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Волгоградский государственный архитектурно-строительный университет**

## **БОРЬБА С ПОЖАРАМИ**

**Сборник текстов и упражнений по английскому языку**

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# Unit 1

## Fire

*Задание 1. Прочитайте и переведите текст.*

Fire, reaction involving fuel and oxygen, which produces heat and light. Early humans used fire to warm themselves, cook food, and frighten away predators. Sitting around a fire may have helped unite and strengthen family groups and speed the evolution of early society. Fire enabled our human ancestors to travel out of warm, equatorial regions and, eventually, spread throughout the world. But fire also posed great risks and challenges to early people, including the threat of burns, the challenge of controlling fire, the greater challenge of starting a fire, and the threat of wildfires.

As early civilizations developed, people discovered more uses for fire. They used fire to provide light, to make better tools, and as a weapon in times of war. Early religions often included fire as a part of their rituals, reflecting its importance to society. Early myths focused on fire's power. One such myth related the story of Vesta, the Roman goddess of the hearth. To honor Vesta, the high priest of the Roman religion periodically chose six priestesses, called Vestal Virgins, to keep a fire going in a community hearth. Keeping a controlled fire burning played a central part in communal life. Before the invention of modern implements, starting a fire, especially in adverse weather, usually required much time and labor to generate sufficient friction to ignite kindling. If people let their fire go out, they had to spend considerable time to start it again before they could eat and get warm.

Today people naturally focus not on starting fires but on using fire productively and on preventing or extinguishing unwanted fires. We use fire to cook food and to heat our homes. Industries use fire to fuel power plants that produce electricity. At the same time, fire remains a potentially destructive force in peoples lives. Natural fires started by lightning and volcanoes destroy wildlife and landscapes. Careless disposal of cigarettes and matches or carelessness with campfires leads to many wildfires. Fires in the home and workplace damage property and cause injury and death.

The earliest use of fire by humans may have occurred as early as 1.4 million years ago. Evidence for this was found in Kenya — a mound of burned clay near animal bones and crude stone tools, suggesting a possible human campsite. However, this fire could have resulted from natural causes.

Homo erectus, a species of human who lived from about 1.8 million to about 30,000 years ago, was the first to use fire on a regular basis. Evidence of a fire tended continuously by many generations of Homo erectus, dating to about 460,000 years ago, has been found in China. Scientists have also found evidence of tended hearths dating back as many as 400,000 years in several parts of France.

Homo erectus was the first human species to leave equatorial Africa in large numbers and spread to other continents. Many scientists believe that the use of fire enabled Homo erectus to adapt to new environments by providing light, heat and

protection from dangerous animals. Tending fires probably helped foster social behavior by bringing early humans together into a small area.

Many people enjoy sitting around a campfire, keeping warm and telling stories, just as people have for tens of thousands of years. Industries use fire to manufacture products and dispose of waste. Companies use heating and drying appliances similar to, but often much larger than, the ones in homes. Large industrial incinerators destroy garbage, including household, medical, and industrial waste. Fire can render toxic waste harmless when it burns such waste in special incinerators. This waste often cannot be destroyed in any other way. Fires also heat large boilers to generate steam, which then powers large turbines. These turbines generate electricity that provides power and heat to industries and homes. Large power plants may generate electricity using fuels such as coal, gas, and even wood or garbage to create fires. In some parts of the world, people use fire to prepare land for growing crops. Farmers in developed countries may burn plant material after a harvest to clear fields and return nutrients to the soil. Small-scale farmers in tropical regions sometimes practice slash-and-burn agriculture, in which wild plants and trees are burned to clear patches of land for cultivation and to quickly enrich nutrient-poor tropical soils. In recent decades widespread use of slash-and-burn agriculture has caused significant damage to the world's rainforests.

People use fire as a weapon in times of war. Armies use napalm, a highly flammable substance, to spread fire. The fire can either directly kill enemy soldiers or destroy foliage, making enemy soldiers easier to find.

Fire results from a rapid chemical reaction between a fuel, such as wood or gasoline, and oxygen. Reactions that involve oxygen and other elements are called oxidation reactions. Chemists use the word combustion to refer to the oxidation reaction that produces fire. Combustion generates light, heat, gases, and soot.

Several important factors need to be present for combustion to occur. The first requirements are fuel and oxygen. Fuel for a fire may range from trees in a forest to furniture in a home to gasoline in an automobile. The oxygen in the reaction usually comes from the surrounding air.

The next requirement for combustion is an initiating energy source, or source of ignition. Ignition sources may be in the form of a spark, a flame, or even a very hot object. The ignition source must provide enough energy to start the chemical reaction. Finally, a chemical chain reaction (reaction that continuously fuels itself) must occur between the fuel and oxygen for combustion to take place.

