Федеральное агентство по образованию
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FORESTRY

Учебно-методическая разработка по развитию иноязычной (английский язык) профессиональной компетенции студентов по направлению «Лесной комплекс»

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Цель настоящей учебно-методической разработки – формирование компетенции грамотного перевода оригинальной научно-технической литературы по направлению: «Лесной комплекс».

Эта учебно-методическая разработка состоит из шести частей, включающих лексический материал по различным аспектам развития лесной промышленности.

Фонетические, лексические и грамматические упражнения направлены на развитие у студентов компетенций английского произношения, грамотного перевода и умения идентифицировать, а также адекватно воспринимать лексический материал и основные грамматические конструкции английского языка по данной тематике.

В разработке оптимально представлены упражнения на усвоение студентами разнообразных лексических единиц английского языка, а также синтаксических конструкций по разделам грамматики, предусмотренной в программе обучения иностранным языкам в неязыковых вузах.

PART 1. GENERAL ASPECTS

TEXT 1.WOOD AND ITS CLASSIFICATION

PRE-TEXT EXERCISES

Ex.1. Pronounce the words with the 1st type of reading.
a [ei] Enable, name, plate, date, hate, rate, mate;
e [i:] tree, feet, fleet, seed, feed, greed, free;
i [ai] time, crime, pine, lime, rime, fine, shine;
o [ou] smoke, phone, note, tone, hone, prone, bone;
u [ju:] student, tube, mute, suit, dude, huge;
y [ai] ply, try, cry, sly, dry, fry, my, thy, shy.

Ex.2. State to what part of speech the following words belong.
Woody – wood; long – length; active – activity; organic – organ;
proper – property; coniferous – conifer; dense – density; hard – hardness;
thick – thickness; supportive – support; functional – function;
relative – relation; commercial — commerce.

Wood is an organic material. It is produced as secondary xylem in the stems of trees (and other woody plants). In a living tree it conducts water and nutrients to the leaves and other growing tissues, and has a support function, enabling woody plants to reach large sizes. However, wood may also refer to other plant materials with comparable properties, and to material engineered from wood, or wood chips or fiber.

People have used wood for many purposes, primarily as a fuel or as a construction material for making houses, tools, weapons, furniture, packaging and paper. The year-to-year variation in tree-ring widths gives clues to the prevailing climate at that time.

There is a strong relationship between the properties of wood and the properties of the tree that yielded it. There is some correlation between density of a wood and its strength (mechanical properties). For example, while mahogany is a medium-dense hardwood which is excellent for furniture crafting, balsa is light, making it useful for model building. The densest wood may be black ironwood.

It is common to classify wood as either softwood or hardwood. The wood from conifers such as pine is called softwood, and the wood from dicotyledons (usually broad-leaved trees, for example, oak) is called hardwood. These names are a bit misleading, as hardwoods are not necessarily hard, and softwoods are not necessarily soft. The well-known balsa (a hardwood) is actually softer than any commercial softwood. Conversely, some softwoods like yew are harder than most hardwoods.

Vocabulary
xylem – ксилема
wood chips – древесная щепа
tree-ring – годовое кольцо дерева

mahogany – красное дерево
black ironwood – кругиодендрон железный
softwood – мягкая древесина
misleading – обманчивый
dicotyledon – двудольное растение
conversely – наоборот
yew – тис
oak – дуб

Ex.1. Answer the questions.
1. What is wood?
2. Where is it produced?
3. What does it conduct to the leaves and growing tissues?
4. What have people used wood for?
5. Is there a relationship between the properties of wood and those of the tree that yielded it?
6. How is it common to classify wood?
7. What is called softwood?
8. What makes balsa useful for model building?
9. Why is mahogany excellent for furniture crafting?
10. What softwoods are harder than most hardwoods?

Ex.2. Translate from English into Russian.
Growing tissue; a support function; may refer to other plant materials; comparable properties; engineered from wood; primarily as a fuel; the year-to-year variation; tree-ring width; to give clue; prevailing climate; medium-dense hardwood; strong relationship between; furniture crafting; useful for model building.

Ex.3. Translate from Russian into English.
Органический материал; древесное растение; вторичная ксилема; растительное сырье; сравнимые свойства; указывать на преобладающий климат; сильная взаимосвязь; разработка модели; промышленная древесина хвойных пород; широколиственное дерево; наоборот; мягкая древесина.

Ex.4. Complete the sentences.
1. Wood is an ….
2. …as secondary xylem in the stems of trees….
3. It is common to classify wood as ….
4. Conversely, some softwoods like yew are ….
5. The wood from conifers such as pine is called
6. These names are a bit ….
7. The densest wood may be….
8. Some hardwoods like yew are harder than…

Ex.5. Translate the sentences.
1. Secondary xylems play an important role in enabling plants to reach larger sizes.
2. The construction material is used for making furniture, packaging and paper.
3. The wood from conifers is called softwood.
4. The well-known balsa is used for making musical instruments.
5. Wood chips are a solid fuel made from woody biomass.
6. The tool was made of wood and plastics.
7. He was involved in the development of new wooden molds for his model.
8. The trees reached large sizes.
9. The scientist's clues were misleading.
10. She gathered apple and cherry chips for making a campfire.
11. Commercial softwood became very expensive.

TEXT 2 HARDWOOD AND ITS APPLICATION

PRE-TEXT EXERCISES

Ex.1. Pronounce the words paying attention to the 2nd type of reading.
a [æ] Can, tram, ban, man, fan, lack, tack;
e [e] ten, help, peck, heck, wreck, deck, check;
i [i] pit, wrist, brisk, sit, hit, kick, pick, chick;
o [o] plot, lot, soft, bond, wonk, honk, wrong;
y [i] myth, baby, shady, woody, moody, footy, rhythm;
u [ʌ] sun, run, gun, rum, sum, slum, fun.

Ex.2. Compare the following sentences paying attention to the function of "there" and word order in the examples. Translate them into Russian.
1. The prevailing climate is favourable for pine reforestation in the area.
2. There are favourable conditions for pine reforestation in the area.
3. Water evaporation is excessive in tropical forests.
4. There is excessive evaporation in tropical forests.
5. Many species of oak trees exist in the region.
6. There are many species of oak trees in the region.

Ex.3. Read the following words, translate them into Russian.
Conifer, density, example, actual, dominant, pore, considerable, shape, structure, range, cooking, tropical, joinery, plywood, overexploitation, variety, core, cherry, apple, cedar, pine, volume, application, bond, available, perforation, solid, supply, teak, reticulate, utensil, cell.

Hardwood contrasts with softwood, which comes from conifer trees. On average, hardwood is of higher density than softwood, although there is an enormous variation in actual wood hardness in both groups, some hardwoods like balsa are softer than most softwoods, while yew is an example of a hard softwood.

Hardwoods are more varied than softwood. There are about a hundred times as many hardwoods as softwoods. The dominant feature separating hardwoods from softwoods is the presence of pores, or vessels. The vessels may show considerable variation in size, shape of perforation plates (simple, reticulate), and structure of cell wall.

Hardwoods are employed in a large range of applications including: construction, furniture, flooring, cooking utensils, etc. Solid hardwood joinery tends to be expensive compared to softwood. In the past, tropical hardwoods were easily available but the supply of some species such as Burma teak and mahogany is now becoming restricted due to overexploitation. Cheaper "hardwood" doors, for instance, now consist of a thin veneer bonded to a core of softwood, plywood or fibreboard. (MDF). Hardwoods can also be used in a variety of objects but mainly for furniture or musical instruments because of their density.

As hardwoods are denser, they contain more volume. This makes hardwoods such as oak, cherry, and apple ideal for camp fires and smoking meat as they tend to burn hotter and longer than softwoods such as pine or cedar.

Vocabulary
hardwood – твердая древесина
conifer – хвойное дерево
perforation plate – перфорационная пластинка
reticulate – сетчатый
flooring – настилка полов
hardwood joinery – жестко древесинные столярные работы
teak – тиковое дерево
veneer – однослойная фанера
plywood – клееная фанера
fibreboard – фибровый картон
smoking – копчение
to restrict – ограничивать
to contain – содержать, включать

Ex.1. State if the following statements are true or false.
1. Hardwood contrasts with softwood.
2. Some hardwoods like balsa are harder than most softwoods.
3. Hardwood is of lower density than softwood.
4. There are about a thousand times as many hardwoods as softwoods.
5. The vessels may show minimal variation in size.
6. Solid hardwood joinery tends to be expensive compared to softwood.
7. As hardwoods are denser, they contain more volume.
8. The supply of some species such as Burma teak and mahogany is now becoming unrestricted due to overexploitation.
9. The dominant feature separating hardwoods from softwoods is the presence of bark.
10. In the past, tropical hardwoods were hardly available.

Ex.2. Translate the expressions from English into Russian.
Comes from conifer trees; there is an enormous variation; some hardwoods like balsa; about a hundred times as many hardwoods as softwoods; the presence of pores; shape of perforation plates; hardwood joinery tends to be expensive; consist of a thin veneer; mainly for furniture or musical instruments; for smoking meat.

Ex.3. Complete the sentences.
1. Hardwoods are employed in...
2. Hardwood contrasts with softwood….
3. Hardwoods are more….
4.…they contain more volume.
5.…tends to be expensive compared to softwood.

