while the cowboy was riding the bull.*

Маркерами Past continuous є: while, when, as, all day/ night / morning і т.п

While / when / as + Past continuous (longer action)

When + Past simple (shorter action)

Complete using the correct past continuous form of the verbs in brackets

1. Ted ... (play) his guitar at half past seven.
2. At midnight, I ... (sleep), but Jane ... (listen) to music.
3. Luke ... (stand) outside the bank when suddenly two robbers ran past him.
4. I know Doug ... (work) late at the office because I saw him when I ... (leave).
5. ... you ... (have) a shower when the earthquake happened?
6. Penny ... (run) to catch the bus when she slipped and fell.
7. When you saw Eugene, ... he ... (go) home?
8. At midnight? Erm... we ... (watch) a DVD, I think.



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Навчально-методичне видання

Бурковська Оксана Йосипівна

**АНГЛІЙСЬКА МОВА ГІРНИКІВ
(ENGLISH FOR THE MINING INDUSTRY):**

методичні вказівки до виконання практичних робіт

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