Most combustible fuels begin as solids, such as wood, wax, and plastic. Many fuels that people burn for energy, including gasoline and methane (natural gas), begin as either a liquid or a gas. Any fuel must be in a gaseous state (so that it can react with oxygen) before a fire can occur. Heat from the fire's ignition source, and later from the fire itself, decomposes solid and liquid fuels, releasing flammable gases called volatiles. Some solids, such as the wax in a candle, melt into a liquid first. The liquid then evaporates, giving off volatiles that may then burn. Other solids, such as wood and cotton, decompose and evaporate directly.

*Задание 2. Переведите и запишите слова.*

Challenge, include, burn, pose, ancestor, source, store, provide, tool, reflect, disposal, adverse, implement, focus, workplace, advantage, cause, society.

*Задание 3. Составьте гнезда слов (обратите внимание на конверсию и словообразование).*

Increase, furniture, loss, reduce, sprinkler, disaster, flood, injury, defector, subway, landscape, damage, lighting, destroy, friction, virgin, honor, capacity, protection, dwelling, value, speed, frighten.

*Задание 4. Переведите словосочетания.*

Early humans, cook food, frighten away predators, family groups, early society, human ancestors, travel out of warm and equatorial regions, spread through the world, to provide light, in times of war, to keep a fire going, in a community hearth, let the fire go out, unwanted fire, fire protection.

*Задание 5. Выучите новые слова.*

fuel	топливо
oxygen	кислород
heat	жара, тепло, тепловая энергия
light	свет
to frighten (away)	пугать (отпугивать)
predator	хищник
to speed	ускорить
society	общество
ancestor	предок, предшественник
eventually	в конце концов, в конечном счете, в итоге
spread (n, v)	распространение, распространяться
throughout	через, по всему
to pose	ставить (проблему)
challenge	трудная проблема, сложная задача
to include	включить
threat	угроза
burn	ожог
wildfire	пожар
source	источник
protection	защита
hearth	очаг, домашний очаг
to develop	развиваться
use	употребление, применение
to provide	обеспечить
tool	инструмент
weapon	оружие
to discover	открыть
to reflect	отражать
to focus	сосредоточить внимание на

priestess	жрица
implement	орудие, инструмент
adverse	неблагоприятный
sufficient	достаточный
friction	трение
to ignite	зажигать
kindling	воспламенение, пламя
to go out	затухать
to prevent	предупредить, предотвратить
to extinguish	гасить, тушить
destructive	разрушительный
force	сила, войска
destroy ( <i>n, v</i> )	разрушение, разрушать
landscape	ландшафт
disposal	передача, размещение, пользование
campfire	костер
to damage	разрушать
workplace	рабочее место, производственное помещение
property	собственность
cause ( <i>n, v</i> )	причина, причинять
injury	повреждения, вред
furniture	мебель

*Задание 6. Переведите предложения.*

Early myths focused on fires power, to honour Vesta, the high priest of the Roman religion periodically chose six priestesses, called Vestal Virgins, The development of new engineering approaches and new building codes and standards has led to safer buildings dramatically increasing costs of construction.

*Задание 7. Ознакомьтесь с грамматическим комментарием об объектном и субъектном инфинитиве и выполните упражнения а) и б) по указанным в комментарии примерам.*

**Субъектный инфинитив (*Subjective Infinitive*).** В предложениях, в которых подлежащее выражено существительным или личным местоимением в именительном падеже и инфинитивом глагола, стоящим после сказуемого, конструкции *are not considered, are said, is supposed, seems, proves etc.* представляют собой инфинитивный оборот, называемый субъектным. Переводить такие конструкции следует как неопределенно-личные предложения, начиная со сказуемого: «Считается, говорят, предполагают, известно, кажется, доказано и т.д.». Затем следует перевод союзного слова (*that, who, when, where, what etc.*). В придаточном предложении подлежащим становится существительное или местоимение, стоящее перед сказуемым *are not considered, are said, is supposed, seems, proves etc.*, а сказуемым становится инфинитив. Все остальные слова переводятся как в обычном предложении.

*Пример.* Fireplaces are not considered to be ideal heating devices. — Считается, что камины не являются идеальными отопительными приборами (Subjective Infinitive).

**Объектный инфинитив (Objective Infinitive).** В английском языке после слов *know, want, consider, see, hear, let, make* (в значении *заставлять*) *etc.* придаточное дополнительное предложение заменяется следующей конструкцией: подлежащее придаточного предложения выражается неизменяемой формой существительного или местоимением в объектном падеже, а сказуемое употребляется в форме инфинитива, т.е. образуется сложное дополнение, которое и называется объектным инфинитивом.

*Пример.* People let their fire go out. — Люди допускают, чтобы их огонь потух.

После глаголов чувства и восприятия, а также глаголов *let* и *make* (в значении *заставлять*) инфинитив употребляется без частицы *to*.

*а) Переведите предложения с английского на русский язык.*

1. Fire is known to produce heat and light.
2. Early humans are supposed to use fire to frighten away predators.
3. People know fire to pose great risks.
4. Fires are reported to cost the United States and Canada great sums.
5. Protection engineers make people use fire safety.
6. Smoke detectors and automatic sprinklers in homes are considered to have reduced property loss and death.