Ex.4. Translate from Russian into English.
Твердая древесина; более высокая плотность, чем у мягкой древесины; разнообразнее; могут проявить заметные различия; структура клеточной оболочки; широкая область применения; по сравнению с мягкой древесиной; проявлять тенденцию к горению.

Ex.5. Revise the English Tenses and translate the sentences.
1. Both groups are employed in a large range of activities.
2. The forester has prepared some wood chips for smoking meat.
3. Hardwoods can be used for making furniture because of their density.
4. Conifer trees are expected to be grown in the area.
5. The main function of a forester is to manage forests and protect them from poachers.
6. The poachers were engaged in illegal blue fox hunting.
7. As hardwoods are denser, they must contain more volume.
8. The presence of pores makes hardwoods different from softwoods.
9. His son was engaged in furniture crafting and had a decent monthly salary.
10. Red mahogany finish will make the living room more spectacular.
11. The fine wood will be used in making some musical instruments.

TEXT 3 SOFTWOOD AND ITS APPLICATION

PRE-TEXT EXERCISES

Ex.1. Pronounce the words according to the 3d type of reading.
a [a:] Large, larch, hard, smart, start, tart, part;
o [o:] form, storm, worm, corm, corn, horn, torn, torture;
e [з:] fern, perm, stern, germ, term, kerky, perky;
i [з:] firm, sir, first, mirk, cirque, twirl, swirl, wirl;
y [з:] syrton, myrrh, myrcene, myrcenol, myrmidon, myrinx, myrtle;
u [з:] burn, turn, furry, blur, sturdy, further, hurtful.

Ex.2. Translate the Participles into English according to the pattern.
Поливающий, политый – watering (Participle 1), watered (Participle 2); включающий, включенный, читающий, прочитанный, растущий, выращенный, выбирающий, выбранный, дающий, отданный, смотрящий, просмотренный, изучающий, изученный, доказывающий, доказанный, строящий, построенный, производящий, произведенный, сравнивающий, сравненный, использующий, использованный, удобряющий, удобренный, делающий, сделанный.

Ex.3.Form Participle 1 from the verbs and translate them into Russian.
To meet, to obtain, to produce, to transport, to use, to break, to sit, to grow, to do, to come, to close, to demonstrate, to water, to fertilize, to nourish, to feed, to continue, to finish, to break, to sell, to buy, to keep, to cut, to evaporate, to multiply, to exert, to exploit, to examine, to conclude, to change, to work.

Softwood is wood obtained primarily from coniferous trees. With the exception of cypress, tamarack, and larch, softwood trees are evergreens. Softwood is mostly obtained from Baltic States, Scandinavia, North America, and is the source of about 80% of the world's production of timber.

Perhaps the most noticeable difference between softwood and hardwood is found in the microscopic structure of the wood. Softwood contains only a few types of cells and has a simple structure compared with hardwoods. Softwoods lack the vessel elements for water transport that hardwoods have. These vessels elements manifest in hardwoods as pores. In general softwood forms the bulk of wood used by humans.

It is used for structural building components, furniture, millwork (doors, windows), raw material as pulp in the production of paper and board.

Wood used in construction includes products such as glued laminated timber (glulam), laminated veneer timber (LVL). They are sometimes selected for specific projects such as public swimming pools or ice rinks where the wood will not corrode in the presence of certain chemicals. These engineered wood products prove to be more environmentally friendly, and sometimes cheaper, than building materials such as steel or concrete.

Wood unsuitable for construction in its native form may be broken down mechanically (into fibres or chips) or chemically (into cellulose) and used as a raw material for other building materials such as chipboard, hardboard, medium-density fiberboard (MDF). Such wood derivatives are widely used: wood fibers are an important component of most paper, and cellulose is used as a component of some synthetic materials. Wood derivatives can also be used for some kinds of flooring, for example laminate flooring.

Vocabulary
softwood – мягкая древесина
tamarack – лиственница американская
larch – лиственница
vessel elements – элементы сосуда

resin transport – транспортировка смолы
radial – радиальный, лучеобразный
millwork – столярные работы
glued laminated timber – дощато-клееные материалы
laminated veneer timber – ламинированная фанера
chipboard – доска из прессованных опилок
fiberboard – фибровый картон
chemical – химикат, химреагент

Ex.1. Find the topical sentence of each passage.

Ex.2. Agree or disagree with the following statements.
1. Softwood is obtained from hardwood trees.
2. With the exception of several kinds softwood trees are evergreens.
3. Softwoods have a simple structure compared with hardwoods.
4. Softwoods include the vessel elements for water transport.
5. Glued laminated timber is sometimes used for specific projects such as public swimming pools or ice rinks.
6. Wood derivatives can also be used for yacht manufacturing.
7. Wood used in construction includes only glued laminated timber (glulam).

Ex.3. Revise the English adjective formation and the infinitive forms**.**

Ex.4. Make up the degrees of comparison according to the pattern.
Noticeable – more noticeable – the most noticeable
general, synthetic, important, regular, accurate, abundant, dominant,
functional, critical, suspicious, thorough, twisted, complicated,
severe, sophisticated, belligerent, cohesive, secure, romantic.

Ex.5. Translate the sentences taking into account the infinitive forms.
1. Softwood is widely used to produce timber.
2. Coniferous trees must be planted in the area.
3. The wood to be used in the model is very rare and expensive.
4. Softwoods lack the vessel elements to transport water.
5. The forester knew his dogs to be playing in the yard.
6. Wood derivatives can also be used for laminate flooring.
7. These engineered wood products prove to be more environmentally friendly than others.
8. He could see yellow cypresses out of his hotel window.
9. She heard him open the door and go to the kitchen.
10. The forester would like to plant and grow various new species of trees in the area.
11. Wood fibers should be used as an important component of most paper products.
12. The wood product proved to be too expensive for mass production.

PART 2. FORESTRY AND ITS CURRENT ACTIVITIES

TEXT 1. DEFINITION OF FORESTRY

PRE-TEXT EXERCISES

Ex.1. Pronounce the words according to the 4th type of reading.
air [ɛə] Pair, fair, airing, care, rare, chair, dare, hare;
ore [o:] core, shore, store, more, lore, deplore, tore, before;
ear/ere [ɪə] here, rear, sheer, mere, beer, deer, fear, peer;
ire [aɪə] fire, tyre, hire, sire, mire, tire, dire, scire facias;
ure [juə] during, cure, pure, mure, lure, fewer, stuart, curing.

Ex.2. Build up sentences from the words below.
1. Forestry the art is forests of managing.
2. Practitioner a known is of forestry as a forester.
3. Forests seen are as of components the biosphere.
4. Foresters involved are planning in forest regeneration.
5. Urban work foresters within town and city environment.
6. Some work foresters tree in nurseries.

Ex.3. Open the brackets using the right form of adjectives.
1. Winter is (cold) season of the year.
2. This oak is (old) in the forest.
3. The pines by the road are (tall) than the ones near the lake.
4. The path is (short) than the roundabout route.
5. We have (little) interest in this work than you.
6. Health is (good) than wealth.
7. It is one of (important) questions of our conference.
8. The Alps are (high) mountains in Europe.

Forestry is the art and science of managing forests, tree plantations and related natural resources. Modern forestry generally concerns itself with: assisting forests to provide timber as raw material for wood products, recreation, landscapes and community protection. A practitioner of forestry is known as a forester.

Forests are seen as one of the most important components of the biosphere, and forestry has emerged as a vital field of science, applied art and technology.

Foresters may be employed by the Forestry Commission (in Britain) industry, government agencies, conservation groups, local authorities or private landowners. Industrial foresters are involved in planning the forest regeneration.Other foresters have specific jobs which include many responsibilities. For example, urban foresters work within town and city environments to manage trees in urban green space. Some foresters work in tree nurseries growing seedlings for regeneration projects. Others are involved with tree genetics or developing new building systems as forest engineers.

Traditionally, professional foresters develop and implement “forest management plans”. These plans rely on tree inventories showing an area’s topographical features as well as its distribution of trees (by species). Finally, forest management plans include the projected use of the land and a timetable for that use.

Traditional forest management plans are chiefly aimed at providing logs as raw material for timber, veneer, plywood, paper, wood fuel or other industries. Hence, considerations of product quality and quantity, employment and profit have been of central, though not always exclusive, importance.

Foresters also frequently develop site plans. These may call for reforestation (tree planting by species), weed control, fertilization, or the spacing of young trees (thinning of trees that are crowding one another).

Foresters are specialists in measuring the growth of forests (forest mensuration). Increasingly, foresters may be involved in wildlife conservation planning and watershed protection.

