

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РФ

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ЛЕСОТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ»

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**РАСТЕНИЯ И ЛЕСА
КАК ОДИН ИЗ ОПРЕДЕЛЯЮЩИХ
АСПЕКТОВ ПОЗНАВАТЕЛЬНОЙ,
ПРОИЗВОДСТВЕННОЙ
И ЭСТЕТИЧЕСКОЙ ЖИЗНИ ЧЕЛОВЕКА**

Учебное пособие
по английскому языку

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В учебном пособии предлагаются тексты и система упражнений для обучения различным видам чтения английского текста: изучающему, просмотровому, поисковому и ознакомительному. Рекомендуется для обучающихся всех направлений и специализаций вузов лесохозяйственного профиля и имеет главной своей целью подготовить обучающихся к Интернет-тестированию по завершении изучения основного курса английского языка.

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ПРЕДИСЛОВИЕ

Представляем Вам учебное пособие по английскому языку «Plants and Forests», которое поможет Вам сформировать первые компетенции для последующей работы с аутентичными текстами в рамках профиля университета. Пособие адресовано студентам I курса. В нем предлагается 17 глав, каждая из которых содержит базовый текст, а также ряд предтекстовых и послетекстовых заданий. При поверхностном чтении любого текста он может показаться сложным, и многое для Вас окажется непонятным. Но опускать руки причин нет. Это лишь первое впечатление.

После прочтения текста мы рекомендуем Вам еще раз обратиться к предтекстовым упражнениям и проработать их особенно тщательно. Там имеется очень много подсказок для его понимания.

Прочтите текст еще раз, привлекая не только Вашу языковую компетенцию, но и фоновые знания, так называемую социально-культурную компетенцию. Она обязательно поможет Вам при работе над иностранным текстом, потому что при всей разнице культур имеются точки соприкосновения. Кто останется равнодушным при виде любимого дерева в разное время года и в различные периоды его жизни? А представителя какой культуры не привлечет цветущее растение или пение птиц?

Только после второго, а в некоторых случаях и третьего чтения переходите к послетекстовым упражнениям. Они помогут Вам глубже понять содержание текста в целом, а также отдельных его фрагментов. А понимание, как известно, воодушевляет на другие речевые действия, в частности, на говорение и письмо. Такого рода задания есть в послетекстовых упражнениях в ряде глав. Трудности будут, особенно при работе с первым текстом. Не отчаивайтесь! Вдумчивая работа над последующими текстами поможет Вам понять, что Вы успешны.

При внимательном прочтении Вы убедитесь, что тексты в пособии подобраны таким образом, что они воздействуют и на Ваш ум, и на Ваши эмоции, что будет дополнительным стимулом для их усвоения.

Наконец, помните, что по завершении обязательного курса изучения английского языка Вам предстоит сдать Интернет-экзамен. Предлагаемое пособие является важной ступенькой в самостоятельной работе при подготовке к этому ответственному испытанию.

Авторы надеются на плодотворное сотрудничество. Все замечания и предложения, касающиеся любого аспекта пособия, будут с благодарностью приняты.

ВВЕДЕНИЕ

Предлагаемое учебное пособие является третьей, заключительной частью учебно-методического комплекса по английскому языку для студентов первого курса лесотехнических вузов. В отличие от двух предыдущих книг («Повторительный курс по фонетике и грамматике английского языка за среднюю школу» и «Основной курс английского языка: грамматика чтения и устной речи») пособие нацелено на развитие навыков всех видов чтения: изучающего (объяснительного), ознакомительного, поискового и просмотрового – другими словами, на умение понять и извлечь нужную информацию из иноязычных источников – интеллектуальный прием, без успешного овладения которым не мыслим выпускник университета.

При отборе содержания авторы руководствовались тем, что студенческая аудитория должна получить не только знания по названной проблеме, узнать актуальные аспекты, связанные с лесными богатствами нашей планеты, но и почувствовать эстетическое наслаждение от прочитанных текстов. В данной связи стояла и другая задача: каким образом обыграть тексты композиционно, т.е. сформулировать архитектуру пособия, чтобы его структура составляла единое целое со стороны содержания и со стороны композиции. Пособие открывается текстом «Plants are all around us», который является очень простым в языковом плане и доступен для понимания каждого студента, а его содержательная сторона не оставит равнодушным ни одного человека, живущего на нашей планете. Заканчивается же пособие текстами «Unique Aspects of Forest Ecology» и «Environmental Groups», которые заставят будущих специалистов в области лесопромышленного комплекса заботиться о сохранении и умножении лесных богатств и заниматься вопросами экологии на всех этапах их производственной деятельности.

В каждой из 17 глав имеется текст на изучающее чтение, назначение которого заключается в том, чтобы помочь обучающимся с помощью системы лексических и грамматических упражнений, нацеленных на декодирование содержащейся информации, приобрести определенные знания и практический опыт по той или иной проблеме, связанной с тематикой пособия. Задачей лексических упражнений является расширение словарного запаса обучающихся на базе аутентичного материала, который необходим им в их будущей деятельности. При работе над пополнением английской лексики полностью исключаются задания механического плана (например, выучите значение незнакомых слов,

обратите внимание на перевод слов, данных в сноске, и т.п). Их место занимают упражнения, направленные на развитие языковой догадки:

- прочтите слова и догадайтесь по тем или иным грамматическим элементам, что они означают;

- подберите к английскому слову эквивалент его перевода (перевод дан в другой колонке);

- прочтите слова в таблице и правильно употребите их в нижеследующих предложениях.

Главное внимание в упражнениях над словарем обращено на сочетаемость слов и раскрытие значения слова с помощью дефиниций.

Задания такого плана расширяют объем памяти обучающихся, а также помогают им практически понять, что большинство слов многозначно, а правильно усвоить их значение можно только с помощью расширенного толкования того или иного понятия.

Некоторые лексические упражнения нацелены на то, чтобы дать студентам знания о структурном составе лексики английского языка и показать разнообразие форм и употребления отдельных членов предложения (речь идет в первую очередь об определениях):

- подберите к словам синонимы (антонимы) и переведите их на русский язык;

- помните о последовательности определений, уточняющих значение существительных. Порядок употребления определений следующий: мнение, размер, возраст, форма, цвет, происхождение, материал.

Известно, что английский язык имеет очень большой словарный запас, в котором значительную долю занимают фразовые глаголы – комбинации одного и того же глагола с различными наречиями и предлогами, которые придают ему многообразие значений, а также словообразовательные элементы (приставки, суффиксы) и сложные слова, знание которых помогает легче ориентироваться в тексте. Тренировке названных пластов лексики в пособии уделяется большое внимание. Упражнения отличаются разнообразием и представлены нередко в игровой форме:

- прочтите предложения и найдите фразовые глаголы;

- переведите предложения на русский язык;

- подберите к фразовым глаголам синонимы, которые соответствуют их содержанию;

- замените в предложении слово одной части речи подходящим по смыслу словом другой части речи.

Не остается в стороне и основной пласт лексики, который очень многочислен в английском языке – это термины и интернационализмы.

Упражнения для работы с ними имеются во многих главах:

В текстах будут встречаться слова, с которыми обучающиеся сталкиваются впервые. В таких случаях рекомендуется подчеркнуть это слово и постараться понять его содержание из контекста. Если это не помогает, то следует обратиться к словарю, который имеется в конце пособия и содержит как специальные термины, так и общеупотребительную лексику.

В данном пособии грамматический материал дается не в системе, а повторяются отдельные фрагменты грамматики, которые могут вызвать затруднения у обучающихся в том или ином тексте.

В первую очередь уделяется внимание пассивному залогу, который в английском языке употребляется довольно часто и имеет, в сравнении с русским языком, большее количество форм и нередко представляет трудности для понимания. Материал вводится по концентрическому принципу, т.е. по мере нарастания трудностей. Вначале сообщаются и тренируются глаголы в форме Present Simple без указания и с указанием носителя действия (Unit 3), а затем приводится таблица всех видо-временных форм пассива, как в сочетании с модальными глаголами, так и без них (Unit 8).

Следующая грамматическая проблема, которая не имеет соответствия в русском языке и, естественно, вызывает затруднения у обучающихся, – это фразовые глаголы. Они рассматриваются как чисто грамматическое явление, т.е. в позиции с другими словами. Фразовые глаголы являются неоднородными по своему составу и окружению.

Рассматривается еще одна проблема, которая должна быть хорошо усвоена обучающимися и которая очень часто встречается в специальных текстах, – это неличные формы глагола: причастия (I и II), герундий и инфинитив. Причастие II повторяется в связи с проблемой пассивного залога и времен группы Perfect активного залога. Причастие I и герундий, поскольку они имеют одинаковые грамматические формы, рассматриваются вместе. В связи с инфинитивом прорабатывается вопрос сложного дополнения, которое широко представлено в текстах любого жанра.

Грамматический материал по словообразованию дается по принципу «семьи слов», когда к базовому слову добавляются словообразовательные элементы – приставки и суффиксы, знание значения которых помогает понять слово без обращения к словарю. В данном пособии не встречаются аббревиатуры (слова, образованные из первых букв слов). Данный термин достоин упоминания в том плане, поскольку обучающиеся в дальнейшем с этим типом словообразования будут иметь дело часто (например, CD-ROM).

Другие грамматические проблемы, в частности, квантификаторы (количественные числительные, наречие и т. п.), степени сравнения прилагательных, артикли, типы вопросительных предложений, порядок слов в предложении, затрагиваются только косвенно, но это не означает, что обучающиеся не должны уделять им внимание. В языковой системе нет мелочей, и порой самая незначительная грамматическая проблема может доставлять неприятности и являться препятствием в понимании содержания текстов. Авторы пособия рекомендуют обратиться к справочникам и изучить ту или иную проблему самостоятельно.

Наконец, еще один тип заданий – информационные упражнения, целью которых является помочь обучающимся извлечь ту или иную информацию. Если лексические и грамматические упражнения являются ключом для освоения техники изучающего чтения, то информационные упражнения – это основа для понимания сути других видов чтения: ознакомительного, поискового, просмотрового.

Задачей данного пособия не является развитие других видов речевой деятельности: говорения, письма и аудирования. Они затрагиваются в косвенном порядке. Например, каждая глава открывается рубрикой: попытайтесь ответить на следующие вопросы и обсудить их со своими коллегами. Это поможет преподавателю лучше узнать аудиторию, а у обучающихся вызвать интерес к рассматриваемой на уроке проблеме. Дискуссия, рекомендуемая на заключительной стадии урока, имеет своей целью повторение проработанного материала и постановку задач на самостоятельную работу. Немногочисленные задания на развитие навыков письма (написание рецепта, аннотации на статью и т. п.) дают возможность обучающимся высказать свое мнение в письменной форме.

Для облегчения восприятия материала в пособии имеются схемы, таблицы и т. п. В них размещается грамматический материал, который подлежит активному усвоению на том или ином занятии. Такая форма подачи материала позволит обучающимся систематизировать и глубже понять прорабатываемое грамматическое явление.

В заключение хотелось бы сказать, что данное пособие учит учиться. В нем обучающиеся не найдут готовых ответов на поставленные в заданиях вопросы, за исключением фонетических заданий. Это касается всех типов упражнений, но в каждом лексическом и грамматическом упражнении имеются подсказки, умелое декодирование которых поможет правильному выполнению упражнений. Из урока в урок повторяются информационные задания, которые нацеливают обучающихся на внимательное прочтение текстов, – прием, которым обучающиеся должны овладеть в совершенстве за период учебы в вузе.

Unit 1

PLANTS ARE ALL AROUND US

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ What do you imagine when you hear the word "plant"?
- ⇒ What plants do you know?
- ⇒ Are plants important in our life? Why?
- ⇒ Do you consider plants are useful for everyone? Why?

2. Pronunciation guide.

blooming	[ˈblu:mɪŋ]
redwoods	[ˈred,wudz]
shoulders	[ˈʃəuldəz]
duckweed	[ˈdʌkwɪ:d]
orchids	[ˈɔ:kɪdz]
dandelion	[ˈdændɪlɪən]

3. Grammar corner. Types of questions. There are three main types of questions:

1) Yes/No questions (the expected answer is "yes" or "no")

A: Can you call 2 plants?

B: Yes, I can.

A: Do all plants smell wonderful?

B: No, they don't.

2) Wh-questions (Who? Whose? Where? Why? When? What? Which? and also how?).

⇒ What plants are these?

⇒ Where do cacti grow?

⇒ Why do some plants grow anywhere?

⇒ How do we use plants?

3) Alternative questions (which expect the answer to be one of two options).

⇒ Do you want to grow potatoes or carrots?

⇒ Which would you rather have, coffee or tea?

4. Match the following words with their translation.

1) duckweed

a) орхидея

2) orchid

b) пиломатериалы

3) bloom

c) куст

4) lumber

d) одуванчик

5) bush

e) цвет

6) dandelion

f) ряска

5. Match the words to make phrases.

1) green

a) tree

2) blooming

b) bush

3) tall

c) flower

4) tropical

d) plants

5) tiny

e) jungles

6) steamy

f) orchids

7) city

g) turkey

8) skunk

h) sidewalks

9) sliced

i) cabbage

6. Read the international words in the box and guess what they mean.

California, water, tropical, jungles, cactuses, rose, minute, hamburger, cotton
--

7. Read the text and find out the sentences with the words given in a box above. Translate them.

Plants Are All Around Us¹

I'm going to say a word and you tell me what you think of. Ready? Here's the word: "plants."

Did you think of something like a green bush or blooming flower or tall tree? Can you tell me two more things about plants?

We live in a world full of plants. Some plants grow big, like the California redwood trees. Some redwoods stand over three hundred feet tall – that means more than 50 people would have to stand on each other's shoulders to reach the top!

Other plants stay tiny. A plant called duckweed grows in lake water. It's so tiny that it just looks like a green speck.

Thousands of different kinds of plants grow all around the world. Some plants, like tropical orchids, grow only in steamy jungles. Some plants, like cactuses, grow where it's hot and dry. Some plants can grow just about anywhere: the dandelion grows in the cracks of city sidewalks just as easily as in fields and yards.

Some plants smell wonderful, like a rose in bloom. Some plants stink, like the plant with a name that says a lot about its smell: skunk cabbage! Have you ever smelled a sweet-smelling flower, or a plant you didn't like at all?

All the food that you eat comes from plants. Peas and potatoes, carrots and cucumbers, the wheat that gets ground into flour and baked into bread – they all come from plants. But wait a minute. What about meat – like a hamburger or sliced turkey? And what about fish? Cows, turkeys, and fish are not plants – they're animals! That's right – but all those animals eat plants.

And that's not all: without plants we would have no paper for writing and drawing, no lumber for building houses, and no cotton cloth for clothes. We couldn't live without the plants in our world.