*б) Переведите предложения с русского на английский язык по вышеуказанному примеру.*

1. Известно, что камины ценятся своим внешним видом.
2. Мы знаем, что они обогревают комнаты неодинаково.

*Задание 8. Найдите в тексте все формы инфинитива. Обратите внимание на особенности перевода таких предложений.*

*Задание 9. Прочитайте текст и найдите в нем информацию о том, какое применение люди находили огню по мере развития цивилизации.*

*Задание 10. Переведите все предложения, в которых встречаются слова с суффиксом -ing.*

*Задание 11. Назовите и переведите слова, с которых начинаются абзацы.*

*Задание 12. Обратите внимание на формальные слова:*

- а) дополняющие какой-то признак (and, too, also);
- б) противопоставляющие какой-то признак (but, yet, than);
- в) указывающие на предпочтительный выбор какого-то признака (on one hand, on the other hand, however, rather, on);
- г) указывающие на отсутствие предпочтительности (in the same way, although, as, such as, at the same time).

## Unit 2

### Early Use Fire

*Задание 1. Прочитайте и переведите текст.*

The earliest use of fire by humans may have occurred as early as 1.4 million years ago. Evidence for this was found in Kenya — a mound of burned clay near animal bones and crude stone tools, suggesting a possible human campsite. However, this fire could have resulted from natural causes.

Homo erectus, a species of human who lived from about 1.8 million to about 30,000 years ago, was the first to use fire on a regular basis. Evidence of a fire tended continuously by many generations of Homo erectus, dating to about 460,000 years ago, has been found in China. Scientists have also found evidence of tended hearths dating back as many as 400,000 years in several parts of France.

Homo erectus was the first human species to leave equatorial Africa in large numbers and spread to other continents. Many scientists believe that the use of fire enabled Homo erectus to adapt to new environments by providing light, heat and protection from dangerous animals. Tending fires probably helped foster social behavior by bringing early humans together into a small area. Fires may have tightened family groups as the families congregated around a fire to protect their young. Homo erectus may have used fire to cook food.

The use of fire became widespread throughout Africa and Asia about 100,000 years ago. By this time anatomically modern humans, Homo sapiens, had evolved and existed alongside their near relatives, the Neanderthals (Homo neanderthalensis). Clear indications of hearths have been found in Israel in Neanderthal settlements that date from 60,000 years ago. The Neanderthals died out about 24,000 years ago.

Sometime after people began to use stone for tools, they found that by rubbing together pieces of flint they could produce sparks that would set fire to wood shavings. Scientists have found evidence that people used pieces of flint and iron to produce sparks for fires 25,000 to 35,000 years ago.

Early people also learned to make fires by rubbing together pieces of wood until the wood produced a hot powder that could light kindling. Later, people made fires by using wood devices that had been developed for other purposes. The fire drill was an adaptation of the bow and the drill. It consisted of a block of wood and a stick that was fixed in the looped string of a small, curved bow. The fire builder moved the bow in a sawing motion, with one end of the stick against the block of wood. This motion rotated the stick rapidly against the wood block, creating friction between the end of the stick and the block of wood. The friction produced a glowing wood powder that could be fanned into a flame and used to light a fire.

Early people of southeastern Asia produced fire another way. They used a wood piston to compress air inside a bamboo tube that contained wood shavings. The compressed air became increasingly hotter, eventually igniting the shavings.



The people of ancient civilizations improved on methods of fire-making. Glassmaking among the Greeks led to the development of lenses, which the Greeks used to focus sunlight on, and thereby ignite, bundles of dry sticks. As the use of metals in tool making increased, people developed the tinderbox. This moisture-proof, metal carrying case held tinder, usually charred cotton or linen cloth, and pieces of steel and flint. Striking the steel and flint together produced a spark that lighted the tinder. Later the Japanese devised a tinderbox that operated like a present-day cigarette lighter, in which the rotary motion of a metal wheel against flint set off sparks in tinder. Finally, in the middle 19th century, a reliable form of the phosphorus match was developed.

*Задание 2. Прочитайте и запишите слова. Дайте их толкование, составьте гнезда слов, выберите синонимы и антонимы.*

Phosphorus, together, piece, contain, fan, light powder, sawing, loop, string, iron, spark, earl use, behavior, tighten, modern, occur, result, dangerous, small, area.

*Задание 3. Переведите слова (обратите внимание на конверсию и словообразование).*

Match, reliable, increase, eventually, use, friction, adaptation, rub, environment, human, tight, evidence, congregate, continuous, social, protect, settlement.

*Задание 4. Переведите словосочетания.*

As early as, evidence for this, a mound of burned clay, crude stone tools, dating to about, dating back as early as, the use of fire enable Homo erectus to adapt to, by bringing early humans together, by this time existed alongside, their near relatives, to make fires by rubbing together pieces of wood, to move in a sawing motion.