Vocabulary

forestry – лесное хозяйство
timber – лесоматериалы, строевой лес
forester- лесничий, лесник
applied art – прикладное искусство
conservation group – группа по охране природы
tree nursery – лесной питомник
seedling – саженец, рассада
regeneration – восстановление, регенерация
tree felling – рубка леса
veneer – шпон, однослойная фанера
plywood – клееная фанера, лигнолит
management plan – план руководства
weed control – борьба с сорняками
watershed protection – защита водораздела, бассейна
forest mensuration – дендрометрия, лесная таксация
thinning of trees – прореживание деревьев
log – бревно

Ex.1. Find the expressions in the text and translate them into Russian.
Tree plantations, natural resources, raw material, wood products,
community protection, a vital field of science, applied art, conservation groups,
local authorities, private landowners, industrial foresters, forest regeneration,
specific jobs, urban green space, growing seedlings, topographical features,
the growth of forests, always exclusive, may be involved, aimed at providing logs,
wildlife conservation, the spacing of young trees, thinning of trees, product quality,
weed control, frequently develop, other industries, distribution of trees.

Ex.2. Revise the English chains of nouns and translate the expressions from the text.

Wood products	government agencies	conservation groups
forest regeneration	city environment	tree nurseries
regeneration projects	tree genetics	tree inventories
forest management plans	site plans	weed control
wildlife conservation	watershed protection	forest engineers

Ex.3. Translate the sentences with the Complex Object.
1. The forest manager compiled the measures to be included in the reforestation plan.
2. Local authorities observed some private landowners growing pine seedlings for regeneration projects.
3. They wanted the forester to provide logs for the local sauna premises.
4. The foreman expected his team to increase the output of the wood product.
5. She watched the scientist performing numerous tests with a new fertilizer in his lab.
6. They expected foresters to be involved in forest mensuration.
7. Henry expects the forest management plan to be approved by Friday.
8. She watched her son watering apple seedlings in the garden.
9. Mr Brown permitted the forester to grow pine saplings near his house.
10. The authorities expect local professional foresters to provide tree inventories before long.
11. Deputy Governor wanted local foresters to develop new site plans in two months.
12. Foresters are trained to measure the growth of forests, in other words to be involved in forest mensuration.

Ex.4. Guess the puzzle. Match the English proverbs and their Russian equivalents.

As a tree falls, so will it lie.	Дерево узнается по его плодам.
A tree is known by its fruit.	Что посеешь, то и пожнешь.
All is not gold that glitters.	И стены имеют уши.
Fields have eyes, and woods have ears.	Красна ягодка, да на вкус горька.
Don’t whistle until you are out of the wood.	Гордыня предшествует падению.
The highest tree has the greatest fall.	Не радуйся прежде времени.
Time is a great healer.	На острый сук - крепкий топор.
One fire drives out another.	Нет дыма без огня.
There is no smoke without fire.	Время – великий целитель.

TEXT 2. HISTORY OF FORESTRY DEVELOPMENT

PRE-TEXT EXERCISES

Ex.1. Pronounce the words with various letter combinations.
oo [u:] Tool, cool, wool, pool, fool, mook, noodle;
oo [u] book, look, rook, hook, nook, took, cook;
w [w] wet, wine, west, willow, wintry, wise, wade;

v [v] vet, vest, vessel, vent, velvet, vapour, valiant;
r [r] green, dream, price, grow, throw, thrust, ridge.

Ex.2. Make up the alternative questions using the words in brackets.
1. Formal forestry practices developed during the Middle Ages (the Bronze Age).
2. Management of forest resources has a long history (short).
3. Systematic management of forests has begun in the 16th century (18th century).
4. Schools of forestry were established after 1825 (after 1917).
5. Forestry also includes the development of better methods of planting, felling and processing of timber (rejects).
6. The pine spruce is very hard to find in the area (the town).

Ex.3. Match the derived adjectives with noun synonyms according to the pattern.
History - historical

culture	industrial
industry	agricultural
agriculture	cultural
administration	normal
norm	administrational
fate	dental
dent	fatal
parent	hydrological
hydrology	parental
psychology	stoical
stoic	logical
logic	psychological
pivot	paschal
pasch	pivotal

Ex.4. Read the words with mute letters.
h – When, why, whenever, where, while;
w – wrong, wriggler, wrest, wretched, wrestle;
k – knowledge, known, knuckle, knotty, knock;
l – should, could, half, would;
gh – sigh, light, might, night, fight, tight, though.

The management of forest resources started in China, dating back to the Han Dynasty and taking place under the landowning gentry. In the Western world, formal forestry practices developed during the Middle Ages, when land was largely under the control of kings and barons.

Control of the land included hunting rights that were retained by the members of the nobility. Systematic management of forests is said to have begun in the 16th century in both the German states and Japan.

The practice of establishing tree plantations acquired some popularity in the British Isles. Schools of forestry were established after 1825. Most of these schools were in Germany and France. During the nineteenth and early twentieth centuries, forest preservation programs were established in the United States, Europe and British India. The enactment and evolution of forestry laws occurred in most Western nations in the 20th century in response to growing conservation concerns and the increasing number of logging companies.

Today a strong body of research exists regarding the management of forest ecosystems and improvement of tree species. Forestry also includes the development of better methods for the planting, protecting, thinning, controlled burning, felling and processing of timber.

One of the applications of modern forestry is reforestation, in which trees are planted and tended in a given area. In topographically severe forested terrain, proper forestry is important for the prevention or minimization of serious soil erosion or even landslides. In areas with a high potential for landslides, forests can stabilize soils and prevent property damage, human injury and loss of life. Sharp disagreements over the role of logging drives debate while the public demand for wood products continues to increase.

Vocabulary

gentry – мелкое дворянство
enactment – принятие закона
conservation concerns - проблемы охраны природы
hunting rights – права на охоту
logging company – лесозаготовительная фирма
thinning – прореживание деревьев
controlled burning – контролируемое выжигание, целевой пал
felling – рубка, валка (леса)
soil erosion – почвенная эрозия
landslide – оползень, обвал
logging – лесозаготовка и транспортировка леса
topographically severe – суровый по топографии
processing of timber – обработка лесоматериалов
reforestation – лесонасаждение, восстановление лесов
to drive debate – вызывать дискуссию
property damage – имущественный, материальный ущерб
public demand – общественный спрос

Ex.1. Agree or disagree with the following statements.

1. Formal forestry practices developed during the Stone Age.
2. Control of the land didn’t include hunting rights.
3. Schools of forestry were established after 1825.
4. Most of these schools were in Japan.
5. One of the applications of modern forestry is deforestation.
6. Proper forestry can prevent or minimize serious soil erosion.

7. Public demand for wood products continues to decrease.
8. Forest preservation programs were established in the Arab Emirates.
9. The enactment and evolution of forestry laws occurred in most Western nations in the 19th century.
10. The management of forest resources started in China.

Ex.2. Revise the Indefinite and Continuous Tenses and choose the right form below.
1. He (waters, is watering) apple seedlings at the moment.
2. Jane (mowed, was mowing) the lawn, when she heard some noise in her house.
3. They (fly, are flying) to Spain next month.
4. Jill always (gets, is getting) up at 9 o'clock.
5. She (knows, is knowing) everything about reforestation, because the subject is her major.
6. Can you hear the noise? The baby (cries, is crying) in the next room.
7. He (works, is working) full-time every week.
8. The measures usually (are helping, help) to minimize soil erosion.
9. I (want, is wanting) a pot flower as a birthday present.
10. His father (works, is working) in the garden every Saturday.

Ex.3. Revise the adverb formation in English and choose the correct form in brackets.
1. Mr Nixon manages the forest very (good/well).
2. The sun is shining (bright/brightly).
3. The log has a (smooth/smoothly) surface.
4. The guy speaks Spanish (fluent/fluently).
5. We must figure out our income tax return (accurate/accurately).
6. We didn't want to drink (bitter/bitterly) tea.
7. The music sounded too (noisy/noisily) to be classical.
8. Paula was working (diligent/diligently) on her reforestation project.
9. Your chocolate cake tastes (delicious/deliciously).
10. He smelled the flowers (cautious/cautiously) before presenting them to the speaker.

Ex.4. Fill in the gaps with the suitable words in brackets.
1. He is a basketball player and he is very (deep, tall, high).
2. Animals, birds and people can not live without (warm, sweet, fresh) water.
3. Our task is to (live, save, break) forests, because they are in great danger now.
4. He is a famous sportsman. He plays (violin, swimming, tennis).
5. We can travel along the river or lake in a (train, plane, boat).
6. I don't know for sure, but (often, seldom, probably) he will come in time.
7. They changed the American dollars to English (roubles, marks, pounds).
8. He gave me a nice present. It was (cut, swallowed, wrapped) in colourful paper.
9. If you don't keep to a diet and don't go in for sport you'll become (slim, clever, fat).
10. Little children should not play with knifes. They may (put, change, cut) themselves.

TEXT 3 LOGGING AND METHODS OF LOGGING

PRE-TEXT EXERCISES

Ex.1. Pronounce the letter combinations according to the pattern.
sh [ʃ] Ship, sheen, shin, shy, shrink, shook, shame;
ch [t ʃ] chess, chap, chop, cherry, chamber, chafe, change;
tch [t ʃ] catch, fetch, hatch, match, patch, latch, cratch;
ck [k] black, rack, pack, sack, heck, reckon, beckon;
th [θ] theme, thick, throng, thunder, thriller, throne, thrift.