8. Read the words in the box and complete the sentences below using the words above.

duckweed, rose, plants, lumber, cotton, orchids, dandelions

1. We live in a world full of
2. A tiny plant called ... grows in lake water.

¹ Wikipedia, the free encyclopedia.

3. Some plants, like tropical ... , grow only in steamy jungles.
4. You can meet ... everywhere.
5. Some plants smell wonderful, like a ... in bloom.
6. Plants are necessary for the production of ... for building houses and ... cloth for clothes.

9. Read the text and choose the correct answer.

1. We live in a world full of:
 - a) trees,
 - b) flowers,
 - c) plants.
2. Some redwoods stand over:
 - a) 10 feet tall,
 - b) 3 hundred feet tall,
 - c) 1 thousand feet tall.
3. A plant called duckweed grows in:
 - a) a hot, dry place,
 - b) a hot, wet place,
 - c) lake water.
4. Orchids grow only in:
 - a) steamy jungles,
 - b) taiga,
 - c) hot dry places.
5. All the food that you eat comes from:
 - a) animals,
 - b) water,
 - c) plants.

10. Work in pairs. Make three questions on the text for your partner to answer. Then change roles.

Unit 2

THE FORESTS AND THE TREES

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ Can you name five parts of a tree?
- ⇒ What is your favorite part of a tree? Why?
- ⇒ What is the biggest tree near your home?

(Call the name of a tree in Russian if you don't know its name in English).

- ⇒ Do we need trees? Why?

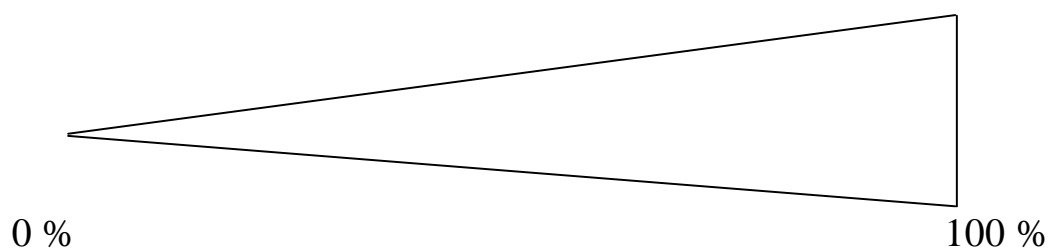
2. Pronunciation guide.

imagine	[ɪ'mæɪdʒn]
though	[ðəʊ]
raccoon	[rə'ku:n]
through	[θru:]
furniture	['fɜ:nɪtʃə]
cardboard	['kɑ:dbɔ:d]
towel	[tauəl]
company	['kʌmpəni]

3. Grammar corner.

Quantifiers

a) **Quantifier** is a word or phrase such as "much" or "a few" that is used with another word to show quantity.



no	few	some	many	most	all
----	-----	------	------	------	-----

b) Read the sentences and translate. Choose the correct word.

- 1) You see so ... trees (many, most).
- 2) There are ... reasons why forests are important (some, all).
- 3) Think of ... the other paper we use (few, all).
- 4) ... logging companies are careful to plant new trees after they have cut down the old ones (some, all).

c) Phrasal verb – a combination of words that is used like a verb and consists of a verb and an adverb (наречие) or preposition (предлог).

- run out of – выбегать, выбежать,
- camp out – ночевать в палатках или на открытом воздухе,
- cut down – рубить деревья,
- make up – составлять,
- think of/about – обдумать, задуматься,
- go into – превращаться.

d) Read the sentences below and find out the phrasal verbs. Translate the sentences.

1. We can never run out of the forest.
2. Many people like to camp out in the woods.
3. Think about the forest and the trees.

4. But people cut down trees.
5. The paper that makes up the pages of this book.
6. Think of all the other paper we use.
7. The paper goes into the newspaper that Americans read every Sunday.

4. Match these words with their translation.

- | | |
|---------------|----------------------------|
| 1) forest | a) древесина, лесоматериал |
| 2) tree | b) воздух |
| 3) wood | c) лес |
| 4) air | d) дерево |
| 5) to breathe | e) бумага |
| 6) furniture | f) бревно, кряж |
| 7) paper | g) сажать (растения) |
| 8) log | h) мебель |
| 9) to plant | i) дышать |

5. Match the words to make phrases.

- | | |
|------------|--------------|
| 1) high | a) blanket |
| 2) great | b) towels |
| 3) big | c) tower |
| 4) fresh | d) forest |
| 5) paper | e) air |
| 6) tall | f) companies |
| 7) logging | g) trees |

6. Read the text and find out the words given in the pronunciation guide. Translate them.

The Forests and the Trees²

Imagine that you're climbing a high tower. When you reach the top, you look out over a great forest. You see trees stretching for miles, like a big blanket of green – so many trees that it might seem as though we could never run out of them.

² Wikipedia, the free encyclopedia.

Think about the forest and the trees. Why are they important? If you were an animal in the forest – a bear, raccoon, owl, or deer – the forest would be important to you because it's your home! Many people like to hike through forests and camp out in the woods, where the air is fresh and clean. Those are some reasons why forests are important: because they are homes for many animals, because people enjoy hiking and camping in the woods, because the trees help keep the air we breathe fresh and clean.

But people cut down trees. Think how many ways we use the wood from trees. We burn wood in fireplaces. We use wood to build houses. We use wood to build furniture: chairs, tables, dressers, and more. Pencils are made from wood. Paper comes from wood. It takes a whole forest – almost half a million trees – just to make the paper that goes into the newspaper that Americans read every Sunday. Think of all the other paper we use: paper towels, cardboard, the paper you use for writing and drawing, the paper that makes up the pages of this book.

So, trees are important to us when we cut them down and use them to make things we need: houses, furniture, paper, and more. But trees are also important to us when they're standing tall in the forest. We have to be very careful not to cut down too many trees. And we should grow new trees to take the place of the ones we've cut down. Some logging companies – companies that cut down trees – are careful to plant new trees after they have cut down the old ones.

7. Read the text again. Complete 1 – 8 with the suitable ending from a – h.

- | | |
|---|---|
| 1. Many people like to hike through forests and camp out ... | a) we breathe fresh and clean. |
| 2. The trees help keep the air ... | b) in fireplaces. |
| 3. We burn wood ... | c) in the woods, where the air is fresh and clean |
| 4. We use wood to build furniture ... | d) from wood. |
| 5. Paper comes ... | e) chairs, tables, dressers, and more. |
| 6. Trees are important to us when we cut them down and use them ... | f) of the ones we've cut down. |

7. We have to be very careful not to cut down ... g) to make things we need: houses, furniture, paper, and more.
8. And we should grow new trees to take the place ... h) too many trees.

8. Read the text again and say if the following sentences are true, false or don't have information.

	True	False	No information
1. Forests are very important to animals.			
2. The air in the forests is fresh and clean.			
3. There are some reasons why forests are important.			
4. People try not to cut down trees.			
5. We don't use trees to build houses.			
6. We don't use trees to build furniture.			
7. Pencils are not made from wood.			
8. Paper comes from wood.			
9. We shouldn't grow new trees.			
10. Sporting goods come from wood.			
11. Some logging companies are careful to plant new trees after they have cut down the old ones.			

9. Look at the table below and say why the plants are important to people.

Products and services provided by plants

vegetables	wood timber	live fencing
fruits	baskets	shade
nuts	paper	wind shelter
oils	furniture	beauty
spices	sporting goods	water management
mushrooms	musical instruments	soil management

10. Discuss in pairs, using the content of the exercises above.

- ⇒ How do trees help people?
- ⇒ How do people help trees?
- ⇒ Have you ever planted a tree? a bush? a flower? Why (How) was it?

Unit 3

THE LAYERS OF THE FOREST

1. *Before you read.*

Answer and discuss the following questions with your partner.

- ⇒ How do you feel in the forest?
- ⇒ What can you see under the trees?
- ⇒ Do you know what the word "layer" means?
- ⇒ What words are synonyms to the word "layer"?

2. *Pronunciation guide.*

emergent	[ɪ'mɜ:dʒ(ə)nt]
nutrient	['nju:trɪənt]
intertwine	[,ɪntə'twaɪn]
dominant	['dɒmɪnənt]
canopy	['kænəpɪ]
scatter	['skætə]
mushroom	['mʌʃru:m]

3. *Grammar corner.*

The following word formation table shows the most common noun and adjective suffixes.

a) Word formation table.

Noun (people)	Abstract noun	Adjective
-or (visitor)	-ment (argument)	-ive
-er (layer)	-tion	(protective)
-ist (cyclist)	(destruction)	-ical (tropical)
-ian	-sion	-al (natural)
(vegetarian)	(permission)	-ful (powerful)
	-(i)ty (poverty)	-y (shady)
	-ance	-ar (popular)
	(performance)	-ly (closely)
	-ence	-ic (economic)
	(independence)	-ing
	-ry (forestry)	(blooming)
	-ness (sadness)	-ed (sliced)
	-al (arrival)	
	-ism (organism)	

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

- | | |
|--|------------|
| 1. The crowns of the ... trees receive most of the sunlight. | DOMINATE |
| 2. The canopy forms a shady ... umbrella over the rest of the forest. | PROTECT |
| 3. The canopy is one of the uppermost levels of a ..., formed by the tree crowns. | FORESTRY |
| 4. As a consequence the rainforest floor has considerably less ... than the rest of the forest layers. | VEGETARIAN |
| 5. Trees in the canopy are able to photosynthesise very ... thanks to the large amount of light. | RAPID |

c) The Passive Voice:

- We use the passive when the action is more important than the person who does it.

- We make the passive voice with the verb ‘to be’ and the past participle.

Example (е.д.): The trees are cut down.

d) The verbs in the sentences below are in the passive voice. Read and translate them.

- 1) A forest is made up of many layers.
- 2) This layer is comprised of decomposing leaves.
- 3) New soil is created of all these decay on the forest floor.
- 4) The canopy is formed by the mass of intertwined branches, twigs and leaves.
- 5) It is composed of a few scattered trees.

4. Read the words in the box and guess what they mean:

sunlight, shady, dominant, protective, rapidly, vegetarian, photosynthesis

5. Match the words to make phrases:

- | | |
|----------------|---------------|
| 1) main | a) droppings |
| 2) forest | b) layers |
| 3) tropical | c) branches |
| 4) animal | d) types |
| 5) intertwined | e) rainforest |
| 6) dominant | f) seedlings |
| 7) tree | g) trees |

6. Match these words with their definitions.

- | | |
|-------------|---|
| 1) canopy | a) more important, powerful, or successful than. the other (people or things) of the same type. |
| 2) dominant | b) just beginning to exist or be noticed. |
| 3) emergent | c) type of plant. |
| 4) mushroom | d) a substance in food that plants, animals and people need to live and grow. |

- | | |
|---------------|---|
| 5) intertwine | e) a mass of leaves and branches that form a cover high above the ground. |
| 6) nutrient | f) to throw or drop things so that they spread over an area. |
| 7) scatter | g) to be closely connected with something else. |

7. Read the text. Find out the words given in the task above and translate the sentences with those words.

The Layers of the Forest³

A forest is made up of many layers. Starting at the bottom and working up, the main layers of all forest types are the forest floor, the understory, and the canopy. The emergent layer exists only in tropical rain forests.

Forest floor layer. This layer is comprised of decomposing leaves, animal droppings, and dead trees and animals. New soil is created of all these decay on the forest floor and provides nutrients for the plants. Ferns, grasses, mushrooms, and tree seedlings grow out of the forest floor.

Understory layer. The understory layer is made up of bushes, shrubs, and young trees that have adapted to living in the shade of the canopy.

Canopy. The canopy is formed by the mass of intertwined branches, twigs, and leaves of tall, mature trees. The crowns of the dominant trees receive most of the sunlight. This is where most of the tree's food is produced. The canopy forms a shady, protective 'umbrella' over the rest of the forest.

Emergent layer. The emergent layer exists in tropical rain forest. It is composed of a few scattered trees that tower over the canopy.

8. Read the text again and find out the terms to the definitions below.

1. A mass of leaves and branches that form a cover high above the ground.
2. A substance in food that plants, animals and people need to live and grow.

³ Wikipedia, the free encyclopedia.

3. The gradual destruction of something is a result of natural process of change.
4. A young plant that has grown from a seed.
5. An amount or sheet of a substance that covers a surface (or lies between two things or two other substances).

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

	True	False	No information
1. A forest is made up of many layers.			
2. The emergent layer exists in taiga.			
3. All of these decay on the forest floor create new soil and provide life for animals.			
4. The understory is made up of bushes, shrubs and young trees.			
5. The canopy is formed by the mass of branches, twigs, and leaves of the tall mature trees.			
6. The crowns of the dominant trees receive least of the sunlight.			
7. The canopy forms a shady, protective "umbrella" over the rest of the forest.			
8. A crown is the wide circular top part of some types of tree.			
9. The emergent layer is below the canopy.			

Unit 4

TREE

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ What types of plant do you know?
- ⇒ What is a tree?
- ⇒ What is a shrub?
- ⇒ Can you differ a tree from a shrub? How do you do it?

2. Pronunciation guide.

perennial	[pə'reniəl]
dominance	['dɒmɪnəns]
minimum	['mɪnɪməm]
height	[haɪt]
maturity	[mə'tʃʊərəti]
diameter	[daɪ'æmɪtə]
erosion	[ɪ'reʊʒ(ə)n]
oxygen	['ɒksɪdʒ(ə)n]
aesthetic	[ɪ:s'θetik]

3. Grammar corner. Numbers.

a) Cardinals (количественные числительные)

1 – one	13 – <u>thirteen</u>	100 – a/one hundred
2 – two	...	215 – two hundred and
3 – three	20 – <u>twenty</u>	fifteen
...	30 – <u>thirty</u>	...
11 – eleven	...	1000 – a/one thousand
12 – twelve	51 – fifty-one	3579 – three thousand five
		hundred and seventy-nine

b) Dates (даты)

We write	We say
1066	Ten sixty six
1903	Nineteen oh three
1450	Fourteen fifty
1612	Sixteen twelve
2008	Two thousand and eight

4. Match these words with their translation.

- | | |
|--------------|-------------------------|
| 1) perennial | a) ландшафт |
| 2) height | b) зрелость |
| 3) maturity | c) фруктовый сад |
| 4) landscape | d) высота, вышина |
| 5) orchard | e) многолетнее растение |

5. Match the words to make phrases.

- | | |
|---------------|--------------|
| 1) woody | a) roots |
| 2) deep | b) stems |
| 3) different | c) plant |
| 4) multiple | d) authors |
| 5) important | e) countries |
| 6) natural | f) component |
| 7) building | g) landscape |
| 8) developing | h) material |

6. Match these words with their definitions.

- | | |
|---------------|--|
| 1) a tree | a) a woody plant that has a lot of thin branches growing from the lower part of the trunk. |
| 2) a shrub | b) an organism that grows in soil or water and usually has green leaves. Trees, algae, ferns and grass are all types of plant. |
| 3) a plant | c) simple plants that have no roots, stems, or leaves and that usually grow in water. |
| 4) algae (pl) | d) a very tall plant that has branches and thick woody trunk. |
| 5) wood | e) a very common plant with thin green leaves that covers the ground. |
| 6) grass | f) the substance that trees are made of. |

7. Read the following international words and guess their meaning.

dominance, minimum, diameter, component, natural, erosion, ecosystem, oxygen, atmosphere, temperature, element, aesthetic, energy, role, mythology, billion, person.