*Задание 5. Выучите новые слова.*

evidence	свидетельство
occur	случаться, происходить
mound	холм, насыпь
crude	необработанный, сырой, неочищенный, грубый
suggest	предлагать, предполагать
campsite	участок возгорания
however	однако
species	род, вид
to tend	ухаживать, поддерживать, прислуживать
generation	поколение
to date	датировать (-ся)
to believe	верить
to enable	давать возможность
to adapt	приспособиться, адаптироваться
environment	окружающая среда
dangerous	опасный
probably	вероятно, возможно
to foster	ухаживать, благоприятствовать
behavior	поведение

to tighten	связывать
to congregate	собираться, сходиться
around	вокруг
alongside	наряду
indication	признак, знак
tube	лампа
area	регион, район
dry	сухой
to contain	содержать
air	воздух
stick	палка
piece	кусок, часть
stone	камень
charred	обугленный
through	сквозь, через

*Задание 6. Переведите предложения.*

1. Fires continues to be essential to humans today.
2. Hunter-gatherers developed a number of valuable uses of fire.
3. Prehistoric people made the meat of the animals they killed more palatable.
4. Fire enabled people to make better weapons and tools.
5. People eventually learned to control the spread of a fire.
6. These communities amassed food surpluses.
7. Fire became the center of daily life in the ancient civilizations.
8. Hot air feuwed to a heat chamber under some of the rooms.
9. People began to use metal dishes with a spout for the wick.
10. This fire destroyed the world's most complete collection.
11. Some of the houses, as well as tenements in crowded cities.
12. Later people began to use pottery or metal dishes with a spout for the wick.

*Задание 7. Ознакомьтесь с грамматическим комментарием.*

**Participle I** — отглагольная форма с суффиксом *-ing*, выполняющая в предложении функцию левого и правого определения, обстоятельства и независимого причастного оборота.

В функции обстоятельства **Participle II** никогда не имеет предлога.

*Пример.* Lamps remained the basic source of light, with gas and kerosene being used as fuel. — Лампы оставались основным источником света, в котором позднее газ и керосин использовались в качестве горючего.

*Задание 8. Ознакомьтесь с грамматическим комментарием и выполните упражнения а) и б).*

**Герундий** — отглагольная форма, образующаяся от глаголов с помощью добавления суффикса *-ing* и выполняющая функции подлежащего, именной части сказуемого, дополнения, определения, обстоятельства. Переводится как существительное, неопределенная форма глагола или целым придаточным предложением.

*Пример.* People began using fire as a source of light by taking advantage of the glow of wood-burning fires.

1) using — является дополнением, отвечает на вопрос: что люди начали делать?

2) by taking advantage — является обстоятельством образа действия и отвечает на вопрос: каким образом?

3) wood-burning — является определением и отвечает на вопрос: какие?

Переводится предложение следующим образом: «Люди начали использовать огонь как источник света, воспользовавшись тем, что он вызывал свечение от горящих поленьев».

*а) Прочитайте нижеприведенные предложения и переведите их на русский язык, обращая внимание на функцию герундия.*

1. By cooking with fire, prehistoric people made the meat of the animals more digestible.

2. They learned to preserve meat by smoking it.

3. Cooking enabled them to add some formerly inedible plants to their food supplies.

4. Hunters formed spears from tree branches by burning the tips of the branches and then scarping the charred ends.

5. People learned to control the spread of a fire by blowing at it through reed pipes.

*б) Найдите предложения с отглагольными формами с суффиксом -ing. Определите, являются ли слова с -ing формой герундия или причастиям, и переведите их.*

1. These communities amassed surpluses, enabling some people to devote their time to becoming skilled artisans.

2. Ancient peoples developed improved devices for using fire to provide light.

3. The Egyptians and Greeks introduced more advanced forms of the oil lamp, filling a shell or carved stone with animal or vegetable oil and introducing a floating wick.

4. Fire was essential in metalworking.

5. Sumerian artisans melted copper ore for casting tools.

6. Later, artisans lined the hearth hole with stone, creating the first furnace.

7. People found they could create a hotter fire by burning carbonized sticks.

8. They produced charcoal by slowly smoldering wood in an oven.

*Задание 9. Ответьте на вопросы.*

1. When did prehistoric people form communities?

2. When did artisans appear?

3. What did artisans produce?

4. What were ancient houses heated by?

5. What are braziers like?

6. What were the houses of the rich in Roman Empire heated by?

7. What did ancient people use to provide light?

8. For what purpose was fire essential in 4000 BC?
9. For what purpose did Sumerians melt copper ore?
10. What did artisans use to force air into the tire?
11. How did they produce charcoal?
12. Where was the ancient city of Troy located?

*Задание 10. Найдите в тексте слова, указывающие на последовательность действия (first, later, eventually etc.).*

*Задание 11. Назовите и переведите слова, с которых начинаются абзацы.*

*Задание 12. Обратите внимание на формальные слова, указывающие на предпочтительный выбор дополнительного признака.*

*Задание 13. Расскажите содержание текста, пользуясь планом:*

1. Использование огня древними людьми.
2. Способы добычи огня.
3. Способ добычи огня в середине 19-го века.