Ex.2. State the functions of the verb "to have". Translate the sentences.
1. The region has appropriate climate for growing hardwood trees.
2. The forester will have the results of his experiments soon.
3. The tundra has low temperature which leads to less evaporation.
4. The forest management plan has been developed by a highly professional team.
5. The loggers had to delimb the trees and load them on a truck.
6. Submerged forests exist on land that has been flooded to create dams.
7. They had a rare opportunity to participate in the expedition to Lake Baikal.
8. The price of the timber has been estimated at more than 20 000 dollars.
9. He has a large cottage by the forest.
10. The ignition of the forest has been caused by lightning.

Ex.3. Translate the sentences, making up the general questions to each of them.
1. There are some new specialists in the team of loggers.
2. There were many old houses near the forest.
3. There are many places of interest in the wooded area of Canada.
4. There will be various beautiful flowers in the new garden.
5. There is something on the shelf in the kitchen.
6. There was much work for the forester last week.
7. There was nobody in the county forester's office.

Logging is the process in which certain kinds of trees are cut for timber. Logging usually refers to above-ground forestry logging. Submerged forests exist on land that has been flooded to create artificial dams and reservoirs. Ootsa Lake and Williston Lake in British Columbia, Canada, are notable examples where logging has been needed to remove vast inundated forests.

The above operations can be carried out by different methods, but the following three are considered industrial methods: tree-length logging, cut-to-length-logging and full-tree logging.

In tree-length logging trees are felled and then delimbed and topped at the stump. The log is then transported to the landing, where it is bucked and loaded on a truck. This leaves the slash (and the nutrients it contains) in the cut area where it must be further treated if wildland fires are of concern.

In full-tree logging trees are felled and transported to the roadside with top and limbs intact. The trees are then delimbed, topped, and bucked at the landing.

Full-tree harvesting also refers to utilization of the entire tree including branches and tops. This technique removes both nutrients and soil cover from the site and so can be harmful to the long term health of the area if no further action is taken. However, depending on the species, many of the limbs are often broken off in handling so the result may be similar to tree-length logging.

In-cut-to-length-logging big trees are felled, delimbed, bucked, and sorted (pulpwood, saw log, etc.) at the stump area, leaving limbs and tops in the forest. Harvesters fell the tree, delimb and buck it, and place the resulting logs in bunks to be brought to the landing by the forwarder. This method is usable for smaller timber on the ground flat enough for forwarders to operate, but does not work well on steep slopes.

Vocabulary
stump - пень, пенек
mill – мельница
submerged forest – затопленный лес
dam – дамба
inundated forest – пойменный лес
tree-length logging – лесозаготовки с трелевкой и вывозкой хлыстов
to delimb – очищать от сучьев
to top – срезать верхнюю часть
to buck – раскряжевывать (распиливать на доски) бревно
slash – порубочный остаток
full tree logging – лесозаготовки полного дерева (целиком)
cut-to-length logging – лесозаготовки с бревнами заданной длины
pulpwood – балансовая древесина
saw log – пиловочное бревно
harvester – лесозаготовительная машина
forwarder – форвардер (саморазгружающийся трелевочный трактор)
bunk – подкладка под бревна
tree thinning – прореживание лесонасаждений
steep slope – крутой склон

Ex.1. State the topical sentence of each extract in Text 3.
Try to explain why you think so.

Ex.2. Answer the following questions.
1. What does logging usually refer to?
2. What are Ootsa and Williston Lakes notable for?
3. What methods are considered industrial in logging?
4. What is usually done in tree-length logging?
5. How can you describe operations in full tree logging?
6. What is brought to the landing in cut-to-length-logging?

7. Why can full-tree harvesting be harmful to the long term health of the area?

Ex.3. Revise the Complex Subject and translate the examples into Russian.
1. Logging is known to refer to above ground forestry.
2. The forester happened to work at the same problem.
3. The problem of tree thinning may seem to be too complex.
4. The acid seems to have caused soil erosion in the area.
5. The new method of reforestation is believed to bring positive results.
6. Your experience in forestry proved to be helpful for the report.
7. The local authorities are likely to change the layout of logging sites next spring.
8. Mr Jones is known to have grown many rare species of trees.
9. Alternation of tree species seems to have contributed to intensive tree growth in the park.
10. This forester is known to be in touch with the latest developments in the field of soil fertilization.

Ex.4. Use the right form of Participles and translate the sentences into Russian.
1. They left room without (said, saying) good-bye to anybody.
2. You must have your trees (trimmed, trimming).
3. He watched the gardener (planting, having planted) various seedlings by the river.
4. I saw her in the market (buying, having bought) low shrubs for her lawn.
5. They know the elderly man (living, having lived) next to the forest reserve.
6. (Having sowed, sowing) all the plants, the gardener had a tea break.
7. My friend lives on the fifth floor in a big (apartment, garden).
8. I hear the boy (being scolded, having scolded) by his mother for wasting her garden hose.

Ex.5. Choose a couple of synonyms to words in the left row.
1. To transport (move, take, cook, transfer);
2. tree (bush, fashion, conifer, pool);
3. wood (timber, song, flame, lumber);
4. to prove (to say, to verify, to chase, to confirm);
5. branch (plate, offshoot, bough, thunder);
6. serious (solemn, heavy, humourless, tender);
7. strategy (milk, plan, state, tactics);
8. to wash (to reap, to clean, to break, to shower):

PART 3. TECHNICAL CHARACTERISTICS OF SAWMILLS

TEXT 1. SAWMILLS AND CURRENT TRENDS

PRE-TEXT EXERCISES
Ex.1. Pronounce the words, paying attention to “y”.
y [aɪ] Life-style, try, dry, apply, by, supply, nullify, qualify, hydrological;

y [ɪ] happily, slowly, thoroughly, widely, humidity, topography, fantasy;
y [j] yellow, yacht, yummy, yet, young, youth, yonder, yield, yoke, yes.

Ex.2. Add the following prefixes to the words. Translate the formed words.
sub – Conscious, computer, contract, control, soil, divide, merge, floor;
post – acceleration, accident, boost, colonial, condition, coordinate, cure;
de – rail, rate, recognize, reference, regulate, restrict, water, form, formation;
in-, im-, ir-, il- advisable, advertent, legal, essential, efficient, possible, relevant.

Ex.3. Read and translate the words built from 2 roots.
Basin-shaped, rainforest, raingear, well-organized, well-paid, psychoactive, psychoanalyst, phytobiology, phytochemistry, phytogenesis, phytography, wood-fiber, woodcutter, wood-cased, wood-eating, wood-meadow, wood-frame, wood-pulp, wood-panelled, wood-road, wood-sawing, wood-shaving, wood-tar, longline.

In the twentieth century the introduction of electricity and high technology developed mill proliferation, and now most sawmills are massive and expensive facilities in which most aspects of the work are computerized. A modern operation will produce between 100 and 700 units annually.

Small gasoline-powered sawmills run by local entrepreneurs served many communities in the early twentieth century. A trend is the small portable sawmill for personal or semi professional use. Many different models have emerged with different designs and functions. They are especially suitable for producing limited volumes of boards.

Technology has changed sawmill operations significantly in recent years, emphasizing increasing profits through waste minimization and increased energy efficiency. Co-generation facilities will produce power for the operation and may also feed superfluous energy onto the grid. While the bark may be ground for barkdust, it may also be burned for heat. Sawdust may make particle board or be pressed into wood pellets for pellet stoves. The larger pieces of wood are chipped into wood chips and provide a source of supply for paper mills. Portable mills became popular in the United States starting from 1970s when the 1973 energy crisis had led to greater interest in small woodlots.

Vocabulary
proliferation – распространение, рост
gasoline - powered sawmill – лесопилка с бензиновым двигателем
facility – завод, предприятие
unit – единица
entrepreneur – предприниматель, бизнесмен
community – общность, сообщество
to emerge – появляться, возникать
board – доска, планка
profit – прибыль
waste minimization – сокращение отходов

energy efficiency – эффективность использования энергии
to grind – размельчать, перемалывать
barkdust – опилки с содержанием коры
particle board – древесностружечная плита, ДСП
wood pellets – древесные топливные гранулы
pellet stove – печь, отапливаемая древесными гранулами
wood chips – древесная щепа, стружка
paper mill – бумажно-целлюлозный завод
superfluous – избыточный, лишний
cogeneration facilities – предприятия когенерации (комбинированного производства тепла и электроэнергии)
woodlot – лесной участок

Ex.1. Agree or disagree with the statements.
1. The introduction of electricity and high technology developed mill proliferation.
2. Most sawmills are small and cheap facilities in which most aspects of the work are simplified.
3. A modern operation will produce between 100 and 700 units annually.
4. Small gasoline-powered sawmills served many communities in the early nineteenth century.
5. A trend is the small portable sawmill for personal or semi professional use.
6. The small portable sawmills are unsuitable for producing limited amount of boards.
7. Technology has changed sawmill operations significantly in recent years.
8. Co-generation facilities will consume power from the operation and feed superfluous energy onto the grid.
9. Sawdust may be pressed into wood pellets for pellet stoves.
10. Portable mills became popular in the United States starting from 1980s.
11. Sawdust can’t be used to make particle boards.