8. Read the text and find the sentences with the international words. Translate them.

Tree⁴

A tree is a perennial woody plant. It is most often defined as a very tall woody plant that has deep roots, a thick single main stem or trunk and many secondary branches. Accordingly to different authors' opinions a minimum height of a mature tree varies from 3 m to 6 m; a minimum diameter of a trunk is around 10 cm and its girth is about 30 cm. Woody plants that do not meet these definitions by having multiple stems and/or small size, are called bushes. Compared with most other plants, trees are long-lived ones, some reaching several thousand years old and growing up to 115 m (379 ft) high.

Trees are an important component of the natural landscape because of their prevention of erosion and the provision of a weather-sheltered ecosystem in and under their foliage. Trees also play an important role in producing oxygen and reducing carbon dioxide in the atmosphere, as well as moderating ground temperatures. They are also elements in landscaping and agriculture, both for their aesthetic appeal and their orchard crops (such as apples). Wood from trees is a building material, as well as a primary energy source in many developing countries. Trees also play a role in many of the world's mythologies. In 2008, there were approximately 400 billion trees on the Earth, about 61 ones per person.

Complete the sentences

1. A ... is a perennial woody plant.
2. Woody plants that do not meet these definitions by having multiple stems are called
3. Compared with most other ..., trees are long – lived ones.
4. Trees are an important ... of the natural landscape.
5. Trees also play an important ... in producing oxygen.
6. ... from trees is a building material.
7. Trees also play a role in many of the world's
8. In 2008 there were approximately 400 billion trees on the Earth, about 61 ones per

⁴ Wikipedia, the free encyclopedia.

9. Read the text again and choose the correct answer.

1. A tree is
 - a) a plant without flowers
 - b) a woody plant
 - c) a simple plant
2. Trees also play an important role in reducing
 - a) oxygen
 - b) radon
 - c) carbon dioxide
3. Wood from trees is
 - a) a natural resource
 - b) an element of decoration
 - c) a building material
4. Trees are an important component of
 - a) weather changes
 - b) natural landscape
 - c) grassland.

10. Read the previous texts and complete the summary. Use words from the box below. Make up your own story about a tree.

wood, plant, branch, twigs, roots, trunk, animals, fruit, leaves

What is a tree?

A tree is a Some trees grow very tall.

What are the parts of a tree?

The main part of a tree is the

... grow from the trunk.

Smaller branches are called

... grow from the twigs.

The ... of the tree are under the ground.

The roots give the tree water and nutrients.

How do trees help us?

Lots of ... and insects make their homes in trees.

We make things from the ... from trees.

We eat the ... from trees.

We enjoy seeing trees.

Unit 5

ANATOMY OF A TREE

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ Can you draw a tree and label its parts?
- ⇒ What do you know how trees feed?
- ⇒ What parts of a tree do we use?
- ⇒ Can you name as many trees as you can?

Trees of the World. Match these words with their translation.

- | | |
|-------------|-------------------|
| 1) birch | a) ясень |
| 2) alder | b) берёза |
| 3) ash | c) вяз |
| 4) aspen | d) ольха |
| 5) elm | e) дуб |
| 6) fir | f) клён |
| 7) maple | g) сосна |
| 8) pine | h) ель |
| 9) oak | i) красное дерево |
| 10) redwood | j) осина |

- ⇒ What other trees do you know?

2. Pronunciation guide.

moisture	[ˈmɔɪstʃə]
insulate	[ˈɪnsjuˌleɪt]
phloem	[ˈfləʊem]
cambium	[ˈkæmbɪəm]
hormone	[ˈhɔːməʊn]
auxin	[ˈɔːksɪn]
pipeline	[ˈpaɪpˌlaɪn]
cellulose	[ˈseljuˌləʊs]
lignin	[ˈlɪgnɪn]

3. Grammar corner.

a) Phrasal verbs.

⇒ Do you remember what phrasal verbs are (go back to unit 2).

⇒ Here are some more phrasal verbs below.

Match the phrasal verbs with their definitions.

- | | |
|--------------|---|
| 1) ward off | a) to change into smth |
| 2) keep out | b) to go to a higher level |
| 3) turn to | c) prevent from, defend |
| 4) pass down | d) to develop from |
| 5) move up | e) to prevent smth from entering a place |
| 6) lay down | f) to transmit smth from generation to generation |
| 7) grow out | g) to assert firmly |

b) Read the sentences below. Find out the phrasal verbs. Translate the sentences.

1. It helps keep out moisture in the rain.
2. It insulates against cold and heat and wards off insect enemies.
3. Inner bark turns to cork.
4. Sapwood is the tree's pipeline for water moving up to the leaves.
5. Newer rings of sapwood are laid down.

4. Match the words with their definitions.

Cork	a) the main part of a tree that the branches grow out
Moisture	b) a light substance forming the bark of a tree
Cambium	c) a natural substance produced by your body that controls important physical processes such as those relating to growth and sexual development
Trunk	d) a small amount of water or another liquid in the air, on the surface of something, or in a substance
Hormone	e) a layer of delicate meristematic tissue between the inner bark or phloem and the wood or xylem that produces all secondary growth in plants and is responsible for the annual rings of wood

5. Read the text and title each paragraph.

The Anatomy of a Tree⁵

The outer bark is the tree's protection from the outside world. Continually renewed from within, it helps keep out moisture in the rain, and prevents the tree from losing moisture when the air is dry. It insulates against cold and heat and wards off insect enemies.

The inner bark, or "phloem", is a pipeline through which food is passed to the rest of the tree. It lives for a short time, then dies and turns to cork to become a part of the protective outer bark.

The cambium cell layer is the growing part of the trunk. It annually produces new bark and new wood in response to hormones that pass down, through the phloem with food from the leaves. These hormones, called "auxins", stimulate growth in cells. Auxins are produced by leaf buds at the ends of branches as soon as they start growing in spring.

Sapwood is the tree's pipeline for water moving up to the leaves. Sapwood is new wood. As newer rings of sapwood are laid down, inner cells lose their vitality and turn to heartwood.

Heartwood is known to be the central, supporting pillar of a tree. The fact is that, it does not decay or lose strength while the outer layers are intact. A composite of hollow, needlelike cellulose fibers bound together by a chemical glue called lignin, which is as strong as steel.

6. Answer the following questions in your own words.

- ⇒ What is the outer bark?
- ⇒ What is the difference between the outer bark and the inner bark?
- ⇒ What produces new bark?
- ⇒ What moves water up to the leaves?
- ⇒ What properties does heartwood have?

⁵ URL:<http://www.arborday.org/trees/treeGuide/anatomy.cfm>

7. Read the text again and choose the correct answer.

- 1) Moisture is ...
 - a) very small drops of water or another liquid in the air, on the surface of something, or in a substance;
 - b) a trunk's outermost layer;
 - c) a liquid inside a tree.
- 2) Phloem is ...
 - a) the process in which green plants combine carbon dioxide and water;
 - b) one of the two main types of vascular tissue in plants, which takes food from the leaves to all parts of the plant;
 - c) a substance that gives colour to the tree's bark.
- 3) Cellulose is ...
 - a) the smallest unit from which all living things are made;
 - b) a strong layer that surrounds each cell in organisms other than animals, protecting them;
 - c) a substance that forms the walls of plant cells and plant fibres.
- 4) Sapwood is ...
 - a) inner cells;
 - b) the tree's pipeline for water moving up to the leaves;
 - c) A sticky substance found in plants and trees.
- 5) Heartwood is ...
 - a) the inner, central part of something;
 - b) the most important or basic part of something;
 - c) the central, supporting pillar of a tree.

8. Read the text again. Complete the sentences below with words from the box.

moisture, leaf buds, insect, sapwood, layer, bark, cork, wood, lignin, heartwood

- 1) The outer . . . is the tree's protection from the outside world.
- 2) It helps keep out ... in the rain.
- 3) It insulates against cold and heat and wards off ... enemies.
- 4) The inner bark turns to ... to become part of the protective outer bark.

- 5) The cambium cell ... is the growing part of the trunk.
- 6) It annually produces new bark and new ... in response to hormones.
- 7) Auxins are produced by ... at the ends of branches.
- 8) ... is new wood.
- 9) ... is the central, supporting pillar of a tree.
- 10) A composite of hollow, needlelike cellulose fibers bound together by a chemical glue called

9. Discuss in pairs.

- ⇒ What trees do you know?
- ⇒ What is your favorite tree? Why?
- ⇒ What trees do you have at your dacha? Why?
- ⇒ What other trees would you like to plant there?

Unit 6

TREE (classification)

1. *Before you read.*

Answer and discuss these questions with your partner.

- ⇒ What does botany study?
- ⇒ Are you interested in plant life? Why?
- ⇒ What areas of botany are you interested in most of all?

2. *Pronunciation guide.*

parallel	[ˈpærəleɪ]
environmental	[ɪn,vaɪrənˈmentl]
majority	[məˈdʒɔrəti]
species	[ˈspi:ʃi:z]
diversity	[daɪˈvɜ:səti]
Carboniferous	[ˌkɑ:bəˈnɪf(ə)res]
Triassic	[traɪˈæsi:k]
Cretaceous	[kriˈteɪʃəs]
subsequently	[ˈsʌbsɪkwəntli]

3. *Match these words with their definitions:*

- | | |
|-------------------------|---|
| 1) botany | a) a large flat area of land covered with grass in a warm part of the world, |
| 2) savanna
[səˈvænə] | b) a large area of land where wild grass grows, |
| 3) woodland | c) the scientific study of plants, |
| 4) horse tail | d) an area of land that is filled with trees, |
| 5) rainforest | e) any perennial herbaceous plant of the genus Equisetum, having hollow, jointed stems, |

- 6) grassland f) a plant without flowers that usually has feather shaped leaves. It reproduces by means of spores,
 7) fern g) a forest in a tropical region of the world where it rains a lot.

4. Grammar corner. Active Voice.

	Past	Present	Future
Simple	+ V ₂ - did + not + V ₁ ? Did ... V ₁ Describes a completed activity in the past	+ V ₁ , 3л -s, -es - do/es + not + V ₁ ? Do/es ... Describes regular activities	+ will + V ₁ - will + not + V ₁ ? Will + S + V ₁ ... Describes a general or indefinite event in the future
Progressive	was/were + V ₄ Describes a continuous activity in the past	am, is, are + V ₄ Describes things that are happening at the moment	will + be + V ₄ Describes things that will be happening at the definite time in the future
Perfect	had + V ₃ Describes an event that happened before another event in the past	have, has + V ₃ Describes an activity in the past that is important for the present	will + have + V ₃ Use for an action which at a given future time will be in the past or will just have finished

5. Read the sentences below and fill in the correct form.

1. Trees (to show) a variety of growth forms.
2. Botanists (not to survey) many tropical plants yet.
3. The earliest trees (to be) ferns, horsetails and lycophytes.
4. Most species of trees today (to be) flowering plants and conifers.
5. We (to call) it a sapling.
6. The tree form (to evolve) separately in unrelated classes of plants.

6. Complete the grid below by adding the other forms of the given word.

№	Noun	Verb	Adjective
1	plant		plantful
2		evolve	evolutionary
3	reproduction	reproduce	
4	challenge	challenge	
5		flower	flowering
6	knowledge		well-known
7	separation	separate	
8		survive	surviving

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

- | | |
|---|------------|
| 1. A tree is a plant form that occurs in many ... families of plants. | DIFFER |
| 2. Trees show a variety of growth forms, leaf shape and ... organs. | REPRODUCE |
| 3. The tree form has evolved | SEPARATION |
| 4. The majority of species are ... in tropical regions. | GROWTH |
| 5. The ferns still | SURVIVAL |

8. Match the words to make phrases.

- | | |
|--------------|--------------------|
| 1) parallel | a) regions |
| 2) great | b) evolution |
| 3) tropical | c) plants |
| 4) reproduct | d) tree |
| 5) flowering | e) biotypes |
| 6) several | f) characteristics |
| 7) young | g) organs |
| 8) bark | h) age |

9. Read the text. Find out the sentences with the words from the pronunciation guide. Translate them.

Tree (classification)⁶

A tree is a plant form that occurs in many different orders and families of plants. Trees show a variety of growth forms, leaf type and shape, bark characteristics, and reproductive organs.

The tree form has evolved separately in unrelated classes of plants, in response to similar environmental challenges, making it a classical example of parallel evolution. With an estimate of 100,000 tree species, the number of tree species worldwide might total 25 percent of all living plant species. The majority of tree species grow in tropical regions of the world and many of these areas have not been surveyed by botanists yet, making species diversity and ranges poorly understood.

The earliest trees were tree ferns, horsetails and lycophytes, which grew in the Carboniferous Period; tree ferns still survive, but the only surviving horsetails and lycophytes are not of a tree form. Later, in the Triassic Period, conifers, ginkgos, cycads and other gymnosperms appeared, and subsequently flowering plants in the Cretaceous Period. Most species of trees today are flowering plants and conifers.

A small group of trees growing together is called a grove or copse, and a landscape covered by a dense growth of trees is called a forest. Several biotypes are defined largely by the trees that inhabit them; examples are rainforest and taiga. A landscape of trees scattered or spaced across grassland is called a savanna. A forest of great age is called old growth forest or ancient woodland (in the UK). A young tree is called a sapling.

⁶ Wikipedia, the free encyclopedia.

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

	True	False	No information
1. Trees show a variety of growth forms, leaf type and shape and reproductive organs.			
2. The number of tree species worldwide might total 50 percent of all living plant species.			
3. The majority of tree species grow in tropical regions of the world.			
4. Most species of trees today are horsetails and lycophytes.			
5. A landscape of trees scattered or spaced across grassland is called a grove or copse.			
6. A lot of flowers grow in tundra.			
7. A young tree is called a sapling.			
8. Botanists demonstrate a great interest in surveying plant species in taiga.			

11. Make up a summary. Read the words in the box below and fill in the gaps.

forms, earliest, plant, savanna, classes,
ferns, majority, forest, flowering,
horsetails, taiga, conifers, copse

A tree is a (1) ... form that occurs in different orders and families of plants. Trees show a variety of growth (2) ... , leaf shape, bark characteristics, and reproductive organs. The tree form has evolved

separately in unrelated (3) ... of plants. The (4) ... of tree species grow in tropical regions.