## Unit 3

### Fire and advance civilization

*Задание 1. Прочитайте и переведите текст.*

As early people began to live in larger communities and to develop more advanced technologies, fire became a central part of their lives. Fire continues to be essential to humans today, although its presence may be hidden in gas-fired ovens and furnaces and thus less noticeable than before.

Thousands of years ago hunter-gatherers (people who lived by hunting and gathering wild food) developed a number of valuable uses for fire. With fire they could remain active after the sun set, protect themselves from predators, warm themselves, cook, and make better tools.

People began using fire as a source of light by taking advantage of the glow of wood-burning fires to continue their activities after dark and inside their dwellings, which were usually natural caves. Eventually people learned to dip branches in pitch to form torches. They created crude lamps by filling a hollowed out piece of stone with moss soaked in oil or tallow (a substance derived from animal fat).

By cooking with fire, prehistoric people made the meat of the animals they killed more palatable and digestible. They learned to preserve meat by smoking it over a fire, vastly decreasing the danger of periodic starvation. Cooking also enabled them to add some formerly inedible plants to their food supplies.

Fire enabled people to make better weapons and tools. In prehistoric times, hunters formed spears from tree branches by burning the tips of the branches and then scraping the charred ends into a point. They used fire to straighten and harden tools made of green wood. People eventually learned to control the spread of a fire by blowing at it through reed pipes. They then used this technique to burn hollows in logs to create cradles, bowls, and canoes.

When prehistoric people developed the ability to cultivate crops and raise animals, they began to form permanent communities. These communities amassed food surpluses, enabling some people to devote their time to becoming skilled artisans. The artisans first used fire to make pottery and bricks. The first potters worked around 6500 BC in Mesopotamia, one of the earliest centers of civilization, located in modern-day Iraq and eastern Syria. They placed wet clay vessels in open fires to harden and waterproof them.

By 3000 BC, Egyptian potters used fire in earthen kilns, or ovens, to bake bricks out of a mixture of mud and straw. Later, potters in Babylonia and Assyria, in the area now known as Iraq, used fire in store kilns to create high temperatures that produced extremely durable pottery.

Fire became the center of daily life in the ancient civilizations. Most of the mud, thatch, or wood houses in which ancient people lived contained a hearth, or fireplace, in the center. Smoke escaped through a hole directly overhead in the roof. Some of the houses, as well as tenements in crowded cities such as Rome and Athens, were heated by braziers (metal pans that held charcoal fires). The large houses of the rich in the Roman Empire were heated by movable stoves, or even furnaces, from which hot air flowed to a heat chamber under some of the rooms. Modern household stoves and furnaces stem from these developments.

Ancient peoples developed improved devices for using fire to provide light. By 2000 BC they began using candles made of yarn or dry rushes dipped in animal fat. The Egyptians and Greeks introduced more advanced forms of the oil lamp, filling a shell or carved stone with animal or vegetable oil and introducing a floating wick. Later people began to use pottery or metal dishes with a spout for the wick. Lamps remained the basic source of light, with gas and kerosene later being used as fuel, until the development of the electric bulb in the 19th century.

Fire was essential in metalworking, which developed after 4000 BC. At this time Sumerian artisans, who preceded the Babylonians, melted copper ore for casting tools and weapons in a fire over an earthen hearth. The hearth contained a hole to collect the hot, liquid metal. Later, artisans lined the hearth hole with stone, creating the first furnace. Eventually, to increase the heat, they used bellows to force air into the fire and developed the first blast furnace. People also found they could create a hotter fire by burning carbonized (partially burned) sticks and twigs. They eventually produced charcoal, a compact, efficient fuel, by slowly smoldering wood in an oven with little air.

The history of people's use of fire includes many difficulties involved in controlling fire. Early cities were often ravaged by fires. The ancient city of Troy, located in present-day Turkey, was destroyed several times by fire, perhaps due to war, perhaps to accident. One of the world's greatest losses was caused by a fire in the great library in Alexandria, Egypt, in 48 BC. This fire destroyed the world's most complete collection of ancient Greek and Roman writings.

Fire continues to be a basic, everyday element of most people's lives. Any home appliance that uses methane, propane, or oil relies on fire to operate. These appliances

include gas- or oil-fired (but not electrically operated) water heaters, boilers, hot air furnaces, clothes dryers, stoves, and ovens. Many people use wood or, sometimes, coal in fireplaces or stoves to supplement the main heating system in their homes. In the countryside, people destroy leaves and brush by burning them. People also make outdoor fires to cook food in barbecues and over campfires. Today, many people enjoy sitting around a campfire, keeping warm and telling stories, just as people have had for tens of thousands of years.

*Задание 2. Прочитайте и запишите слова. Дайте их толкование, приведите гнезда слов, подберите синонимы и антонимы.*

Communities, advance, civilization, technology, essential, although, oven, furnace, thus, year, valuable, light, natural, torch, tallow, digestible, weapon, spear, straighten, through, artisan, temperature, extremely, durable, ancient, yarn, Egyptians, ore, liquid, bellow, efficient, ravaged.