Ex.2. Make up sentences from the words below.
1. Sawdust particle board is used to make.
2. Most sawmills massive are and facilities expensive.
3. Many models different of sawmills have recently emerged.
4. Technology profits have increased waste minimization through.
5. Co-generation will produce facilities power for the sawmill operation.
6. Portable mills popular became in the States United.

Ex.3. Fill in the gaps with the suitable words in brackets.
1. It was a really wonderful film which (excited, hurt, paralyzed) everybody.
2. The old forester was going to die, because he was (seriously, much, little) ill.
3. The logger cut his finger and noticed some drips of (water, juice, blood) on his instrument.
4. Mr Gripple, the co-partner of the portable sawmill, is rich and famous, he is a very (tender, boring, respectable) man.

5. One must (offend, buy, respect) parents.
6. Linda doesn't like theatre so she goes there very (seldom, often, usually).
7. One of the two organs of breathing is called a (lung, head, heart).
8. If you want to be a success you should (sleep, eat, work) much.
9. The poacher was put into prison for ten years. His (award, punishment, diet) was really serious.
10. The son of the forest guard is not very fortunate, he always gets into (abyss, trouble, fun).

Ex.4. Revise Absolute Participle Construction and translate the sentences below.
1. The humidity being very high, the loggers could not advance very fast.
2. All plants were unique in the area, the growth being accompanied by disappearance of endangered species.
3. The precious kinds of timber having been shipped by early morning, the team of loggers could move to another logging site.
4. There being many speakers at the conference, it lasted longer than usual.
5. They took some necessary measurements during pretrial operation of the excavator, this being the usual practice of those days.
6. The sawmill produces large quantities of finished lumber, most of the lumber being exported to Europe.
7. All factors having been analyzed, the architects started to develop the final layout plan of the park.
8. The discussion was over, with many aspects of the problem being unsolved.
9. The climatic change must have taken place, with the data showing dramatic warming in the region.
10. Weather permitting, the gardener could proceed with his work.
11. Technology has changed sawmill operations, profits increasing through waste minimization and higher energy efficiency.

TEXT 2. PORTABLE MILLS

PRE-TEXT EXERCISES

Ex.1. Unite the sentences by means of the conjunction "both and" according to the model**.**
Model:
Climate influences the forest formation.
Topography influences forest formation too.
Both climate *and* topography influence forest formation.
1. Russia is rich in pine forests. Finland is rich in pine forests too.
2. Soil compaction is controlled by physical factors. It is controlled by geographical factors too.
3. High rainfall contributes to rainforest proliferation. Intertropical convergence zone contributes to rainforest proliferation.

Ex.2. Find nouns formed by adding the suffix – er.
Heavier, fertilizer, under, sprinkler, discover, sprinter, after, taller, logger, greater, forester, minimizer, drier, liar, brighter, writer, happier, shifter, faster, browser, smarter, designer, warmer, clipper, colder, blader.

The first portable sawmills were the "One Farmer's Sawmills." These mills featured large circular blades and were marketed during the early twentieth century by companies like Sears, Montgomery Ward and JC Penney. These machines were all "private label" machines manufactured by the Belsaw Company. Belsaw also sold sawmills under its own name until the early 1990s.

More recently, portable bandsaw mills represented a dramatic shift in design. Unlike traditional mills, they used a resaw blade of the type used on a band saw rather than a circular blade, which reduced weight and cost, and reduced the size and weight of the bearings and support blocks. The smaller kerf on these blades dramatically increased the yield from a given log. Use of band blades also prompted different design where the head, consisting of the blade and a power source, moves back and forth while the log remains stationary. This is in contrast to traditional mills where the log moves on a trolley while the blade remains fixed.

Larger mills have recently appeared on the market. They are portable only in sections. These are faster and can handle larger logs. The portable mills can cut lumber with speed and accuracy, though the subsequent steps of planing and drying must still be performed to produce finished lumber. Commodity lumber in standard sizes can be made this way. Occasionally, this is done. Portable mills are also used for low-volume production of specialty hardwoods used in furniture.

Vocabulary
portable sawmill – малогабаритная передвижная лесопилка
circular blade – дискообразный нож
private label – частная торговая марка
bandsaw mill – лесопилка с ленточными пилами
resaw blade – нож ребровой пилы (для продольной распилки древесины)
support block – опора
kerf – впадина между зубьями пилы
yield – объем выпуска продукции
trolley – вагонетка, дрезина, тележка
lumber – пиломатериалы, строевой лес
band blade – полотно ленточной пилы
portable mill - малогабаритная лесопилка
planing – строгание, обработка на строгальном станке
finished lumber – обработанная начисто древесина
commodity lumber – товарная древесина
hardwood – твердая древесина

Ex.1. Check your knowledge of the expressions and match the pairs.

1. Portable sawmills	представлять изменение
2. resaw blade	малогабаритные передвижные лесопилки
3. to represent a shift	нож ребровой пилы
4. traditional mills	поступать в продажу
5. to increase the yield	традиционные лесопилки
6. to move back and forth	источник энергопитания
7. power source	двигаться вперед и назад
8. to come on the market	увеличить объем выпуска продукции

Ex.2. Read the text and find arguments to prove the statement: "Portable mills are different from traditional mills in many ways".

Ex.3. Translate the second and the fourth extracts of the text in written form.

Ex.4. Summarize the main ideas of Text 8. Discuss the topics.
1. Peculiarities of portable mills in comparison with traditional mills.
2. Output of portable mills.

Ex.5. Revise the English Gerund and translate the sentences below.
1. The high technology system is used for forest thinning.
2. His parents heard of his having been offered the post of the chief forester.
3. Good eating habits can result in healthcare savings between 15 and 20 per cent.
4. The use of underground waters is a way towards solving the problem of water shortage in hot countries.
5. Technologists agreed to wood-pulp board being used in the cottage construction.
6. Everybody in the team objected to installing the gang-sawing machine.
7. The distance can be adjusted by moving the rails at each end of the mill attachment.
8. Three local mills have been used in handling larger logs for heating in the area.

TEXT 3. ALASKAN MILLS

PRE-TEXT EXERCISES

Ex.1. Read the expressions and translate them paying attention to attributes.
Predetermined thickness, mill attachment, timber construction, the water content to be calculated, the problem to be solved, mechanical resistance, consistent depth, small mill, single chainsaw, large diameter, felled timber, nature-friendly,
the length of the bar, hobbyist woodworkers, to have access to felled timber.

Ex.2. State the functions of "should" and "would" in the sentences. Translate them.
1. The main parts of the tropical plant should be studied more thoroughly.
2. It was evident that the team of scientists would continue their studies of cloud forests.
3. Lumber standards should be discussed at the conference in June.

4. He wouldn’t stay at home.
5. He should get a driving license for the job.
6. They would discuss the problems of thinning agents for hours.

Alaskan Mill is a type of sawmill that is used by one or two operators to mill logs into planks for use in furniture, building and other types of timber construction.

The mill attachment consists of a pair of rails which are attached to bar of the chainsaw. The rails ride on the face of the log and guide the chainsaw blade through the log at a consistent depth so that planks of a predetermined thickness can be cut. The distance between the rails and the bar determines this thickness and it can be adjusted by moving the rails at each end of the mill attachment.

Small mills use a single chainsaw and can be handled by a single operator. Larger mills use two chainsaws, and these require two operators. The width of the plank that can be cut is determined by the length of the bar, so for logs having a large diameter, the longer bar is necessary.

Alaskan mills are relatively cheap to purchase compared to other types of mill and are also quite easy to make. They are therefore popular with hobbyist woodworkers who have access to felled timber.

Vocabulary
to mill – пилить
plank – толстая доска, планка
timber construction – деревянное сооружение
mill attachment – блок лесопилки
consistent depth – соответствующая глубина
rail - перекладина
bar of the chainsaw – полотно цепной пилы
chainsaw blade – нож цепной пилы
predetermined thickness – заданная толщина
purchase – приобретать
woodworker – плотник, столяр
felled timber – срубленная древесина
to purchase - покупать, закупать
therefore – по этой причине, поэтому

Ex.1. Say what facts attracted your attention in Text 9.
Give arguments to support your point of view.

Ex.2. Find the topical sentence of each extract in Text 9.

Ex.3. Form groups of synonyms from the list below.

1. Organic substance	massive rails
2. moisture content	popular mill
3. central function	water content

4. well-known mill organic material
5. large rails primary function

Ex.4. Make up sentences with the expressions from the previous exercise.

PART 4. DEFORESTATION AND ECOLOGY

TEXT 1. DEFORESTATION AND ITS ECOLOGICAL IMPACT

PRE-TEXT EXERCISES
Ex.1. Read and translate the following expressions.
Forested area, derived charcoal, human settlement, sufficient reforestation, greenhouse effect, climate change, normal respiration, carbon dioxide emissions, cleared land, photosynthesis, stored carbon, new circumstances.

Ex.2. Transform the following sentences according to the pattern.
Model: You *must* revise the rule. You *are to* revise the rule.
1. The forester must have extensive knowledge of local flora and fauna.
2. We must do everything possible to protect endangered species of flora.
3. He must know all necessary conditions for reforestation procedure in the area.

Deforestation is the logging and burning of trees in a forested area. There are several reasons for doing so: trees or derived charcoal can be sold as a commodity and are used by humans while cleared land is used as pasture and for human settlements. The removal of trees without sufficient reforestation has resulted in damage to habitat, biodiversity loss and aridity. Also deforested regions often degrade into wasteland.