The (5) ... trees were tree ferns, horsetails and lycophytes. Tree (6) ... still survive. Surviving (7) ... and lycophytes are not of a tree form. Later (8) ... , cycads and other gymnosperms appeared. Finally, (9) ... plants began their life in the world a plants.

A small group of trees growing close together is called a (10) A large area of land covered by a dense growth of trees is called a (11)

A landscape of tree scattered across grassland in a warm part of the world is called a (12) There are many other biotypes, examples are rainforest and (13)

Unit 7

MAJOR BIOMES OF THE WORLD

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ What is a "biome"?
- ⇒ Have you visited any biomes lately?
- ⇒ What biome do you live in?

* biome is a region that is classified by its climate and the types of animals and plants that are living in it.

2. Pronunciation guide.

ermine	[ˈɜːmɪn]
fertile	[ˈfɜːtaɪl]
surface	[ˈsɜːfɪs]
amphibian(s)	[æmˈfɪbiən]
hemisphere	[ˈhemɪsfɪə]
wood pecker	[ˈwud, pekə]
throughout	[θruːˈaʊt]
prairie(s)	[ˈpreəri]
evaporate	[ɪˈvæpəreɪt]
desert	[ˈdezət]

3. Grammar corner. Countable nouns.

a) Singular Plural

Prairie – prairies

Giraffe – giraffes

Leaf – leaves

Field – fields

Area – areas

Fox – foxes

Snake – snakes

Inch – inches

Forest – forests

b) Proper names

We use capital letters for:

- the beginning of a sentence
- the names of continents
- the names of countries, states
- the names of oceans
- the names of deserts.

Alaska [ə'ləskə], Europe ['juərəp], Antarctica [æn'tɑ:ktikə], Sahara [sə'hɑ:rə],
Asia ['eɪʃə], Pacific [pə'sɪfɪk], Brazil [brə'zɪl], Arctic ['ɑ:ktɪk].

4. Read and translate the sentences below.

1. There are no leaves to decompose and enrich soil.
2. Deciduous trees lose their leaves in fall.
3. Tropical rain forests receive at least 70 inches of rain each year.
4. Snakes and lizards are adapted to the hot desert.
5. This inland biome includes vast areas of grassy fields.
6. In the US grassland are called prairies.

5. Match the words to make phrases.

- | | |
|--------------|---------------|
| 1) arctic | a) trees |
| 2) treeless | b) life |
| 3) major | c) area |
| 4) deciduous | d) vegetation |
| 5) animal | e) desert |
| 6) thick | f) tundra |
| 7) life | g) biome |
| 8) hot | h) regions |
| 9) grassy | i) forms |
| 10) inland | j) fields |

6. Read the international words in the box and guess their meaning.

Tundra, zone, billion, tropical, million, bamboo, banana, continent, form, prairie, climate, giraffe, zebra, typical, Africa
--

7. Trees of the world. Match these words with their translation.

- | | |
|----------------|----------------------|
| 1) spruce | a) пихта |
| 2) hemlock | b) дуб |
| 3) silver fir | c) ель |
| 4) oak | d) клён |
| 5) beech | e) каучуковое дерево |
| 6) maple | f) бук |
| 7) ash | g) тсуга |
| 8) rubber tree | h) бамбук |
| 9) bamboo | i) ясень |

8. Read the text and find out the words, given in the pronunciation guide.

Major biomes of the world⁷

1. The Arctic tundra is a cold, treeless area of low, swampy plains in the far north around the Arctic Ocean. This is the Earth's coldest biome. The Arctic tundra's frozen subsoil, called permafrost, makes it impossible for trees to grow.

2. The coniferous-forest biome is south of Arctic tundra. It stretches from Alaska across North America and across Europe and Asia. These forests consist mainly of cone-bearing trees such as spruce, hemlock and fir. The soil is not very fertile, because there are no leaves to decompose and enrich it. Some animals that thrive in this biome are ermine, moose, red fox, snowshoe rabbits and great horned owls.

3. This biome is in the mild-temperate zone of the Northern Hemisphere. Major regions are found in eastern North America, Europe and eastern Asia. Deciduous trees lose their leaves in fall. The natural decaying of the fallen leaves enriches the soil and supports plant and animal life. Oak, beech, ash and maple trees are typical, and many types of insect and animal life abound. In the US, the deciduous forest is a

⁷ Wikipedia, the free encyclopedia.

home to many animals including deer, American gray squirrels, rabbits, raccoons and woodpeckers.

4. Tropical rain forests are found in Asia, Africa, South America, Central America and on many Pacific islands. Brazil has the largest area of rain forest in the world – almost a billion acres. Tropical rain forests receive at least 70 inches of rain each year and have more species of plants and animals than any other biomes. The thick vegetation absorbs moisture, which then evaporates and falls as rain. The combination of heat and moisture makes the tropical rain forest the perfect environment for more than 15 million plants and animals. Among the many plant species are bamboo, banana trees and rubber trees.

5. About one-fifth of Earth's land surface is desert. Deserts are found on every continent except Europe. There are two kinds: hot and dry (such as the Sahara) and cold and dry (such as Antarctica). Lack of water and intense heat or cold make this biome unfriendly for most life forms. Most of the plants you'll see in the hot desert are types of cactuses. A few animals – mainly reptiles, such as snakes and lizards, and amphibians, such as frogs and toads – are adapted to the hot desert.

6. Grasslands are known throughout the world by different names. In the US they are called prairies. Grasslands are places with hot, dry climates that are perfect for growing crops. This inland biome includes vast areas of grassy fields. It receives so little rain that very few trees can grow. The US prairies are used to graze cattle and to raise cereal crops. There is little variety of animal life. Today, common grassland animals include the prairie dog and the mule deer in North America, the giraffe and the zebra in Africa and the lion in Africa and Asia.

9. Read the text again. Choose the most suitable heading from the list A – G for each part 1 – 6 of the article. There is one extra heading which you do not need to use.

- A – Rain forests
- B – Arctic tundra
- C – Desert
- D – Deciduous forest
- E – Mountains
- F – Coniferous forest
- G – Grasslands

10. Match these words with their definitions. Translate them.

- | | |
|-----------------------------|--|
| 1. Permafrost _n | a) plants and trees, |
| 2. Soil _n | b) a type of animal that lays eggs and whose body is covered in flat hard pieces of skin, |
| 3. Vegetation _n | c) ground that stays permanently frozen |
| 4. Environment _n | d) an animal such as a frog or a turtle that can live both in water and on land, |
| 5. Reptile _n | e) the place in which people live and work including all the physical conditions that affect them, |
| 6. Amphibian _n | f) a plant grown for food usually on the farm, |
| 7. Crop(s) _n | g) the substance on the surface of the Earth in which plants grow. |

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

	True	False	No information
1. The Arctic tundra is the coldest biome.			
2. The coniferous-forest biome stretches from Alaska across North America and across Europe and Asia.			
3. Deciduous trees lose their leaves in winter.			
4. Red foxes, snowshoe rabbits and great horned owls live in deciduous forest.			
5. Tropical rain forests are found in Europe and Northern America.			
6. The combination of heat and moisture makes the tropical rain forest the perfect environment for more than 15 million plants and animals.			

	True	False	No information
7. Plants that you might find include small shrubs and the lichen that covers the tundra's many rocks.			
8. A rain forest grows in some levels.			
9. About one-fifth of Earth's land surface is desert.			
10. Emperor penguins are well-known animals that live at the edge of the Antarctic desert.			

12. Make up a summary, using the plan below.

PLAN

1. Arctic tundra.
2. Coniferous forests.
3. Deciduous forests.
4. Rain forests.
5. Desert.
6. Grasslands.

Unit 8

TROPICAL RAIN FORESTS

1. Before you read.

Answer and discuss these questions with your partner.

⇒ Where are tropical rain forests situated?

⇒ How many of the world's species of plants and animals live in the tropical rain forests?

⇒ Why do you think these forests are being destroyed?

2. Pronunciation guide.

carbon dioxide	[ˈkɑːbən daɪˈɒksaɪd]
habitat	[ˈhæbɪtæt]
valuable	[ˈvæljuəbəl]
serious	[ˈsɪəriəs]
altogether	[ˌɔːltəˈgeðə]
continuous	[kənˈtɪnjuəs]
oxygen	[ˈɒksɪdʒən]
mahogany	[məˈhɒɡəni]

3. Grammar corner.

The Passive voice

a)

	Past	Present	Future
Simple	was + V ₃ were	am is + V ₃ are	will + be + V ₃
Progressive	was + being + V ₃ were	am is + being + V ₃ are	-
Perfect	had + been + V ₃	have has + been + V ₃	Will + have + been + V ₃

b) Revise these rules:

1. The Passive is used when it is not known or not important to know exactly who performs an action.
2. To make the Passive voice we use the verb 'to be' + the past participle (V₃).
3. To form different tenses in the passive, we change the tense of the verb 'to be'.
4. When we use a modal verb with the Passive voice, we use the following structure: modal verb (can, may, etc.) + 'be' + past participle (V₃).

c) The verbs in the sentences below are in the passive voice. Read and translate them.

1. Vast stretches of forest are being cut down.
2. Other areas are cleared to provide land for farming.
3. Many of the plant species have been lost for ever.
4. They will be followed by other animals in the food chain.
5. Two-thirds of the world's tropical forest will have been destroyed by the year 2015.
6. Trees can also be planted to replace those that have been cut down.

d) Phrasal verbs. Match the phrasal verbs with their translation.

- | | |
|---------------------|--------------------------------|
| 1) wear out | a) рубить деревья |
| 2) cut down | b) предоставлять, давать |
| 3) look after | c) истощать |
| 4) provide for | d) использовать, израсходовать |
| 5) break up | e) заботиться о |
| 6) give out | f) разбиваться на части |
| 7) use up | g) выделять |
| 8) dry out = dry up | h) высушить, обезводить |

4. Read these words in a box and complete the sentences below.

Wet, vast, habitat, hardwoods, forest , food chain, good-quality timber

1. ... regions of the Earth have plenty of sunshine and rain.
2. This hot, ... climate makes trees and plants grow quickly.
3. Mahogany and rosewood are kinds of trees known as
4. They provide a good ... for animals.
5. But these trees also provide us with a valuable harvest of
6. More ... is cleared to make way for roads.
7. They will be followed by other animals in the

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

- | | |
|---|----------|
| 1. Much of the land that has been cleared is used for | FARM |
| 2. But without the ... of the trees, the soil quickly dries out. | PROTECT |
| 3. Two-thirds of the world's tropical rain forests will have been ... by the year 2015. | DESTROY |
| 4. The destruction of the rain forests is one of the world's most important ... problems. | CONSERVE |

6. Read the text consisting of 4 parts and title each one.

Tropical Rain Forests⁸



Vast regions of the Earth have plenty of sunshine and rain. This hot, wet climate makes trees and plants grow quickly, forming huge, dense forests. These are known as tropical rain forests. Mahogany and rosewood are kinds of trees known as hardwoods. They are just some of the trees which grow well here. They provide a good habitat for animals. Many animals, such as parrots, monkeys, eagles and bats, find food and shelter high up in the trees.

But these trees also provide us with a valuable harvest of good-quality timber. For this reason, vast stretches of forest are being cut

⁸ Wikipedia, the free encyclopedia.

down. Other areas are cleared to provide land for farming or for mining rich ores. More forest is cleared to make way for roads.

Meanwhile, what is happening to the plant and animal life of the forest? Many of the plants have been lost for ever. Those animals which depend on the plants for food must move on to remaining parts of the forest. They will be followed by other animals in the food chain. Soon, the remaining forest is crowded and unable to support all the animals that are trying to live here.



Much of the land that has been cleared is used for farming. But, without the protection of the trees, the soil quickly dries out and breaks up in the heat and wind. After a few years, the soil is worn out, and the farmer must clear new land.

If people continue to cut down these forests, as they are doing today, two-thirds of the world's tropical rain forests will have been destroyed by the year 2015. This is a serious problem because trees take in carbon dioxide, so if there are fewer trees, there will be more carbon dioxide in the air. Carbon dioxide traps heat from the Sun, so the world's climate will become hotter in the future. The destruction of the rain forests is one of the world's most important conservation problems.



What can we do to help save the tropical rain forests? There are two ways to prevent them from disappearing altogether. One way is to make sure that no more trees are cut down. The other is to replant trees on forest land that has been cleared.

If we look after the forests, they can still provide us with timber. The older trees can be felled, leaving the younger trees with room to grow. This way, the forests will provide a continuous home for plant and animal life. The growing trees will use up carbon dioxide and give out oxygen. Trees can also be planted to replace those that have been cut down.



The governments of countries in South America, central Africa and South-east Asia have started to protect their rain forests. They have turned areas of forest into national parks, where all tree-felling and other activities that could damage the forest and its wildlife are strictly controlled.

7. Read the text again and choose the best title for each paragraph. There is one title which you do not need to use. Compare your titles with ones given below.

1. National parks.
2. Tropical rain forests.
3. No protection.
4. Benefits of rain forests.
5. Saving the Forests.

8. Arrange class discussion on the topic.

What do you know about rain forests?

a) Make notes in your notebooks what you know about rain forests.

b) Read these people's ideas about rain forests and compare your ideas with theirs.

Ben: "In my opinion rain forests have many problems. If we continue to destroy the rain forests, we can stay without lots of plants and animals".

Alice: "I don't know very much about rain forests. People are destroying the rain forests to get wood or to look for gold and other minerals."

Richard: "I think people can't survive without destroying the rain forests. They have to use the land for cows, and to grow coffee and sugar, which they sell to rich countries".

Bill: "I know a bit about rain forests. Rain forests are important for drugs and medicines. That's why we must save rain forests".

Lisa: "I know a lot about rain forests. We should remember more than 50 million people live in the rain forests. Most of them do not hurt the forest. They are trying to save their forest. I think they use rain forests carefully".

c) Discuss your ideas in a group.

d) Use the following expressions for discussion.

- 1) I think
- 2) I agree
- 3) I fully agree
- 4) I know a lot about
- 5) I know a bit about
- 6) I don't know very much about
- 7) In my opinion
- 8) I don't think that is
- 9) I don't think
- 10) I disagree

Unit 9

WHY SAVE TROPICAL RAIN FORESTS?

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ Do rain forests exist in your home country?
- ⇒ What do you know about the problems of rain forests?
- ⇒ Should we save rain forests?