*Задание 3. Переведите слова (обратите внимание на конверсию и словообразование).*

Central, presence, noticeable, gather, activities, prehistoric, palatable, digestible, decrease, starvation, inedible, straighten, surplus, devote, pottery, waterproof, earthen, mixture, overhead, charcoal, carved, introduce, carbonized, partially.

*Задание 4. Переведите слова и словосочетания.*

Blast, furnace, hunter-gatherer, take advantage, wood-burning fires, natural caves, to dip branches in pitch, to form torches, a hollowed out piece of stone, soaked in oil, by smoking meat over a fire, vastly decreasing, danger of periodic starvation, inedible plants, food supplies, tips of the branches, the charred ends, reed pipes.

*Задание 5. Выучите новые слова.*

to hunt	охотиться
hunter-gatherer	охотник-собиратель
valuable	ценный, дорогой, дорогостоящий
to remain active	оставаться
sun set	закат
to protect	защищать
advantage (n, v)	превосходство, давать преимущество
to take advantage	воспользоваться преимуществом, обмануть
to glow	светиться
cave	пещера, полость, впадина
to dip	погружать, окунать
branch	ветка, отрасль
pitch	смола, вар, деготь, битум
torch	факел, осветительный прибор
cloth	ткань, полотно
device	устройство, прибор
century	век, столетие

*Задание 6. Переведите предложения.*

1. Homo erectus, a species of human, who lived from about 1.8 million to about 30,000 years ago.
2. Evidence of a fire tended continuously by many gene rations of Homo erectus, dating to about 460,000 years ago, has been found in China.
3. By this time anatomically modern humans, Homo sapiens, had evolved and existed alongside the near relations, the Neanderthals (Homo neanderthalensis).

*Задание 7. Ознакомьтесь с грамматическим комментарием и выполните упражнения а) и б) по указанному примеру.*

**Infinitive** в функции определения. Инфинитив, который стоит после существительного или числительного (часто имеет модальную силу), в качестве эквивалента в русском языке имеет целое придаточное определительное предложение с союзом *которое, который, которая, которые (кто, что)*. Если глагол в английском предложении стоит в форме прошедшего времени, то инфинитив при переводе в придаточном определительном предложении ставится в прошедшем времени, если время настоящее, то инфинитив — в будущем времени или с модальным глаголом.

*Пример.* Homo erectus was the first to use fire on a regular basis. — Хомо эректус был первым, кто (который) регулярно пользовался огнем.

*а) Переведите предложения с английского на русский язык.*

1. Homo erectus was the first species to leave equatorial Africa in large numbers.
2. People began to use pieces of flint to produce sparks by rubbing them together.
3. Engineers develop more-resistant materials to be used in furniture, buildings, automobiles, subway cars and ships.

*б) Переведите предложения с русского на английский язык.*

1. Были найдены деревянные приспособления, которые использовались для получения огня.
2. Жители Юго-Восточной Азии пользовались бамбуковыми трубками, в которые засыпались древесные стружки.

*Задание 8. Найдите в тексте предложения, содержащие инфинитив, определите его функцию и переведите на русский язык.*

*Задание 9. Найдите в тексте предложения, содержащие прилагательные, определите их степень сравнения и переведите на русский язык.*

*Задание 10. Ответьте на вопросы.*

1. What did hunter-gatherers live by?
2. For what purpose did people use fire?
3. What is tallow like?
4. How did prehistoric people preserve meat?
5. What did fire help people to do?

## Unit 4

### History of fire fighting

*Задание 1. Прочитайте и переведите текст.*

The Roman Emperor Augustine is credited with instituting a corps of fire-fighting vigils (“watchman”) in 24 BC. Regulations for checking and preventing fires were developed. In the preindustrial era most cities had watchman who sounded an alarm at signs of fire. The principal piece of fire-fighting equipment in ancient Rome and into early modern times was the bucket, passed from hand to hand to deliver water to the fire. Another important fire-fighting tool was the ax, used to remove the fuel and prevent the spread of fire as well as to make openings that would allow heat and smoke to escape a burning building. In major conflagration long hooks with ropes were used to pull down buildings in the path of an approaching fire to create firebreak. When explosives were available, they would be used for this same purpose.

Following the Great Fire of London in 1666, fire brigades were formed by insurance companies. The government was not involved until 1965, when these brigades became London’s Metropolitan Fire Brigade. The first modern standards for the operation of a fire department were not established until 1830, in Edinburgh, Scotland. These standards explained, for the first time, what was expected of a good fire department.

After a major fire in Boston in 1631, the first fire regulation in America was established. In 1648 in New Amsterdam (now New York) fire wardens were appointed, thereby establishing the beginnings of the first public fire department in North America.

In the modern sense, fire departments constitute a comparatively recent development. Their personnel are either volunteer (non-salaried) or career (salaried). Typically, volunteer fire fighters are found mainly in smaller communities, career fire fighters in cities. The modern department with salaried personnel and standardized equipment became an integral part of municipal administration only late in the 19th century.