Deforestation is a contributor to global climate change, and is often cited as one of the major causes of the enhanced greenhouse effect. Tropical deforestation is responsible for approximately 20% of world greenhouse gas emissions. Deforestation, mainly in tropical areas, accounts for up to one-third of total carbon dioxide emissions. Trees and other plants remove carbon from the atmosphere during the process of photosynthesis and release it back into the atmosphere during normal respiration. Burning of woods discharges much carbon to the atmosphere.

Reducing emissions from the tropical deforestation can contribute to ongoing climate policies. The idea consists in providing financial compensations for the reduction of greenhouse gas (GHG) emissions from deforestation and forest degradation.

The world’s rain forests are widely believed by laymen to contribute a significant amount of world's oxygen although it is now accepted by scientists that rainforests contribute little net oxygen to the atmosphere and deforestation will have no effect on atmospheric oxygen levels. However, burning of forest plants in order to clear land releases tons of CO_2 which contributes to global warming. Forests are also able to extract carbon dioxide and pollutants from the air, thus contributing to biosphere stability.

Vocabulary
deforestation – вырубка, уничтожение лесов
burning – (здесь) возгорание лесов
derived charcoal – производный древесный уголь
human settlement – населенный пункт
aridity – засушливость
reforestation – лесовосстановление
contributor – содействующий фактор
wasteland – пустырь, пустошь
greenhouse effect – парниковый эффект
greenhouse gas emissions – выбросы парниковых газов
to account for – быть, являться причиной
to release back – (здесь) возвращать
respiration – дыхание
to contribute to – способствовать, содействовать
climate policies – политика по климату
financial compensation – денежная компенсация
forest degradation – вырождение лесов
layman – непрофессионал, дилетант
oxygen – кислород
global warming – глобальное потепление
pollutant – загрязняющее вещество
biosphere stability – постоянство, устойчивость биосферы

Ex.1. State if the following statements are true or false.
1. Deforestation is the logging and burning of trees in a forested area.
2. Trees or derived charcoal can be used in making human dwellings.
1. The removal of trees without sufficient reforestation has resulted in damage to habitat, biodiversity loss and aridity.
4. Deforestation is a contributor to global climate stability.
5. Tropical deforestation is responsible for approximately 20% of world greenhouse gas emissions.

Ex.2. Answer the following questions.
1. What is deforestation?
2. What reasons are there for deforestation?
3. What has resulted in damage to habitat, biodiversity loss and aridity?
4. Deforestation is a contributor to global climate change, isn't it?
5. What can you say about tropical deforestation?
6. What happens during the process of photosynthesis?
7. What can contribute to ongoing climate policies?
8. What is believed by laymen to contribute a significant amount of world's oxygen?
9. Will deforestation have effect on atmospheric oxygen levels?
10. How are forests able to contribute to biosphere stability?
11. What discharges much carbon to the atmosphere?

Ex.3. Fill in the gaps with the suitable words.
1. Deforestation is a (donation, gift, contributor) to global climate change.
2. Deforested regions often (worsen, humiliate, degrade) into wasteland.
3. It is often cited as one of the (senior, superior, major) causes of the enhanced greenhouse effect.
4. Deforestation (explains, clears up, accounts for) up to one-third of total carbon dioxide emissions.
5. Trees and other plants remove carbon from the (sky, heavens, atmosphere) during the process of photosynthesis.
6. Burning of forest plants in order to clear land (discharge, liberate, releases) tons of CO_2.

Ex.4. Revise the English Participles and translate the sentences into Russian.
1. Derived charcoal can be sold as a commodity to different foreign countries.
2. Having questioned the chief forester several times the prosecutor no longer doubted his testimony.
3. She heard the weather forecast being announced in a news bulletin at 6 p.m.
4. Burning of wood releases much of stored carbon back to the atmosphere.
5. If changed, the compensation agreement will be accepted by the city council.
6. Money saved is money gained.
7. Mr Jones will have his garden fertilized next week.
8. The logger's activity being heard all over the area provoked much agitation among local residents.
9. He went along the narrow forest path not knowing where to turn.
10. The children could hear the rain coming through the roof.
11. Having been felled by three loggers the pine tree was taken to the truck.
12. Having been invited to the party he decided to buy a new suit for the occasion.
13. She was really busy planting new flowers in her garden.

TEXT 2. MY SPECIALITY

I am a second year student of the Tver State Technical University. I study at the Forestry Department of the University. My future speciality is forestry equipment and its maintenance.

Forestry is the art and science of managing forests, tree plantations and related natural resources. Modern forestry generally concerns itself with providing timber as raw material for wood products, recreation and community protection. A practitioner of forestry is known as a forester.

Nowadays forestry is an advanced branch of industry that involves highly qualified specialists and complex methods of tree logging. The process of logging is carried out while using three industrial methods: tree-length logging, cut-to-length-logging and full-tree logging.

Full-tree logging refers to utilization of the entire tree including branches and tops. The method of cut-to-length-logging is usable for smaller timber on flat ground. The work is usually fulfilled by a team of loggers equipped with modern circular and cylinder saws as well as other machinery such as yarders, skylines and forwarders. All the mechanisms are controlled by operators who must adhere to high professional standards.

That's why it is necessary for us as future specialists in the field to study different subjects such as physics, mathematics, descriptive geometry, applied mechanics and others. We also acquire practical skills in assembling and test run of machines. Our course of study lasts 5 years. Graduates are given a qualification of a maintenance engineer. After graduation we can work at different plants and supply organizations related to forestry. Our speciality gives us a rare opportunity to find jobs even in the times of economic downturn.

Vocabulary

maintenance – техобслуживание
natural resources – природные ресурсы
related – соответствующий
to concern with – заниматься чем-либо
raw material – сырьевой материал
community protection – защита сообщества
practitioner – практикующий специалист
tree logging – лесозаготовки
full tree logging – лесозаготовки полного дерева (целиком)
cut-to-length logging – лесозаготовки с бревнами заданной длины
circular saw – круглая пила
cylinder saw – цилиндрическая пила
yarder- кран для укладки древесины
skyline – трелевочная установка с несущим канатом
forwarder - форвардер (саморазгружающийся трелевочный трактор)

Ex.1. Answer the following questions.
1. What is your future speciality?
2. What does forestry concerns itself with?
3. Who is known as a forester?
4. What does full-tree logging refer to?
5. What is cut-to-length logging usable for?
6. What subjects do you study?
6. Do you acquire any practical skills?
7. How long does your course of study last?
8. Where can you work after graduation?

Ex.2. Translate into Russian paying attention to the non-finite forms.
1. The forester should have watered the seedlings several times.

2. The experimental plants having been grown, we can recommend them for reforestation in the area.
3. Being an efficient practitioner Dr. Jones was quite well-known in his county.
4. Any body heated to a high temperature can become a source of heat and light.
5. The data processed after the experiment was really significant.
6. He has demonstrated extensive skills in using the computer.
7. My friends acquired practical skills in assembling and test run of machines.
8. After graduation he found a well-paid job related to forestry.

PART 5. ADDITIONAL TEXTS

Caring For Your Woodlot

In this age of environmental concern, keeping your own little nook of the woods healthy is more important than ever. Your woodlot, whether it is only an acre or two or several hundred acres, is home to a wide variety of wildlife and native plant species. Of course, you are also interested in getting good quality firewood and lumber from your woods in the future. All of this can be possible with proper care for your woodlot.

Your specific priorities in woodlot care will depend on private goals for your forest. Are you more interested in producing firewood or creating good habitat for wildlife? Do you use your woods for recreation, such as hunting or hiking? Each of these priorities will require slightly different management techniques, but there is much in common among the different approaches.

One thing you may wish to do is plant more trees around the periphery of your woods in order to make the lot larger. If you can, plant them so that they link up with other large tracts of forest. The value to this practice is in providing quality habitat for many species of wild animals. Many animals require a large territory for safety and food.

When you plant trees, be sure to choose native species. These are suited to the environment and will not bring unwanted pests. Also, if you wish to encourage wildlife to stay in your woods, choose trees like walnuts and black cherry that provide something for animals and birds to eat.

If you are harvesting firewood, it is good to first choose the smaller trees that are competing for space. By thinning the trees, you can allow your trees to grow more efficiently.

If you plan to sell your timber from time to time, proceed cautiously and learn the lingo. Choose your loggers carefully and be sure they understand what your goals are. It is wise to write up a woodlot management plan to give yourself a plan for the next five, ten, or twenty years. Consult a professional forester if you need help writing up this plan.

(1.627printed characters)

woodlot – лесной участок, угодье
habitat – среда обитания
native species – местные породы, виды
pest – вредитель, паразит
lingo – специальный (профессиональный) язык
black cherry – вишня птичья
compete – соревноваться
walnut – грецкий орех

Splitting Firewood Safely

Heating a home with wood requires a lot of physical labor. One of the more strenuous parts of burning wood is splitting the firewood. It is essential to split those sections of wood that are very thick in diameter. Sometimes they won't fit into your stove until they are split. If you cook with wood, you must split it into fine strips or "cook wood."