2. Pronunciation guide.

environmental	[ɪn,vaɪrən'mentl]
equator	[ɪ'kwetə]
actually	['ækjʊəli]['æktʃuəli]
medicinal	[mi'dɪsənəl]
percent	[pə'sent]
vegetation	[,vedʒɪ'teɪʃən]
acre	['eɪkə]
beyond	[bi'jɒnd]
absorb	[əb'sɔ:b]
enormous	[ɪ'nɔ:məs]
erosion	[ɪ'rəʊʒən]
relatively	['relatɪvli]

3. Grammar corner. Complete the grid below by adding the other forms of the given word.

a) Grammar grid.

	Noun	Verb	Adjective
	Organization		Organizational
	Safety		Safe
		Value	Valuable
		Treat	Treatable
	Impact		Impactful
		Benefit	Beneficial
	Encouragement		Encouraging
		Protect	Protective
	Prevention		Preventive

b) The Infinitive.

- In most cases we use the infinitive with to
Example (е.д.): They send experts to help.
- We use the infinitive without to after the modal verbs (can, may, must)
Example (е.д.): Income from mining can be calculated in dollars.
- Negative infinitives are made with not to
Example (е.д.): I want you not to go there.
Uses:
- After certain verbs
Example (е.д.): Rain forests also help to prevent soil erosion.
- To express purpose (to say why somebody does something)
Example (е.д.): Many governments encourage forest clearing to make room for mining.
- After a noun or pronoun the verb in the infinitive relates to the preceding noun/pronoun
Example (е.д.): Everyone in the world has something to gain from saving them.
- After verbs of knowing and believing:
Example (е.д.): I consider him to be our leader.

c) Match the halves to make sentences.

- | | |
|---|---|
| 1. The rock star Sting has organized concerts | a) to make room for cattle or export crops. |
| 2. Dozens of environmental groups have raised millions of dollars | b) to gain from saving them. |
| 3. Nearly everyone in the world has something | c) to save the Brazilian rain forest. |
| 4. Rain forest also help | d) to send experts to help. |
| 5. Many governments encourage forest clearing | e) to prevent pollution. |

4. Quiz. Some Facts About Rain Forests.

- 1) Which three countries contain the world's largest remaining rain forests?
a) Brazil, Indonesia and Zaire c) Brazil, Mexico and Panama
b) Brazil, Canada and the USA d) Australia, Brazil and Russia

- 2) How many people live in the world's rain forests?
a) 14 thousand c) 140 thousand
b) 14 million d) 140 million

- 3) At what rate are the world's rain forests disappearing?
a) 100 acres a day c) 100 acres a minute
b) 100 acres an hou d) 100 acres a second

- 4) What percentage of the world's plant and animal species exist only in rain forests?
a) 5 percent c) 35 percent
b) 15 percent d) 50 percent

- 5) Which of these woods does not come from a rain forest?
a) mahogany c) teak
b) black walnut d) rosewood

- 6) Which of these animals does not live in a rain forest?
a) lama c) howler monkey
b) gorilla d) mouse deer

5. International words. Read the international words and guess their meaning.

jungles, rock, concert, group, expert, minute,
percent, potential, medicine, global, energy,
erosion, farmers, calculated

6. Read the article and find out the sentences with the words given in ex. above. Translate them.

Why Save Tropical Rain Forests?⁹

Tropical rain forests – those steamy jungles shown in movies, where it's always hot and it rains day – are in trouble, and people around the world are becoming concerned. The rock star Sting has organized concerts to save the Brazilian rain forest, and dozens of environmental groups have raised millions of dollars to save tropical rain forests and send experts to help. Yet there are many people who say, "Why save rain forests? Aren't people more important than trees?"

Located in a belt of 33 countries, mostly around the equator, more than half of the tropical rain forests have disappeared in the past fifty years. Some are actually turning into deserts. With these forests disappearing at a rate of 100 acres per minute, nearly everyone in the world has something to gain from saving them. For example, scientists have learned that over 1,300 rain forest plants in the Amazon have medicinal value. So far less than 10 percent of the plant and animal species in the world's rain forests have been studied for their possible medical benefits and – of those that have been studied – less than one percent have been tested for the potential value in the treatment of cancer.

But the value of tropical rain forests goes beyond medicine. These forests have a critical impact on global weather patterns. Their vegetation absorbs enormous quantities of solar energy, thus affecting wind and rainfall patterns around the world. This vegetation contains huge amounts

⁹ Stempleski Susan, Focus on the Environment Regents/Prentice Hall Englewood Cliffs, New Jersey, 2003.

of carbon dioxide. As the forests disappear, the carbon dioxide is released into the air and contributes to "global warming" – what we know as the "greenhouse effect." Rain forests also help to prevent soil erosion in areas that could be damaged by floods and wind, and they also prevent pollution.



However, the benefits of rain forests are often overlooked, especially in developing countries where poor farmers move into forest land because they have no alternatives. Many governments encourage forest clearing to make room for mining, cattle, or export crops. The cutting down of forests is viewed in terms of a short term gain that benefits relatively few people – those who take over the land.



The loss of a tropical rain forest affects many more people - the forest people who lose their homes, the farmers whose soil erodes, the people whose water supplies are polluted, and others. Income from mining, export crops, timber, and cattle can be calculated in dollars, but the benefits of the forest as a protector of the land cannot.

7. Read the article again and match the questions 1 – 6 with the paragraphs A – E.

- 1) How many tropical rain forests have disappeared in the past fifty years?
- 2) Besides medicine, what are some other benefits to be gained from saving rain forests?
- 3) Who is affected by the loss of tropical rain forests?
- 4) Why are the benefits of rain forests often overlooked?
- 5) Why has the rock star Sting organized concert?
- 6) Where are most of the world's tropical rain forests located?

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

	True	False	No information
1. Tropical rain forests are in trouble.			

	True	False	No information
2. The rock star Madonna also had organized concerts to save Brazilian rain forest.			
3. Many people can't understand why to save rain forests.			
4. Tropical rain forest are located in 40 countries.			
5. More than 2/3 of the tropical rain forest have disappeared in he past fifty years.			
6. Scientists have learned that over 1,300 rain forest plants in the Amazon have medicinal value.			
7. The scientists of Canada have studied more than 10 percent of rain forest plants.			
8. Rain forests have a critical impact on global weather patterns.			
9. Many governments don't encourage the cutting down of rain forests.			
10. The loss of a tropical rain forest affects a lot of people.			
11. There was a conference on the problems of Brazilian rain forest in London in 2008.			

9. Discuss the questions:

- ⇒ Do you believe that saving the rain forests is necessary and important? Why yes or why not?
- ⇒ What efforts, if any, do you think should be made to save the world's rain forests?

10. Useful ideas for discussion:

- ⇒ tropical rain forests are unique (Do you agree or disagree? Why?)
- ⇒ many bird species from other parts of the world migrate to tropical rain forests (Do you agree or disagree?)
- ⇒ destroying tropical rain forests would drastically change weather patterns around the world (Is it true or false?)
- ⇒ destroying rain forests destroys the cultural traditions of the native peoples who live in them (Is it true or false?)
- ⇒ the destruction of rain forests causes serious local problems such as soil erosion and water pollution. (Do you agree or disagree? Why?)

Use expressions for discussion.

- I think
- I don't think
- I know a bit about
- I know a lot about
- I don't know very much about
- It does not interest me
- I'm greatly interested in
- I agree
- I don't agree
- I don't agree with that at all

Unit 10

TAIGA

1. *Before you read.*

Answer and discuss these questions with your partner

⇒ What is taiga?

⇒ What is special about taiga?

2. *Pronunciation guide.*

taiga	[ˈtaɪgə]
coniferous	[kənɪf(ə)rəs]
Minnesota	[ˌmɪniˈsəʊtə]
Michigan	[ˈmɪʃɪgən]
Hampshire	[ˈhæmpʃɪə]
Maine	[meɪn]
Kazakhstan	[ˌkæzækˈstɑːn]
Hokkaido	[hɒˈkaɪdəʊ]
terrestrial	[təˈrestriəl]
boreal	[ˈbɔːriəl]
colonize	[ˈkɒlənaɪz]
Siberia	[saɪˈbɪəriə]
Scandinavia	[ˈskændiˈneɪviə]
photosynthesize	[ˌfəʊtəʊˈsɪnθəsaɪz]

3. *Grammar corner.*

a) **Word Formation.** Complete the grid below by adding the other forms of the given word.

Noun	Verb	Adjective
characteristic		characterized
	cover	covering
connection		connective
colonist	colonize	
freezer		freezing
occupation	occupy	
fall		fallen

b) Opposites – are words having completely different meaning.

Read the opposites below and guess their meaning.

poor	rich	summer	winter	moist	dry
small	large	cold	hot	low	high
broad	narrow	cool	warm	good	bad
difficult	easy	long	short	open	close
thin	thick	young	old	deep	shallow
north	south	late	early	far	near

4. Match these words with their definitions:

- | | |
|-----------------|---|
| 1) biome | a) a small soft plant that grows on surfaces such as trees and walls |
| 2) hemisphere | b) the top layer on the surface of the Earth in which plants grow |
| 3) soil | c) the study of chemical processes in living things |
| 4) lichen | d) a region that is classified by its climate and the types of animals and plants that are living in it |
| 5) biochemistry | e) one half of the Earth |
| 6) moss | f) the average and usual weather conditions of a particular country or region. |
| 7) climate | g) a soft green or brown plant that grows in a layer on wet ground, rocks or trees. They do not produce flowers or seeds. |

5. *Look at the underlined words in the text. Match them with their translation given in the box below.*

ольха, дуб, береза, вяз, осина, ива, ель,
клён, рябина, лиственница, сосна,
пихта

6. *Read the following international words and guess their meaning.*

continental, temperature, climate, classification,
Arctic, continent, regionally, extreme, hemisphere,
dominated, horizon

7. *Read the text and find out the international words in it. Translate these sentences.*

Taiga¹⁰

Taiga is a biome characterized by coniferous forests. Covering most of inland Alaska, Canada, Sweden, Finland, inland Norway, and Russia (especially Siberia), as well as parts of the extreme northern continental United States (Northern Minnesota, Michigan, New Hampshire, and Maine), northern Kazakhstan and Japan (Hokkaido), taiga is the world's largest terrestrial biome. Boreal forest is the term used to refer to the southern part of this biome, while "taiga" is used to describe the more barren northern areas of the Arctic tree line.

Since North America, Europe and Asia were recently connected by the Bering land bridge, a number of animal and plant species (more animals than plants) were able to colonize both continents and were distributed throughout the taiga biome. Taigas have some small-leaved deciduous trees like birch, alder, willow, and aspen; mostly in areas escaping the most extreme winter cold. However, the deciduous larch copes with the coldest winters on the northern hemisphere in eastern Siberia. The southernmost part of the taiga also has trees like oak, maple, and elm scattered among the conifers.

¹⁰ Wikipedia, the free encyclopedia.

Taiga, the world's largest biome, has a harsh continental climate with a very large temperature range between summer and winter.

Taiga soil tends to be young and nutrient-poor; it lacks the deep, organically-enriched profile present in temperate deciduous forests. The thinness of the soil is due largely to the cold, which hinders the development of soil and the ease with which plants can use its nutrients. Fallen leaves and moss can remain on the forest floor for a long time in the cool, moist climate, which limits their organic contribution to the soil; acids from evergreen needles further leach the soil, creating spodosol. Since the soil is acidic due to the falling pine needles, the forest floor has only lichens and some mosses growing on it.

There are two major types of taiga: closed forest, consisting of many closely-spaced trees with mossy ground cover, and lichen woodland, with trees that are farther-spaced and lichen ground cover; the latter is more common in the northernmost taiga.

Coniferous trees are the dominant plants of the taiga biome. Evergreen species in taiga (spruce, fir, and pine) are adapted for survival in harsh taiga winters, though larch, the most cold-tolerant of all trees, is deciduous. Taiga trees tend to have shallow roots to take advantage of the thin soils, while many of them seasonally alter their biochemistry to make them more resistant to freezing, called "hardening".

Because the sun is low in the horizon for a long period of the year, it is difficult for plants to generate energy from photosynthesis. Pine and spruce do not lose their leaves seasonally and are able to photosynthesize with their older leaves in late winter and spring when light is good but temperatures are still too low for new growth.

Although the taiga is dominated by coniferous trees, some broadleaf trees also occur, notably birch, aspen, willow, and rowan. Grasses grow wherever they can find a patch of sun, and mosses and lichens thrive on the damp ground and on the sides of tree trunks.

8. Read the definitions below. Choose the right term.

1. These trees lose all their leaves each autumn.
 - a) deciduous trees
 - b) coniferous trees
 - c) growing trees

2. To remove a chemical or mineral from something such as soil as a result of water passing through it, or to be removed by this process.
 - a) to dry out
 - b) break up
 - c) leach

3. The fact or state of continuing to live or exist, especially in difficult conditions.
 - a) extinction
 - b) survival
 - c) existence

4. A plant or animal group whose members all have similar general features and are able to produce young plants or animals together.
 - a) biome
 - b) species
 - c) zapovednik

5. The process in which green plants use energy from light to produce their food.
 - a) pasteurization
 - b) vaccination
 - c) photosynthesis.

9. Read the text again. Complete 1 – 6 with the suitable ending from a – f.

- | | |
|--|--|
| 1) Taiga is a biome | a) connected by the Bering land bridge. |
| 2) Boreal forest is the term | b) characterized by coniferous forests. |
| 3) North America and EuroAsia were recently | c) to make them more resistant to freezing. |
| 4) A number of animal and plant species | d) used to refer to the southern part of this biome. |
| 5) Many of taiga trees seasonally alter their biochemistry | e) for a long time in the cool, moist climate. |
| 6) Fallen leaves and moss can remain on the forest floor... . | f) were able to colonize both continents. |

***10. Read the article again. Number the questions in the correct order.
Answer the questions.***

- 1) What territories of the world are covered with taiga?
- 2) Why is the soil of taiga thin?
- 3) What coniferous trees are there in taiga?
- 4) Why do many taiga trees alter their biochemistry seasonally?
- 5) What is taiga?
- 6) What is special about climate in taiga?
- 7) What broad leaf trees are there in taiga?
- 8) What forests is taiga dominated by?

Unit 11

HORTICULTURE

(part 1)

1. Before you read.

Answer and discuss these questions with your partner.

⇒ If you were a tree what tree would you like to be?

⇒ Do trees affect your life? How? Why do you think so?