In some cities a fire commissioner admenstars the department, other cities have a board of fire commissioners with a fire chief as executive officer and head of the uniformed force; in still other cities a safety director may be in charge of both police and fire departments. The basic operating unit of the department is the company, commanded by a captain. A captain may be on duty on each shift, although in some fire departments lieutenants and sergeants command companies when the captain is off duty. Fire companies are usually organized by types of apparatus: engine companies, leader companies, and equal or rescue companies.

Fire-alarm systems came into existence with the invention of the telegraph. Today many communities are served either with the telegraph-alarm system or with telephone call boxes. Most fires, however, are reported from private telephones. Many large cities have removed all or many of their street alarm boxes



because of problems associated with maintenance and with false alarm transmissions. Some boxes have been replaced with telephones. All alarms are then transmitted to the fire stations. In large cities, alarms are received at a central dispatch office and then transmitted to fire stations, frequently with the use of mobile teleprinters and computers. Apparatus is dispatched according to the nature of the alarm and location of the fire. Many modern departments are now equipped with computer-aided dispatch systems that can track the status of all units and provide vital information about the buildings where fires occur.

Typically, on a first alarm, more apparatus is sent to industrial sections, schools, institutions, and theaters than to neighborhoods of one-family dwellings. Additional personnel, volunteer or off duty, is called as needed. Fires that cannot be brought under control by the apparatus responding to the first alarm are called multiple-alarm fires, with each additional alarm bringing more fire fighters and apparatus to the scene. Special calls are sent for specific types of equipment. Mutual aid and regional mobilization plans are in effect among adjacent fire departments for assisting each other in fighting fires.

Perhaps more important than fire fighting itself in many modern industrial countries is fire prevention. In Russia and Japan, for example, fire prevention is treated as a responsibility of citizenship. Fire fighters in the U.S. are trained in basic fire-prevention methods, and fire companies are assigned inspection districts in which they attempt to prevent or correct unsafe conditions. Fire departments are charged with enforcement of the local fire-prevention code and of state fire laws and regulations. A fire-prevention bureau in the fire department usually directs fire prevention activities. It handles the more technical fire-prevention problems, maintains appropriate records, grants licenses and permits, investigates the causes of fires, and conducts public education programs. All commercial or multi-dwelling buildings are inspected at regular intervals, and orders are issued for the correction of violations of fire laws. If necessary, court action is taken to compel compliance.

In some communities protected by volunteer or part-time paid fire departments, fire prevention is the responsibility of a state or county fire marshal or of a professional fire staff in an otherwise voluntary organization. In addition, fire departments usually inspect commercial buildings for what is called prefire planning.

Private dwellings may also be inspected as part of a fire department's educational program to impress the importance of fire safety on the inhabitants and to check for any unsafe conditions.

Many modern fire departments spend a decreasing amount of overall activity in fighting fires. Instead, fire fighters typically respond to all kinds of emergencies. For example, in the U.S. approximately 70 percent of all emergency medical calls are handled by the fire service. The same is true in many other countries.

The enormous increase in transportation of hazardous materials or dangerous goods has resulted in intensified training for fire fighters, and their departments often provide them with chemical protective clothing and monitoring equipment. Fire departments also prepare and equip their members to handle emergencies

that result from earthquakes, plane crashes, and violent storms. In addition, fire fighters handle incidents that require extricating trapped people from fallen structures, from cave-ins, and from other situations.

*Задание 2. Сгруппируйте синонимы.*

Volunteer, vigil, fire, commissioner, rescue, force, save, watchman, salaried, conflagration, non-salaried, warden, career, group, company, fighter.

*Задание 3. Прочитайте гнезда слов и переведите слова (обратите внимание на конверсию и словообразование).*

Regulate, regulation, regulator, regulated; to watch, watch, watchman; industry, industrialize, industrial, preindustrial; equip, equipment, equipped; insure, insurance, insured; compare, comparatively, comparance; fight, to fight, fighter.

*Задание 4. Переведите словосочетания.*

A corps of fire, fighting vigils, preindustrial era, signs of fire, fire-fighting equipment, early modern times, from hand to hand, fire-fighting tool, as well as, insurance companies.

*Задание 5. Переведите слова и словосочетания (найдите их эквиваленты в тексте).*

Впервые, инструкция по пожарам, комиссар-пожарник, в современном смысле, персонал из профессионалов, управляющий по безопасности, руководить, быть на дежурстве, отдыхать, типы подразделений.