The first safety rule for splitting wood is to dress for the job. Always wear eye protection, because it is possible for a splinter to fly out and cause you to lose an eye. Wear sturdy pants and solid shoes. Use work gloves, too. This is not a job to be done in flip-flops and shorts!

Tools for splitting firewood include an axe and a splitting maul. A heavier axe works better with larger wood, and a splitting maul is needed for the largest pieces. A good axe for splitting wood has a head of about 5 pounds, while a maul's head weighs about 6 to 8 pounds. Choose the heaviest one you can swing fast. The impact is what causes the wood to split. If the tool is too heavy for you, you won't be able to come down fast and hard on the wood.

Beginners sometimes break their axe handles while spitting wood, so be careful about your technique. Another thing that can happen is that the maul can get stuck in the wood. One way to get it out is to strike the outer end of the maul head with a sledge hammer until the wood goes ahead and splits. If an axe gets stuck, rock it in the direction it is stuck and not side to side to dislodge it. Never lift it above your head while it is stuck! The wood could fall off the axe and hit you.

There are a few other safety considerations when splitting wood. Keep your eyes open for poisonous spiders or snakes that might be hanging out in the woodpile. Make sure other people, especially children, stay clear of where you are working. Always work at wood-splitting with a companion, and stop working before you get too tired.

(1.574 printed characters)

strenuous – энергичный, усердный
eye protection – средство для защиты глаз
splinter – щепка, лучина
flip-flops – сланцы
axe – топор
splitting maul – раскалывающий молоток

to dislodge – перемещать, сдвигать
sledge hammer – кузнечный молот
safety considerations – соображения по технике безопасности

Proper Firewood Storage Improves Efficiency

Everyone loves the cozy warmth of a fire in the fireplace or woodstove. In order to get the best value from your wood, proper storage of firewood is a must. If you store firewood poorly, it is likely to rot, stay wet, grow moss, or show other signs of decay that render it less efficient in the stove. So what are the basics of firewood storage?

One of the most important principles of proper storage is that air should circulate around the sticks of wood. It helps to have pallets or concrete blocks arranged underneath the stack of wood. Alternate the direction of the sticks from layer to layer to increase the air flow.

Another important principle of proper storage of firewood is that the wood pile must be at least ten feet away from the house. A stack of firewood is a popular nesting place for little rodents and insects, and if the pile is too close to the house, these varmints can become a problem in the house.

Firewood should be able to dry out before it is used. It is a good idea to buy your firewood the spring before you plan to use it so that it can have the warm dry months of the year to dry or "season." Green firewood, which is wood that is freshly cut, can be burned, but because it has a large percentage of moisture in it, it is hard to get started, and can lead to creosote build-up in the chimney or stovepipe. Proper storage of firewood is no mystery. Just keep it in a dry, airy location away from the house for best results.

(1.218 printed characters)

woodstove – дровяная печь
to rot – гнить, отмирать
to grow moss – покрываться мхом
pallet – платформа, стеллаж
rodent- грызун
fireplace – камин
layer – слой, пласт
creosote build-up – накопление креозота
stovepipe – дымоход, железная дымовая труба
mystery – тайна, загадка

Buy Your Lumber From Local Woodlots

Considering the price of gasoline, it makes sense to buy things that are locally produced. This applies to farm products, of course, but it also applies to lumber for building and wood products. There are many reasons to buy lumber grown in local woodlots and milled locally. The first to come to mind is the savings in fuel consumption and air pollution when the trucks hauling the logs don't have to travel so far.

Another reason not to transport logs or lumber over long distances is that it can spread insects and diseases that attack and kill trees. Locally milled wood doesn't bring any new critters into the area, while imported lumber can.

If you are fortunate enough to have your own woodlot, you can hire a woodcutter with a portable sawmill to come to your woods and mill your trees into the types of lumber you need. Otherwise, check you local directory for information about local woodlots and locally milled lumber in your area.

(808 printed characters)

to mill – распиливать лесной материал
fuel consumption – потребление топлива
critter – существо
directory - справочник
imported lumber – импортируемый лесоматериал
to mill – пилить лес

Waste Wood Fire Logs

As people look for renewable sources of heat, sometimes a remarkably good idea comes along. Waste wood manufactured fire logs are one such idea. Made from sawdust, wax, and recycled wood, manufactured fire logs are a great way to reuse things that would otherwise end up in a landfill somewhere. And wood products are definitely renewable.

Waste wood manufactured fire logs differ in how they are made according to brand. Some brands are made with environment in mind, while others are treated with pollutant chemicals to make them burn well.

Waste wood manufactured fire logs are easier to use than wood in several ways. Obviously there is the fact that you don't have to go out and cut them! It is known that regular logs are messy to use. They bring dirt, debris, and sometimes even insects into the house, making the house harder to clean. Then you have to work at starting the fire. Finally, you have to clean the ashes out of the stove or fireplace on a regular basis.

Manufactured logs eliminate almost all of this hassle. Purchase the paper wrapped logs at the store and pile them near the stove in a pretty basket. Then when you need a fire, simply light the paper wrapper and the log will burn evenly like a big candle. (Do follow the manufacturer's instructions.) Very little ash will be left over, making cleaning up after them very easy.

Your chimneys will thank you, too. Fire logs have been found to cause only a fourth of the creosote build-up of regular logs. This makes them safer and reduces the chances of a chimney fire. For best results, look for the term "UL Listed" on the package. This means that they have been classified for safety. For use in wood stoves, look for manufactured logs that do not include wax in the formula. They should be made of sawdust only.

For best results use an EPA certified wood stove, and make sure you have a chimney sweep clean your chimney on a regular basis. Both of these measures will greatly reduce the amount of emissions you put into the air with your wood stove.

(1.681 printed characters)

waste wood – древесные отходы
renewable sources – возобновляемые ресурсы
manufactured firelogs – промышленные дрова
recycled wood – переработанная древесина
wax – воск
landfill – свалка (мусора)
debris – лом, остатки, мусор
pollutant chemicals – загрязняющие химикаты
creosote build-up – накопление креозота
EPA – Управление по охране окружающей среды
sawdust – опилки
to reduce – сокращать, уменьшать

The Responsibilities Of A Forester

A young person who enjoys science and nature, and is interested in ecology, could be a good candidate for becoming a forester. There are many different specialties a student can pursue when preparing for a career in forestry.

Some foresters are employed by private industries, such as paper producers or companies that make wood products. These foresters use their knowledge of the forest to plan how and where the timber can be harvested in order to make the most profit without harming the ecology of the forest or its wildlife. They must have a good understanding of the chemistry involved in making trees into paper or wood products.

Other foresters are employed by state and government agencies to look after public lands, state parks, and national forests. They may be involved in enforcing hunting and fishing regulations. The responsibilities of a forester depend on their specialty. For instance, a forester can specialize in recreational uses of the outdoors. This type of forester may be responsible for educating people who visit state parks about the wildlife and plants found there. Some foresters even lead outdoor activities as therapy for troubled youths.

Urban foresters help keep trees in urban areas safe and healthy. They may oversee the trimming of trees in city parks and public areas. They may also do educational work, helping homeowners choose the types of trees that would suit their area.

To prepare for a career in forestry, a student should take courses in math, biology, and agriculture. A forester has the opportunity to spend his life doing something that is beneficial to the well-being of people and wildlife. What better occupation for someone who enjoys the forest?

(1.454 printed characters)

specialty – специализация
to pursue – заниматься, избрать своей профессией
to have a good understanding – хорошо разбираться
public lands- общественные земельные площади
fishing regulations – режим рыболовства
recreational use - использование в рекреационных целях
outdoors – внешнее пространство
troubled youths – проблемные подростки
well-being – благосостояние
to harm- причинять вред, ущерб
to oversee – наблюдать, следить
beneficial – благотворный, благожелательный
opportunity- возможность
occupation - занятие

PART 6. GRAMMAR

ПРИЧАСТИЕ (PARTICIPLE)

Причастие – неличная форма глагола, сочетающая свойства глагола, прилагательного и наречия. В английском языке существуют два причастия.

Participle I (оно же – Present Participle) – причастие I или причастие настоящего времени.

Participle II (оно же - Past Participle) - причастие II или причастие прошедшего времени.

В свою очередь эти причастия имеют форму действительного *(bringing, having brought)* или страдательного залога *(being brought, having been brought).*

Также причастия бывают простые, то есть состоящие из одного слова, и сложные, состоящие из двух- трех слов (см. следующую таблицу).

Participle I	INDEFINITE	Ving	being V
	PERFECT	having V3	having been V3
Participle II			V3

В зависимости от синтаксической функции в предложении причастие может переводиться на русский язык причастием, деепричастием или соответствующим придаточным предложением.