2. Pronunciation guide.

advancement	[əd'vɑ:nsmənt]
ancient	['eɪnʃənt]
antiquity	[æn'tɪkwɪtɪ]
civilization	[,sɪvəl'aɪ'zeɪʃən]
crispness	['krɪspnɪs]
culinary	['kʌlɪnəri]
deliberate	[dɪ'libəɪt]
decorative	['dekəreɪtɪv]
edible	['edəbl]
horticulture	['hɔ:tɪkʌltʃə]
ornament	['ɔ:nəmənt]
pomology	[pəu'mɒlədʒɪ]
recipe	['resɪpɪ]

3. Grammar corner. Adjectives.

Regular

Adjectives	Comparatives	Superlative
1 – syllable (thin, new, big) 2 – syllable (ending in <u>e</u>) (ending in y)	+er (thinner, newer, bigger) +r (nicer, finer) drop y + ier (happier)	+est (thinnest, newest, biggest) +est (nicest, finest) drop y + iest (happiest)
3 – syllable (modern)	more + adj (more modern)	the most + adj (the most modern)
4 – syllable (interesting)	more + adj (more interesting)	the most + adj (the most interesting)

Irregular

good	better	the best
bad	worse	the worst
little	less	the least
far	further/farther	the furthest/the farthest

To compare two things, use:

a) a comparative adjective + than

е.д.: Boxing is more dangerous than rugby.

b) not + as + adjective + as

е.д.: Rugby is not as dangerous as boxing.

4. Read and translate the sentences below.

1. The advancement of horticulture is intertwined with the history of civilization from the earliest times to the present.
2. The average garden is an ideal place for today's newer fruit trees.
3. Growing is one of the most satisfying pleasures of having a garden.
4. Apples are the most popular fruit in the USA.
5. This branch of horticulture is the most popular with homeowners.
6. Different complexes have plants to make the area more pleasing.

5. Match the words to make phrases.

- | | |
|------------------|----------------|
| 1) ideal | a) trees |
| 2) fruit | b) societies |
| 3) seven | c) fruit |
| 4) ancient | d) place |
| 5) primitive | e) wonders |
| 6) technological | f) inventions |
| 7) fresh | g) world |
| 8) modern-day | h) development |

6. Read the international words in the box and guess their meaning.

ornament, civilization, practice, primitive,
technological, transformation, progress,
category, productive, ideal, container, jelly

7. Read the text and find out the sentences with words, given in pronunciation guide. Translate them.

Horticulture (part 1)¹¹

Horticulture is the science and art of cultivating plants. The word 'horticulture' originates from the Latin words *horta*, which means garden and *cultura*, which mean cultivation.

Human use of plants for food and ornament has its origin in antiquity. For instance, the hanging gardens of Babylon were hailed as one of the seven wonders of the ancient world. As civilizations evolved, the deliberate cultivation and domestication (agriculture) of edible plants replaced less efficient food-gathering practices of primitive societies. The advancement of horticulture is intertwined with the history of civilization and of scientific and technological development from the earliest times to the present. Horticulture and agriculture are not modern-day inventions but have gone through continuous transformation as civilization (society) progressed technologically.

¹¹ Forum, January 2000, volume 38, Number 1, published by the United States Information Agency.

Horticulture has many branches and can be divided into categories based on types of plants.

Fruit culture is called pomology. This branch of horticulture covers the growing of fruits trees.

Growing, harvesting, and tasting your own fresh fruit is one of the most satisfying pleasures of having a garden. A fruit garden may be highly decorative as well as productive, and the average garden is an ideal place for today's newer varieties such as dwarf fruit trees. Fruit trees can be trained to grow in a variety of ways: rows of trees, bushes, or in containers. Fruit trees can be grown in a separate area or among other plants. Fruit trees require fertile, well-drained soil, plenty of sun, spray protection against insects, and annual pruning.

Apples are one of the most widely grown hardy fruits. There are about 7000 varieties worldwide. Apples are available fresh throughout the year, and the most popular among people. Apples are ripe when picked and need to be kept cold so they do not become soft. It takes only two days on the counter for apples to lose their crispness. When refrigerated, apples will keep for about six weeks. Apples appear in a variety of culinary and dessert recipes and in the form of apple sauce, jelly, and juice.

8. Match the words with their definitions.

- | | |
|-----------------|--|
| 1) antiquity | a) a small attractive object used for decoration or for making someone or something more beautiful |
| 2) garden | b) ancient times, especially the period of time before the end of the Roman Empire; the state of being extremely old |
| 3) ornament | c) the liquid that comes out of fruit or vegetables when you squeeze them, often used as a drink |
| 4) juice | d) a set of instructions for cooking or preparing a particular food |
| 5) recipe | e) an area of land next to a house that belongs to the house, usually with grass and plants growing in it |
| 6) sauce | f) a society that has developed its own culture and institutions |
| 7) civilization | g) a liquid food that you put on other foods to give them a particular flavour (e.g. apple sauce) |

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

	True	False	No information
1. Human use of plants for food has its origin in antiquity.			
2. The hanging gardens of Babylon were one of the seven wonders of the ancient world.			
3. Horticulture is the science of medicine and education.			
4. Horticulture and agriculture are modern – day inventions.			
5. Horticulture began to develop in Babylon.			
6. Growing, harvesting and tasting your own fresh fruit is one of the most satisfying pleasures of having a garden.			
7. Apples are not available fresh throughout the year.			
8. Apples are used for making a wine.			

10. Project Time.

- ⇒ **Would you like to make up a culinary book?**
- ⇒ **Do you know any recipes for fruit cakes, vegetable pies, pancakes? Are you ready to share your ideas?**
- ⇒ Let's start with me.
- ⇒ Here is one for apple cake.

Name: apple cake

Ingredients: 200 grams of margarine

2 cups of sugar

4 eggs

2 cups of all-purpose flour
2 teaspoons of cinnamon
1 teaspoon of baking soda
*4 cups of finely chopped¹ apples**
1 cup of chopped nuts (your favorite)
1 cup of raisins (boil² for 5 minutes in water before using)

Sift³ the flour, cinnamon, soda together.
Cooking: Heat⁴ your oven to 200 C.
Bake⁵ 1 hour at 200 C.
The cake may be served warm or cold.

* Best apples for baking are Jonathan, Golden Delicious, Rome Beauty.

¹ chop — нарезать, шинковать,

² boil – кипятить,

³ sift – просеивать,

⁴ heat – нагревать,

⁵ bake – выпекать.

Your recipe for a culinary book.

Name: _____

Ingredients: _____

Cooking: _____

It's easy to make!! Bon appetite.

Unit 12

HORTICULTURE (part 2)

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ What is horticulture?
- ⇒ What do you know about vegetables?
- ⇒ Have you ever heard about ornamental plants?
- ⇒ Where could you see ornamental plants?

2. Pronunciation guide.

appreciate	[ə'pri:ʃieɪt]
arboriculture	['ɑ:bəri,kʌltjə]
architecture	['ɑ:kɪtektʃə]
disability	[,dɪsə'bɪlɪtɪ]
floriculture	['flɔ:rɪkʌltjə]
intellectual	[,ɪntɪ'lektʃuəl]
olericulture	[əu'leri,kʌltjə]
ornamental	[,ɔ:nə'mentəl]
therapeutic	[,θerə'pjʊ:tɪk]
turfgrass	['tɜ:fgrɑ:s]

3. *Grammar corner.*

a) **Word formation table.**

Prefixes	Suffixes
re- (replant)	-ify (beautify)
sub- (subdivide)	-al (emotional, functional)
un- (unlike)	-ar (popular)
dis- (disability)	-tion (production)
	-er (container)
	-ly (usually)

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

- | | |
|--|------------|
| 1. This branch of horticulture is often the most ... with homeowners. | POPULATION |
| 2. Vegetables usually have a short growing season and must be ... each year. | PLANT |
| 3. Ornamental horticulture is the ... and use of plants as ornaments. | PRODUCE |
| 4. This category can be ... into floriculture. | DIVIDE |
| 5. Government office complexes have ... plants and trees. | ORNAMENT |

Gerunds and participles

c) To make the present participle and the gerund we add –ing.

е.д.: **grow – growing,**

If the verb has a short vowel and ends in one consonant, we double (удваиваем) the consonant and add –ing.

е.д.: **shop – shopping,**

If the verb ends in -e, we drop (опускаем) the e and add –ing.

е.д.: **use – using.**

d) Match the halves to make sentences. Translate them.

- | | |
|---|--|
| 1. Horticulture is the science and art of... . | a) of perennial trees |
| 2. Vegetables usually have | b) of <u>seeing</u> the flower, <u>touching</u> the flower, and <u>smelling</u> the flower |
| 3. Arboriculture is about <u>growing</u> and <u>caring</u> | c) <u>cultivating</u> plants |
| 4. Ornamental plants make the area | d) a short <u>growing</u> season |
| 5. <u>Landscaping</u> is the term | e) more <u>pleasing</u> |
| 6. A <u>growing</u> flower can be appreciated on many levels – through the senses | f) for <u>using</u> plants outdoors. |

4. Read the international words in the box and guess their meaning.

tomato, popular, season, production, container, element, commercial, complex, functional, emotional, physical, therapeutic, category
--

5. Read the text and find out the sentences with the words, given in exercise above. Translate them.

Horticulture (part 2)¹²

Horticulture is the science and art of cultivating fruits, vegetables and ornamental plants. We have got information about pomology. Fruit culture is called pomology.

Vegetable culture is called olericulture. Vegetables are grown for their fruits (tomatoes), leaves (spinach), roots (carrots), or pods (beans). This branch of horticulture is often the most popular with homeowners. Unlike fruit trees, vegetables usually have a short growing season and must be replanted each year.

¹² Forum, January 2000, volume 38 Number 1, published by the United States Information Agency.

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

	True	False	No information
1. Vegetable culture is called pomology.			
2. Olericulture is often the most popular with homeowners.			
3. Vegetables are used in food industry.			
4. Ornamental horticulture is the production and use of plants as ornaments.			
5. Ornamental horticulture can be subdivided into floriculture, turf care and arboriculture.			
6. Landscape architecture is the use of ornamental plants and trees.			
7. Horticulture is a compulsory subject at forestry-engineering educational institutions.			

8. Read the words in a box below and use them to make up a summary.

elements, history, science, plants, pleasing, fruit, branches, popular, vegetable, therapeutic, decorative, development

What is horticulture?

Horticulture is the ... and art of cultivating fruits, vegetables and ornamental plants.

Horticulture has many ... based on types of plants.

What branches does horticulture include?

Pomology is a ... culture.

Olericulture is a ... culture.

Ornamental horticulture is the production and use of ... as ornaments.

Landscape architecture is about the use of ornamental plants and trees with other ... (stones) to beautify an area.

Why is horticulture in progress?

The advancement of horticulture is intertwined with the ... of civilization and of scientific and technological ... from the earliest times to the present.

All types of horticulture are ... with people.

A fruit garden may be highly ... as well as productive.

Ornamental plants and trees make the area(s) more ... and functional.

Horticulture can be very ... for all people.

9. Choose the right translation.

1. Alder:

a) осина; b) ольха; c) дуб; d) ясень.

2. Acacia:

a) ольха; b) вяз; c) акация; d) сосна.

3. Poplar:

a) тополь; b) пихта; c) дуб; d) ясень.

4. Cherry tree:

a) рябина; b) черёмуха ; c) яблоня ; d) вишня.

5. Larch:

a) рябина; b) ольха; c) лиственница; d) ясень.

6. Mimosa:

a) осина; b) акация; c) мимоза; d) ясень.

7. Apple tree:

a) осина; b) липа; c) сосна; d) яблоня.

8. Willow:

a) ива; b) вишня; c) черемуха; d) мимоза.

9. Rowan:

a) ива; b) ольха; c) дуб; d) рябина.

10. A chestnut tree:

a) вяз; b) груша; c) каштан; d) ясень.

10. Discuss!

⇒ **What trees from Ex. 9 can be used for landscape architecture in our city?**

⇒ **What trees from Ex. 9 can be used by people having a garden?**

⇒ **What trees from Ex. 9 would you like to have near your university?**

⇒ **What trees from Ex. 9 do you like most of all? Why?**

Unit 13

TREE MYTHOLOGY. BIRCH

1. Before you read.

Answer and discuss the following questions with your partner.

- ⇒ What do you know about medicinal properties of trees?
- ⇒ And what have you heard about miraculous healing qualities of trees? Do you believe? Why?/Why not?

2. Pronunciation guide.

civilisation	[,sɪvəl'aɪ'zeɪʃn]
miraculous	[mə'reɪkjʊləs]
associated	[ə'səʊsiətɪd]
particularly	[pə'tɪkjʊləli]
height	[haɪt]
unearth(ed)	[ʌn'ɜ:θ(t)]
fossilised	['fɒsəl'aɪzɪd]

3. Grammar corner.

a) Complete the grid below by adding the other forms of the given word.

Word building		
Noun	Verb	Adjective
beauty	beautify	beautiful
knowledge		known
power	power	
pointer		pointed
development		developed
respect	respect	
symbol		symbolic
	apply	applied

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

1. Many primitive people of noble, highlycivilisations treated trees, flowers and plants with great respect.	DEVELOPMENT
2. Often trees were associated with having supernatural	POWERFUL
3. People thought that of flowers and plants having medicinal ... and miraculous qualities.	APPLY
4. Cut Birch branches and placed in the circle with the ... towards the centre could provide a way from devils' appearing.	POINTED
5. In Estonia the Birch tree is the ... of their county itself.	SYMBOLIC

c) There are 26 letters in the English alphabet. The first letter is Aa the last is Zz.

d) Glossary. Put the names of trees in the ABC order.

1. Poplar – a tall thin tree, often grown in rows along the edge of roads or fields.
2. Aspen – a tall thin tree that grows in North America and Europe and has leaves that rustle (= make a noise as they rub against each other) in the wind.
3. Mimosa – a small tree with yellow flowers that grows in hot countries.
4. Willow – a tree with long thin branches and narrow leaves that grows near water.
5. Cherry tree – a tree that produces cherries.
6. Alder – a tree that grows near water and has round leaves and long thin yellow flowers called catkins.
7. Larch – a tree that has thin sharp leaves called needles that fall in the winter and produces brown fruits called cones.
8. Chestnut tree – a tall tree with large wide leaves that produces chestnuts.
9. Ash – a tree with a smooth grey bark.

10. Pine – a tall tree with thin sharp leaves called needles that do not fall off in winter.
 11. Acacia – a tree with small white or yellow flowers that grows in warm countries.
 12. Elm – a large tree with round leaves that fall off in winter.
 13. Birch – a tall tree with thin branches and an outer layer that comes off in thin stripes.
 14. Rowan – a small tree that produces bright red berries.
- 4. Read the words in a box and fill in the gaps. Read the poem and translate.**

pine tree, poplar, oak

THE TREES

The ... is a French tree,
A tall and laughing wench¹ tree,
A slender tree, a tender² tree,
That whispers to the rain –

The ... is a British tree,
And not at all a skittish³ tree,
A rough tree, a tough⁴ tree,
A knotty tree to bruise⁵,

The ... is our own tree,
A grown tree, a cone tree,
The tree to face a bitter⁶ wind,
The tree for mast⁷ and spar⁸.