*Задание 6. Выучите слова.*

emperor	император
to credit	ставить в заслугу, приписывать
corps	корпус, служба
watchman (vigil)	сторож, вахтер
to check	контролировать, останавливать, сдерживать, препятствовать
to sound	исследовать, испытывать, звонить
alarm	тревога, сигнал опасности
sign (n, v)	знак, свидетельство, ставить знак
equipment	оборудование, оснащение, снаряжение
ancient	древний
bucket	ведро
to deliver	передавать, отдавать, вручать
another (adj, pr)	еще один, другой
ax	топор
to remove	перемещать, сносить, уничтожать
to escape	избегать
conflagration	большой пожар
hook	крюк
gore	веревка
path	дорожка, линия действия

approaching	приближение
to create	создавать
firebreak	противопожарная полоса
explosive	взрывное устройство
available	пригодный, доступный, имеющийся, используемый
insurance company	страховая компания
to involve	включать, вовлекать
to establish	создавать, учреждать, предполагать
regulation	инструкция
warden	уполномоченный по охране (чего-либо)
to appoint	назначать
thereby	тем самым
sense	смысл
volunteer (non-salaried)	волонтер
career (salaried)	штатный работник
municipal	муниципальный, городской
fire commissioner	комиссар-пожарник, специальный уполномоченный по борьбе с пожарами
board	правление, совет
executive	исполнительный орган
uniformed	одетый в форму
to be in charge of	руководить
engine company	личный состав, обеспечивающий непосредственное тушение пожара
rescue (v, n)	спасать, спасение

*Задание 7. Переведите предложения на русский язык.*

1. Augustus is credited with instituting a corps of fire-fighting vigils.
2. The principal piece of fire-fighting equipment was the bucket passed from hand to hand.
3. In major conflagrations long hooks with ropes were used.
4. The first modern standards for the operation of a fire department were not established until 1830.
5. In the modern sense, fire departments constitute a comparatively recent development.

*Задание 8. Закончите предложения.*

1. Regulations for checking and preventing fires ...
2. After a major fire in Boston in 1631 ...
3. Volunteer fire fighters are found ...
4. The basic operating unit of the fire development is ...
5. Another important fire-fighting tool was ...
6. The modern standards established in 1830 explained ...

*Задание 9. Ознакомьтесь с грамматическим комментарием и выполните упражнения а) и б).*

В тексте встречается предложение в сослагательном наклонении со словом *would*: Another important fire-fighting tool was the ax, used to remove the fuel and prevent the spread of fire as well as to make opening that would allow heat and smoke to escape a burning building.

В таком случае *would* требует при переводе употребление «бы»: ... которые позволили бы ...

*а) Найдите в тексте и переведите все предложение со словом would.*

Слово *would* также используется в значении «иметь обыкновение».

*б) Прочитайте и переведите нижестоящее предложение.*

When explosives were available, they would be used for this same purpose.

*Задание 10. Выберите предложения, содержащие слова с суффиксом -ing. Определите, являются ли слова отглагольными существительными, причастиями настоящего времени или герундием. Переведите предложения.*

*Задание 11. Выберите предложения, в которых имеются слова с суффиксом -ed. Определите, являются ли они определениями, сказуемыми в Past Simple Active или входят в состав Passive. Переведите предложения.*

*Задание 12. Найдите в тексте информацию об организационной системе по пожарной безопасности.*

*Задание 13. Прочитайте текст еще раз. Назовите слова, с которых начинаются абзацы. Переведите их.*

*Задание 14. Обратите внимание на формальные слова: another, as well as, for the first time, thereby, recent, either ... or, typically, only, other, still, both ... and.*

*Задание 15. Ответьте на вопросы.*

1. What is the Rome emperor Augustus credited with?
2. When were fire brigades formed in London?
3. When were the first modern standards for the operation of a fire department established?
4. What were the first-fighting tools?
5. What kind of workers does the personnel include?
6. Who administers the departments?

*Задание 16. Коротко перескажите содержание текста на английском языке.*

### **Fire Departments. Outside the United States**

Although fire fighting is largely a matter of local jurisdiction in the U.S., many countries have more centralized fire departments. Italy has a national fire service (Corpo Nazionale — Vigili del Fuoco) organized into 92 provinces, administered from 12 regional centers. In the United Kingdom, local fire departments are organized into county, borough, and special district departments, all under a chief inspector of fire services. In France, fire protection is administered in sectors, except

in Paris, where the fire department is operated by the Sapeurs-Pompiers, a brigade of the French army, and in Marseille, where it is administered by the navy. The Japanese government administers 43 regional and 3 metropolitan fire departments. In Denmark, local governments contract for fire-fighting services with companies under supervision of The Ministry of Justice. In Germany, professional fire brigades operate in large cities, volunteer brigades serve the small towns.

In all industrial countries, fire fighters undergo training, beginning with probationary fire fighters school and continuing throughout a fire fighter's career. Great Britain has several fire training centers. In Russia, fire schools are in Moscow and Saint Petersburg; Sweden and Denmark have similar schools. In some European countries fire protection and fire fighting are among the courses included in teaching safety engineering.

International fire service and fire protection associations bring together leaders of the fire services of many nations. In Europe Comite Technique International de Prevention et d'Extinction du Feu (CTIF) has over 30 member nations, including Russia. The Organization Iberoamericana de Protection Contra Incendios (OPCI) brings together the fire service leaders of all Latin America countries. The Asia-Pacific region is served by the Asian Pacific Fire Safety Association (APAC).

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