Таблица моделей перевода английских причастий I и II

Students *translating* the new article are excited and happy.	Студенты, *переводящие* эту новую статью, взволнованы и	Действие причастия совпадает с действием глагола-сказуемого

	счастливы.	
The students *translating* the new article were excited and happy.	Студенты, *переводившие* эту новую статью, были взволнованы и счастливы.	Действие причастия совпадает с действием глагола-сказуемого
While *translating* the new article students were excited and happy.	*Переводя* эту новую статью, студенты были взволнованы и счастливы.	Действие причастия совпадает с действием глагола-сказуемого
Having translated the new article the students were satisfied with their work.	*Сделав перевод* этой новой статьи, студенты были удовлетворены своей работой.	Последовательность действий.
The students who had *translated* the new article were excited.	Студенты, *сделавшие* перевод этой новой статьи, были взволнованы.	Действие причастия предшествует действию глагола-сказуемого.

Также следует обратить внимание на модели перевода Participle I в страдательном залоге:

1. The new equipment, *being used* by the loggers, is very efficient.

Первый вариант перевода:

Новое оборудование, *используемое* этими лесорубами, является весьма эффективным.

Второй вариант перевода:

Новое оборудование, *которое используют* эти лесорубы, является весьма эффективным.

2. *Having been introduced* extensively in forestry, the new equipment brought additional profit to loggers.

После того как в лесной промышленности *стали* широко *внедрять* новое оборудование, оно принесло дополнительную прибыль лесорубам.

Сложные причастия выполняют в предложении, как правило, функцию обстоятельства и обозначают дополнительные действия, которые совершаются подлежащим, или которые подлежащее само совершает наряду с действиями, обозначенными сказуемым. Переводить на русский язык причастный оборот, образуемый сложными причастиями страдательного залога, лучше придаточным предложением, первоначально уяснив для себя связь между действиями.

COMPLEX OBJECT WITH PARTICIPLE I

Причастие в сочетании с существительным или местоимением в объектном падеже может входить в состав причастных оборотов, выполняющих роль сложного дополнения.

Оборот «Сложное дополнение с причастием настоящего времени» употребляется после следующих глаголов: to feel, to hear, to find, to listen, to look, to notice, to see, to watch.

На русский язык такие обороты переводятся придаточными предложениями с союзом *как* и *глаголом-сказуемым несовершенного вида*.

She heard *the forester asking* numerous questions on the phone.

Она слышала, как *лесничий задавал* многочисленные вопросы по телефону.

Причастный оборот «Сложное дополнение с причастием настоящего времени» показывает действие в процессе его совершения.

COMPLEX OBJECT WITH PARTICIPLE II (PAST PARTICIPLE)

Сложное дополнение с причастием прошедшего времени представляет собой сочетание существительного или местоимения в объектном падеже с причастием прошедшего времени. Этот оборот употребляется после глаголов: to have, to get, to want, to wish, to watch, to hear, to see, to find.

You must have your hair done. – Вы должны постричься.

I want my car serviced now. – Я хочу, чтобы мою машину обслужили сейчас.

Этот оборот с глаголом to have (to get) используется для обозначения действия, которое совершается не самим подлежащим, а другим лицом для него или за него.

He had his money stolen on a train. – У него украли деньги в поезде.

Примечание: В этой конструкции возможно употребление причастия II после глаголов чувственного восприятия и глагола *to find*:

She found *him wounded*. – Она обнаружила, что он ранен.

I saw the *child taken* home. – Я видел, что ребенка отвели домой.

They found the *table laid* for the feast. – Они обнаружили, что стол накрыт к празднеству.

ГЕРУНДИЙ (GERUND)

Gerund (герундий) является неличной формой глагола, которая сочетает в себе свойства глагола и существительного. Формы герундия совпадают с формами причастия настоящего времени (Participle I).

Gerund	INDEFINITE	Ving	being V3
	PERFECT	having V3	having been V3

Перед герундием часто стоят:

1. Притяжательное местоимение (my, his, her и др.) или существительное в притяжательном падеже. Например:

She forgot about *her passing* the driving test.

Она забыла о сдаче своего теста на вождение.

Mrs Jones was happy with her *son's entering* the University.

Миссис Джоунс была счастлива в связи с поступлением ее сына в Университет.

2. Предлог (by, of, after, before и др.). Например:

He never dreamed *of going* to Spain.

Он никогда не мечтал о поездке в Испанию.

3. Глаголы начала-завершения действия (to begin, to start, to continue, to commence, to finish, to end, to stop и др.). Например:

They *started investing* adequate amount of money in this business.

Они начали вкладывать необходимое количество денег в это предприятие.

4. Отрицательное местоимение NO. Например:

NO ENTERING. The area is dangerous.

Вход воспрещен (не входить). Опасная зона.

Важно уметь отличать герундий от причастия I, так как их значения различны. В русском языке формы, аналогичной герундию, нет, поэтому герундий можно переводить по-разному, в зависимости от контекста: существительным, неопределенной формой глагола, деепричастием и глаголом в личной форме, если перед ним имеется притяжательное местоимение или существительное в притяжательном падеже.

Герундий без предлога может выполнять в предложении синтаксические функции:

1. Подлежащего.

2. Части сказуемого (именной части сказуемого или второй части составного глагольного сказуемого).

3. Прямого дополнения.

Герундий с предлогом может выполнять функции:

1. Определения.

2. Предложного дополнения.

3. Обстоятельства (времени, образа действия, цели).

ИНФИНИТИВ (INFINITIVE)

INDEFINITE	to V	to be V3
CONTINUOUS	to be V ing	-
PERFECT	to have V3	to have been V3
PERFECT CONTINUOUS	to have been Ving	-

Алгоритм перевода инфинитива в зависимости от его формы

Indefinite Active (to V)	неопределенной формой глагола (совершенного или несовершенного вида) в наст. или будущем времени
Indefinite Passive (to be V3)	дополнительным придаточным предложением, которое начинается союзами *что, чтобы*
Perfect Active (to have V3), Passive (to have been V3)	дополнительными придаточными предложениями, в которых формы инфинитива передаются глаголами прошедшего времени
Continuous (to be Ving)	неопределенной формой глагола несовершенного вида
Perfect Continuous (to have been Ving)	глаголом настоящего или прошедшего времени (несовершенного вида)

1. I want *to write* the article tomorrow. - Я хочу написать эту статью завтра.
2. I want *to be answered* at once. – Я хочу, чтобы мне ответили сразу же.
3. We are happy *to have taken part* in the conference. – Мы счастливы, что приняли участие в этой конференции.
4. Mike was happy *to have been offered* such an interesting job. – Майк был счастлив, что ему предложили такую интересную работу.
5. He knows his students *to be studying* in the library. – Он знает, что его студенты занимаются в этой библиотеке.
6. I am glad *to have been working* at the plant all these years. – Я рад, что работаю на заводе все эти годы.
7. I remember *to have been living* in the Caucasus for two years before War II broke out. – Я помню, что я жил на Кавказе два года до начала Второй мировой войны.

НЕЗАВИСИМЫЙ ПРИЧАСТНЫЙ ОБОРОТ (ABSOLUTE PARTICIPLE CONSTRUCTION)

Независимый причастный оборот – это причастный оборот, имеющий свое «подлежащее».

Независимый причастный оборот распознается в предложении по следующим признакам:

1. Имеется свое подлежащее.
2. Вместо сказуемого причастие.
3. Выделяется запятой.

Правило перевода: причастие переводится глаголом. Независимый причастный оборот переводится придаточным предложением с определенными союзами.

1.Если оборот находится в начале предложения – придаточным предложением с союзами «так как, после того как, теперь, когда»

Silver being very expensive, we seldom use it as a conductor.

Так как серебро очень дорого стоит, мы редко используем его в качестве проводника.

2. Если оборот находится в конце предложения – придаточным предложением с союзами «причем, а, и, но»

All these elements are radioactive, their atoms being very unstable.

Все эти элементы радиоактивны, причем их атомы очень нестабильны.

3. Может начинаться с предлога «with», причем «with» не переводится.

With research involving more and more people, the profession of a scientist has become very popular now.

Теперь, когда исследовательская работа затрагивает все больше людей, профессия ученого стала очень популярной в наше время.

Примечание: Причастие в независимом причастном обороте обычно переводится как сказуемое. Перфектные формы причастия переводятся глаголом в совершенном виде. Например:

Employment hours having increased, the GDP will also increase.

После того, как время занятости увеличилось, валовый внутренний продукт также возрастет.

УСИЛИТЕЛЬНАЯ КОНСТРУКЦИЯ IT IS...THAT(WHO)

Данная конструкция служит для смыслового выделения одного члена предложения (подлежащего, дополнения или обстоятельства).

It is (was) + выделяемое слово + *that (who)…*

На русский язык эта конструкция переводится со словом *именно.*

Например:

It is the new system of management *that* gave the best results.

Именно эта новая система управления дала лучшие результаты.

It is the accountant *who* prepares the balance sheet.

Именно бухгалтер подготавливает балансовый отчет.

НЕПОЛНОЕ ПРИДАТОЧНОЕ ПРЕДЛОЖЕНИЕ

Группа слов, состоящая из союзов *when, while, if, until, unless* и т.д. и причастия, прилагательного и редко (существительного), рассматриваются как неполные придаточные предложения.

Например:

When carried out last year, the experiment showed good results.

Здесь пропущено подлежащее (то же, что в главном предложении – *the experiment* и вспомогательный глагол *was*).

При переводе на русский язык подлежащее восстанавливается.

Когда эксперимент проводился в прошлом году, он показал хорошие результаты.

Оглавление