Christopher Morley

¹ wench — молодой, юный

² tender — нежный

³ skittish — капризный

⁴ tough — сильный, выносливый

⁵ to bruise — повредить

⁶ bitter — резкий, сильный

⁷ mast — мачта

⁸ spar — рангоутное дерево.

5. Read the international words and guess their meaning.

civilisations, traditionally, centre, symbol, Druids, mythical, demonstrate, transform, primitive
--

**6. Read the text and find out the sentences with the international words.
Translate them.**

Tree Mythology. Birch.¹³

The tree has always been a cultural symbol. Trees make places. Trees deeply affect the idiom of a place. Trees demonstrate how in every land we have learned to live with them, using them, explaining things concerned with them, telling stories and moral tales about them.

Many primitive people of noble, highly developed civilisations treated trees, flowers and plants with great respect. Often trees were associated with having supernatural power, being gods, ancestors and associated with different forms of worship. Flowers and grass were species having medicinal applications and miraculous healing qualities.

The Druids, particularly, believed that trees possessed great mysterious powers especially the rowan and the oak.

Birch trees have been traditionally reputed to be the favourite trees of mythical creatures which inhabited Russian Forests known as 'Forest Devils' or 'Genii of the Forest'. People stated that these creatures had observed the world from the top of the trees. They were able to transform their shape. They were trees in the forest and became as small as the smallest blade of grass in an open land. Cut Birch branches and placed in a circle with the points towards the centre could provide a way of the forest devils' appearing.

People said, 'If you place a branch of the Birch tree above the front entrance of a house, your home will be protected from any evil spirits and misfortune.

In Estonia the Birch tree is considered to be symbolic of all their beliefs and the country itself.

In ancient times the bark of the Birch tree was traditionally used for writing. The bark has a smooth texture and a light satin colour, of which many fossilised examples have been unearthed.

¹³ URL: <http://www.mystical-www.co.uk/trees.htm>.

7. Read the text again. Find out the sentences with the opposites to the words, given below.

undeveloped	descendant	real	bottom	large
exit	dark	rough	a few	close

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

	True	False	No information
1. Often trees were associated with having supernatural power.			
2. The Druids didn't believe that trees possessed great mysterious powers.			
3. Mythical creatures which inhabited Russian Forests known as "Forest Devils" loved birch trees.			
4. Estonian people consider birch trees to bring a lot of problems.			
5. The bark of the Birch tree was used for writing in ancient times.			
6. It's known a poplar to be a French national tree.			
7. Flowers and plants have medicinal applications.			

9. Discuss these questions with your partner.

1. What was that first tree you could remember? (Its name, place it grew; its peculiarities: size, trunk, bark, branches, leaves, needles, flowers, berries, fruits, nuts, catkins, etc.).
2. How old were you?
3. Did you plant trees in your childhood?
4. What songs? Poems? Stories about birch do you know? Do you like them? Why?
5. What myths about birch could you hear before?
6. What myths about other trees do you remember?
7. What poems and songs about other trees would you like to introduce?
8. Would you like to write a poem about a tree?

Unit 14

THE VENUS FLYTRAP

1. *Before you read.*

Answer and discuss the following questions with your partner.

⇒ Where do most plants get their food from?

⇒ Do people in your country eat any kinds of insects?

⇒ Look at a map of the USA. Find North and South Carolina.

2. *Pronunciation guide.*

carnivorous	[ka:'nɪvərə]
Venus	['vɪ:nəs]
flytrap	['flaɪtræp]
carnivore	['kɑ:nɪvɔ:]
venenous	['venɪnəs]
although	[ɔ:l'dəu]

3. *Grammar corner. Expressing quantity.*

a) **Some/any**

- Some and any are the indefinite articles for plural nouns and uncountable nouns.
- We use *some* with positive statements.
- Some = not an exact number/quantity.
- We use *any* with negative statements and questions.

b) **There is/there are**

- We often use there is/there are with a/an, some, and any
е.д.: There is some food in the flower.
There are some little hairs near the spines.

c) Compound words (Two nouns in one word)

sun + light

wet + land

fly + trap

d) Compounds with some

some + thing = something

some + one = someone

e) Find out compound words in the text and tick them.

4. Match the words to make phrases.

- | | |
|----------------|------------|
| 1) carnivorous | a) insect |
| 2) thin | b) hairs |
| 3) small | c) stalk |
| 4) little | d) name |
| 5) next | e) plants |
| 6) good | f) flytrap |
| 7) large | g) meal |

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

- | | |
|---|-----------|
| 1. Dogs are mostly carnivorous, but sometimes they ... other kinds of food as well. | EATABLE |
| 2. We must buy a trap to ... the mice running around the house. | CATCHER |
| 3. Some flowers have very long stalks, but others ... close to the ground. | GROWTH |
| 4. Oh! I have just hurt myself on the ... spines of this plant. | SHARPENER |
| 5. I hate insects – they are small and ... and can make us feel ill. | DIRT |
| 6. Most plants make their food from ... and sunlight. | WATERFALL |
| 7. Once the flytrap has caught an insect, it pours ... over it and then eats it. | POISONOUS |

6. Read the words in a box and guess their meaning.

sunlight, trap, pour(s), carnivorous, stalks, although, wetlands, outside, something, nothing, flytrap, poison
--

7. *Read the text and find out the sentences with the words given in ex. 6.*

The Venus Flytrap¹⁴

1

Most plants make their food from water and sunlight, but some plants are carnivorous, which means that they eat meat. Although most of these carnivorous plants do not live only on meat, they do get some of their food from insects. One of these carnivorous plants is called the "Venus flytrap".

2

The Venus flytrap grows in wetlands in the Carolinas, in the United States. Each plant has a long, thin stalk with several flowers at the top of it, and 10 to 12 leaves. Each leaf has sharp spines along the outside of both sides. When something like a small insect lands on a leaf, the sides of the leaf come together like two hands closing, and the insect is trapped between the spines.

3

Insects land on the Venus flytrap because they can smell something sweet and they think there is food in the flower. On the leaf there are little hairs near the spines. If an insect touches one of these hairs, nothing happens, but if an insect touches two or three of them, the leaves close very quickly, and the insect is trapped by the spines. People have seen the leaves close in less than half a second.

4

Once the flytrap has caught an insect, it pours poison over it and then eats it. When the plant has finished eating, the leaf opens up again and is ready for the next passing meal. The spines don't last very long. After three or four insects have been trapped, the Venus flytrap has to grow new spines.

5

The name the "Venus flytrap" is not really a good name for this plant because it does not catch flies. It mostly catches other insects. A large Venus flytrap can even catch a small frog.

¹⁴ Wikipedia, the free encyclopedia.

8. Determine the main idea. Circle the correct answer. It is about ...

- 1) poisonous plant,
- 2) an insect-eating plant,
- 3) a carnivorous animal,
- 4) poisons,
- 5) a plant-eating frog.

9. Find words in the text which have a similar meaning to these definitions. The first letter is given to help you. There is one word in each paragraph.

1. I... – a small animal that has six legs and often has wings. There are many different types of these animals.
2. Fl... – the colored part of a plant from which the plant's fruit develops.
3. F... – the things that people or animals eat.
4. P... – a substance that can kill you or make you ill if you eat, drink or breathe it.
5. Fr.. – a small animal with smooth skin that uses its long back legs to jump from place to place.

10. Match the phrases in A to the phrases in B to make sentences.

A	B
1. The wetlands are	a) things on the outside of plants or animals
2. Spines are small, sharp	b) rainy places in America
3. If something is trapped	c) have sugar in them
4. Sweet foods usually	d) it is stuck and cannot get out

11. Read the text again and choose the right answer.

1. Carnivorous plants eat:
a) grass; b) flowers; c) meat.
2. The Venus flytrap grows:
a) in the UK; b) in Australia; c) in the USA.

3. It takes ... for the leaves of a Venus flytrap to close
 - a) less than half a second; b) a second; c) a minute.
4. Each plant has ... leaves
 - a) 4 – 6; b) 8 – 10; c) 10 – 12.
5. Each leaf has ... spines
 - a) long; b) small; c) sharp.
6. Insects land on the Venus flytrap because:
 - a) it is big; b) it is nice; c) it smells sweet.
7. Once the flytrap has caught an insect, it pours:
 - a) water; b) poison; c) drugs.
8. A large Venus flytrap can even catch
 - a) small frog; b) small bird; c) small snake.

12. Read the article again. Match the questions (a – h) with the paragraphs 1 – 5.

- a) What happens when a small insect lands on one of its leaves?
- b) What does the insect have to touch before the leaves close?
- c) How long do the spines of the Venus flytrap last?
- d) What does a carnivorous plant eat?
- e) Can a Venus flytrap catch small animals?
- f) Where does the Venus flytrap grow?
- g) What does the flytrap pour over an insect?
- h) How long does it take for the leaves of a Venus flytrap to close?

13. Discuss!

- ⇒ Do you know of any other dangerous plants?
- ⇒ What are they?
- ⇒ What special do you know about them?
- ⇒ Could you tell your partners about dangerous plants you know?

Unit 15

THE SPIRIT OF TREES

1. Before you read.

Answer and discuss these questions with your partner

⇒ What trees do you like most of all? Why?

⇒ What do you feel when you see your favorite plants?

2. Pronunciation guide

nimble	[nɪmbəl]
rough	[rʌf]
smooth	[smu:ð]
touch	[tʌtʃ]
through	[θru:]

3. Grammar corner. The Infinitive (complex object).

a)

- After verbs: *want, would like*

verb + object (noun or pronoun) + to infinitive

е.д.: They want you to run through fallen leaves.

- After verbs: *see, hear, feel, watch*

verb + object (noun or pronoun) + bare infinitive

е.д.: I love to hear them whisper amongst themselves.

- After verbs of a knowing and believing

verb + object (noun or pronoun) + to infinitive

е.д.: We consider it to be our duty.

- After verbs: *make, let*

verb + object (noun or pronoun) + bare infinitive

е.д.: She is able to let all the noisy hectic mayhem go out of her everyday life.

b) Complete the sentences using the infinitive correctly.

1. Most of all, I love to hear them (whisper) amongst themselves when the spirit of wind moves them.
2. It's a soft comforting sound that brushes your skin and makes you (believe) past and present.
3. They have stories to tell, but they want you (come) play first.
4. They want you (run) around under their branches and through their fallen leaves.
5. The trees I am sitting under now watching the ducks.

c) Phrasal verbs.

start out = to intend to do something

hold up = to support something so that they do not fall down

make out = to see

go out of = if a feeling or quality goes out of someone they do not have it longer

pull into = enter.

d) Look through the text quickly and tick (✓) these phrasal verbs.

4. Match these words with their definitions.

- | | |
|------------|--|
| 1) moon | a) the sounds people make when they speak |
| 2) feather | b) the object similar to a planet that goes round the Earth and that you can see shining in the sky at night |
| 3) voice | c) one of the things that covers a bird, like a thin stick with soft hairs |
| 4) mimosa | d) the main stem of a tree |
| 5) oak | e) a small tree with yellow flowers that grow in hot countries |
| 6) the sky | f) the time when the sun disappears and night begins |
| 7) sunset | g) a large plant with branches, leaves and a thick trunk |
| 8) tree | h) air which moves quickly |
| 9) trunk | i) the space above the Earth which you can see if you look up |
| 10) wind | j) a big tree with hard wood |

5. Read the international words and guess their meaning.

comfort, secret, vocal, mimosa, exotic, favourite, moments, breeze

6. Read the text and find out the sentences with the international words given in Ex. 5. Translate them.

The Spirit of Trees¹⁵

Let me start out by saying I love trees. I love the way their branches seem to hold up the sky with nimble fingers. How they pull the colors of a thousand sunsets into their leaves come fall; love the way they feel, rough or smooth. Most of all, I love to hear them whisper amongst themselves when the spirit of wind moves them. They sway gracefully, bending, reaching to touch each other and sometimes, if we are lucky, to touch us.

I've found through the years that trees have different voices, and all you have to do to hear their difference is listen to. Pine trees for instance, really do whisper when the winds blow. It's a soft comforting sound that brushes your skin and makes you believe if you could just listen a little harder, you'd hear a thousand secrets past and present. Trees with larger leaves, like oaks, are more vocal, getting louder as the wind blows harder. They have stories to tell, but they want you to come play first; want you to run around under their branches and through their fallen leaves. Once you've done that, they're more than happy to share their secrets.

There are trees I have loved and held close. The mimosa that stood in the front yard of my childhood home that wore exotic fern-like fronds as leaves and held feather-light puffs of flower in shades of pink. That tree happily wore the handprints of all my friends and me as we used it for home base during games of tag. Its branches held fast when I climbed as high as I could see my mom's car pull around the corner as she came home from work. Then there are the trees at my grandparent's house, one of which held a favourite rope swing, all under which a favourite uncle tossed me (when I was a very small child) in the air and caught me in big, warm hands. The tree that held the house my father built, under which I could lay and watch the night sky filled with stars and try to make out the face of the man in the moon. The trees I sit under now watching the ducks pass quietly.

¹⁵ Mahon Lisa. URL: <http://www.dailywriting.net/MahouGrove.htm>.

Trees are a huge part of my past and my present. I sit under a tree and within moments feel centered and quiet; able to let go out of all the noisy hectic mayhem that is my everyday life. A breeze blows across my skin and runs its fingers through the leaves over my head and I listen. Try it sometime. You never know what you might hear.

7. Find out the sentences with the ticked phrasal verbs. Translate them.

8. Complete the sentences 1 – 5 with the endings a – e.

- | | |
|---|---|
| 1. How they make the colors of sunsets | a) other and sometimes, if we are lucky to touch us. |
| 2. They sway gracefully, bending, reaching to touch each | b) than happy to share their secrets. |
| 3. Pine trees for instance, really do whisper | c) filled with the stars and try to make out the face of the man in the moon. |
| 4. Once you have done that they are more | d) pull into their leaves. |
| 5. The tree under which I could lay and watch a night sky | e) when the winds blow. |

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

	True	False	No information
1. Let me start out by saying I love trees.			
2. The trees don't have different voices.			
3. Pines whisper when the winds blow.			
4. Trees with the larger leaves, like oaks, are less vocal.			
5. The trees have stories to tell.			
6. The mimosa stood in the back yard of my childhood home.			
7. The mimosa wore the handprints of all my friends.			
8. Three of the trees at my grandparents' house held ropes for swinging.			
9. The author's grandparents lived with their son.			
10. Now the author could lay under the tree and watch the night sky.			
11. All author's friends always grew trees.			

	True	False	No information
12. The night sky was full of stars.			
13. Most of all the author liked fruit trees.			
14. Trees are a huge part of my past and my present.			

10. Think of this.

Project time

Traditions have to begin sometime!

Trees need our love and help all year round.

!Let it be a new tradition!

- Create a social celebration for the trees in your place.
- Arrange contests about plants and trees for poets, musicians, painters, storytellers, dancers, gardeners, etc.
- Clean the park or a square in your neighbourhood.
- Plant a new tree or a bush or a flower near your house or near your office or on your balcony.
- Your ideas?

Unit 16

UNIQUE ASPECTS OF FOREST ECOLOGY

1. *Before you read.*

Answer and discuss the following questions with your partner.

- ⇒ What is ecology?
- ⇒ What does ecology study?
- ⇒ What is forest ecology?

2. *Pronunciation guide.*

infinite (adj)	[ˈɪnfɪnət]
microenvironment	[ˌmaɪkəʊɪnˈvaɪrənmənt]
biomass	[ˈbaɪəʊ,mæs]
heterogeneous	[ˌhet əreʊˈdʒ:niəs]
execute (v)	[ˈɛksɪ,kju:t]
accumulate	[əˈkju:mjuˌleɪt]
kinetic	[kaɪˈnetɪk]
conversion	[kənˈvɜ:ʃn]
instantaneous	[ˌɪnstənˈteɪniəs]
arid (adj)	[ˈærɪd]
physiological	[ˌfɪziəˈlɒdʒɪkəl]

3. *Grammar corner. Order of adjectives.*

a) When there is more than one adjective preceding a noun, they are generally placed in the following order.

What it is like (opinion)	How big (size)	How old (age)	Shape	What color	Where it was made (origin)	What it is made from. What type it is	Noun
beautiful expensive	big small	old new	oval square	red yellow	Chinese Russian	silk handmade	bag

b) Put the adjectives in the sentences in right order.

1. It also affects the design of (sampling, inventory, forest) strategies.
2. Such high levels of biomass and (vertical, tall) structures represent large stores of potential energy.
3. The woody materials decay relatively slowly in comparison to most (other, organic, different) materials.
4. Forest ecology studies share characteristics and methodological approaches with other areas of (plant, terrestrial) ecology.
5. Thus, tree trunks and branches can remain on the forest floor affecting (regeneration, tree) processes.

4. Read the words in the box and complete the sentences below.

branch, ecology, research, ecosystem,
concentrate, connote

1. An ... is a natural unit consisting of all plants, animals and microorganisms in an area functioning with all non-living factors of the environment.
2. Forest ... is a branch of a biotically-oriented classification of types of ecological study.
3. The term "forest" ... an area inhabited by more than one organism.
4. Forest ecology most often ... on the level of the population, community or ecosystem.
5. Trees are an important component of forest
6. Forest ecology is a highly diverse and important ... of ecological study.

5. Match the words with their translations:

- | | |
|----------------|--------------------------|
| 1) terrestrial | a) бесконечный |
| 2) approach | b) сложный, замысловатый |
| 3) variety | c) земной |
| 4) infinite | d) быстрый, скорый |

- | | |
|-------------------|-----------------------|
| 5) intricate | e) качество |
| 6) humidity | f) подход |
| 7) quality | g) влажность, сырость |
| 8) quantity | h) немедленный |
| 9) rapid | i) разнообразие |
| 10) instantaneous | j) количество |

6. Read the following international words and guess their meaning:

characteristics, unique, potential, radiation, distance, proportion, biomass, structure, affect, strategy, result, vertical, energy, materials, organic, period, process, factor, regulators, plan

7. Read the text. Find out the words given in the task above and translate sentences with those words.

Unique aspects of forest ecology¹⁶



Forest ecology studies share characteristics and methodological approaches with other areas of terrestrial plant ecology. However, the presence of trees makes forest ecosystems and their study unique in at least four ways.



Firstly, since trees grow to much larger size than other plant life-forms, there is the potential for a wide variety of forest structures (or physiognomies). The infinite number of possible spatial arrangements of trees of varying size and species makes for a highly intricate and diverse microenvironment in which environmental variables such as solar radiation, temperature, relative humidity, and wind speed can vary greatly over large and small distances. In addition, an important proportion of a forest ecosystem's biomass is often underground, where variations in soil structure, water quality and quantity, and levels of various soil nutrients can vary greatly. Thus, forests are often highly heterogeneous environments compared to other terrestrial plant communities. This heterogeneity in turn greatly affects how forest studies are designed and

¹⁶ Wikipedia, the free encyclopedia.

executed. It also affects the design of forest inventory sampling strategies, the results of which are sometimes used in ecological studies.



Secondly, forests accumulate large amounts of standing biomass, and many are capable of accumulating it at high rates, i.e. they are highly productive. Such high levels of biomass and tall vertical structures represent large stores of potential energy that can be converted to kinetic energy under the right circumstances. Two such conversions of great importance are fires and treefalls, both of which radically alter the biota and the physical environment where they occur. Also, in forests of high productivity, the rapid growth of the trees themselves induces biotic and environmental changes, although at a slower rate and lower intensity than relatively instantaneous disturbances such as fires.



Thirdly, the woody materials in many forests decay relatively slowly in comparison to most other organic materials, due to a combination of environmental factors and wood chemistry (see lignin). Trees growing in arid and/or cold environments do so especially slowly. Thus, tree trunks and branches can remain on the forest floor for long periods, affecting such things as wildlife habitat, fire behavior, and tree regeneration processes. This is also an important factor in the science of dendrochronology.



Lastly, forest trees store large amounts of water because of their large size and anatomical/physiological characteristics. They are therefore important regulators of hydrological processes, especially those involving groundwater hydrology and local evaporation and rainfall/snowfall patterns. Thus, forest ecological studies are sometimes closely aligned with meteorological and hydrological studies in regional ecosystem or resource planning studies.

8. Choose the most suitable heading from the list A – F for each part of the article. There is one extra heading which you do not need to use.

- A. – Water
- B. – Forest ecosystem
- C. – Community diversity and complexity
- D. – Forest ecology
- E. – Death in the forest ecosystem
- F. – Energy potential

9. In the text underline words you don't understand. Guess the meaning from the context. Check in the dictionary.

10. Read the text again. Match the terms a – h with their meaning 1 – 8.

- | | |
|---|------------------|
| 1. A place which is very dry without many plants because of a lack of rain. | a) accumulate |
| 2. The process of changing from one system, method to another. | b) induce |
| 3. To get more and more of something over a period of time. | c) biomass |
| 4. All the plant and animal life found in a particular area. | d) arid |
| 5. To cause something especially a mental or physical change. | e) instantaneous |
| 6. Very great, and seeming to have no limit. | f) conversion |
| 7. Immediate. | g) terrestrial |
| 8. Existing on the Earth or, happening on the Earth instead of in the sky or sea. | h) infinite |

11. Correct the sentences which are wrong.

1. The presence of trees makes forest ecosystems and their study unique.
2. The infinite number of possible spatial arrangements of trees of varying size and species makes up a simple microenvironment.
3. Variations in soil structure, water quality and quantity can vary greatly.
4. Forests don't accumulate large amounts of standing biomass.
5. Such low levels of biomass and low vertical structures represent small stores of potential energy.
6. Two such conversions of great importance are fires and tree falls.
7. The woody materials in many forests decay very fast.
8. Forest trees store small amounts of water because of their small size.

Unit 17

ENVIRONMENTAL GROUPS

1. Before you read.

Answer and discuss these questions with your partner.

- ⇒ What do you already know about environmental groups and organizations?
- ⇒ What sorts of things does each organization do?
- ⇒ Do you find their activities interesting, useful, unusual?

2. Pronunciation guide.

environment	[ɪn'vaɪrənmənt]
environmental	[ɪn,vaɪrən'mənt(ə)l]
European	[,juərə'pi:ən]
Parliament	['pɑ:ləmənt]
pesticides	['pestɪ,sɑɪdz]

3. Grammar corner.

a) Place names and 'the' article. No article.

- 'the' means you know which one (ones) I mean
- Some place names take 'the'
- We often use 'the' in these patterns:
 - of – phrase – the Palace of Congresses
 - adjective – the Royal Opera
 - plural – the West Indies
- Place names with no article (see unit 7)
 - continents, most countries – Africa, Germany
 - towns, cities – Sydney, Oxford
 - most streets – Oxford Street, Gagarin Street
 - lakes, most mountains – Baikal, Everest
 - town/city + building – Oxford University, York Airport.

b) Read the following proper names and fill in the article "the" if it is necessary.

Britain, Greenpeace, North Sea, Friends of the Earth, Green Party, European Parliament, Royal Society for the Protection of Birds, National Trust.

4. Put the words to make a sentence:

- 1) most, Greenpeace, the, group, is, famous,
- 2) around, Greenpeace, many, in, the, campaigns, world, countries,
- 3) supporters, Greenpeace, pour, the, sea, into, block, that, pipes, pollution,
- 4) Green, political, a, the, party, is, one,
- 5) National, the, Trust, 1895, set, was, up, in, protect, to, parks.

5. Match two halves to make sentences.

- | | |
|---|--|
| 1. There are some groups in Britain | a) against pollution in the North Sea |
| 2. The members of Greenpeace campaigned | b) with protecting the environment |
| 3. A lot of people all over the world warn | c) which try to protect the environment |
| 4. The representatives of 'the Friends of the Earth' have led campaigns | d) about dangers dealt with pesticides |
| 5. There are many other groups which are concerned | e) against global warming, the destruction of the rain forest. |

6. The text contains several infinitives of purpose. Find these sentences. Translate them.

7. Read the international words and guess their meaning.

groups, organize, demonstrations, action, block, global, local, political, party, council

8. Read the text and find out the sentences with the international words given in Ex. 7. Translate them.

Environmental Groups¹⁷



There are several groups in Britain which try to protect the environment. The most famous group is Greenpeace, which campaigns in many countries around the world. They have campaigned against hunting whales, pollution in the North Sea, nuclear power, testing nuclear weapons, and many other issues. Greenpeace supporters organize demonstrations and they also take direct action. For example, they block pipes that pour pollution into the sea.



Another important environmental group is the Friends of the Earth. They have led campaigns against global warming, the destruction of the rain forest, and the hole in the ozone layer. There is also the Green Party, which is a political party. It regularly fights elections and it has won seats in the European Parliament and on local councils.



There are many other groups which are concerned with protecting the environment, for example, the Royal Society for the Protection of Birds (RSPB), which campaigns to protect birds against dangers such as pesticides and hunting. Some environmental groups are very old. The oldest is the National Trust which was set up in 1895 to protect parks, buildings and monuments in Britain.

9. Find words in the text which have a similar meaning to these definitions. The first letter is given to help you.

1. P... – the process of damaging the air, water or land with chemicals or other substances.
2. Des... – damage that is so severe that something stops existing or can never return to its normal state.
3. D... – a situation in which harm, death, damage or destruction is possible.
4. E... – an occasion when people vote for someone to represent them, especially in a government.
5. H... – the activity of chasing and killing wild animals.

¹⁷ Hutchinson Tom, 1997, Hotline, Oxford University Press.

6. Pes...– a chemical used for killing insects especially those that damage crops.
7. Dem... – an occasion when a large group of people protest about something.

10. Read the text again and title the paragraphs A – C.

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

	True	False	No information
1. The most famous environmental group in Britain is "The Friends of the Earth".			
2. Greenpeace supporters organize demonstrations, block pipes that pour pollution into the sea.			
3. Greenpeace is located in 33 countries of the world.			
4. The Green Party is a political one.			
5. The members of the Green Party have seats in the European Parliament.			
6. The Green Party cooperates with Greenpeace.			
7. The Green Party has won 10 seats in the European Parliament.			
8. The youngest environmental group was set up in 1895.			
9. The oldest environmental group is the National Trust.			
10. Prince Charles is at the head of the Royal Society for the protection of Birds.			
11. Greenpeace is the oldest environmental group.			

12. Discuss these questions with your partner

- ⇒ What environmental groups are there in your country?
- ⇒ What issues do they campaign about?
- ⇒ What kinds of things do they do?

13. Write your summary of what this article is about.

14. Writing a letter.

A friend has given you the address of Greenpeace, and you are interested in the possibility of joining.

⇒ Address of the organization.

Greenpeace
100
Canonbury Villas
London N1
2PN
UK

You have decided to write them a letter to find out more about the organization.

⇒ Use these notes to help you.

- Dear Sir/Madam, (if you do not know the gender)
- I am writing... (get information, offer your help, ...)
- Reasons (you are interested in the world ecological problems; ecological problems of your country, ...)
- Personal information (country you are from, age of volunteers, activity, experience, summer work, ...)
- Offer your help and discuss some items (program, schedule of activities in 2009 – 2010; your readiness to support their activities abroad, in your country ...)
- I look forward to hearing from you
- Yours sincerely (faithfully)(you write before your name)
- Here is the signing off (first name + surname).

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KEYS

UNIT 1

Ex. 4

1) f; 2) a; 3) e; 4) b; 5) c; 6) d.

Ex. 5

1) c; 2) a; 3) d; 4) e; 5) b; 6) h; 7) f; 8) i; 9) g.

Ex. 8

1) plants; 2) duckweed; 3) orchid; 4) dandelion; 5) rose; 6) lumber, cotton.

Ex. 9

1) c; 2) b; 3) c; 4) a; 5) c.

UNIT 2

Ex. 3 (b)

1) many; 2) some; 3) all; 4) some.

Ex. 4

1) c; 2) d; 3) a; 4) b; 5) i; 6) h; 7) e; 8) f; 9) g.

Ex. 7

1) c; 2) a; 3) b; 4) e; 5) d; 6) g; 7) h; 8) f.

Ex. 8

1) T; 2) T; 3) T; 4) F; 5) F; 6) F; 7) F; 8) T; 9) F; 10) NI; 11) T.

UNIT 3

Ex. 3(d)

1) dominant; 2) protective; 3) forest; 4) vegetation; 5) rapidly.

Ex. 5

1) e; 2) a; 3) b; 4) c; 5) g; 6) d; 7) f.

Ex. 6

1) d; 2) a; 3) e; 4) b; 5) c; 6) g; 7) f.

Ex. 8

1) canopy ; 2) nutrient ; 3) decay ; 4) seedling ; 5) layer.

Ex. 9

1) T; 2) F; 3) F; 4) T; 5) T; 6) F; 7) T; 8) NO; 9) F.

UNIT 4

Ex. 4

1) e; 2) d; 3) b; 4) a; 5) c.

Ex. 6

1) b; 2) d; 3) a; 4) c; 5) h; 6) e;

Ex. 8

1) tree; 2) bushes; 3) plants; 4) component; 5) role; 6) word;
7) mythologies; 8) person.

Ex. 9

1) b; 2) c; 3) c; 4) b.

Ex. 10

1) plant; 2) trunk; 3) branches; 4) turfs; 5) leaves; 6) roots; 7)
animals; 8) wood; 9) fruit.

UNIT 5

Ex. 1

1) b; 2) d; 3) a; 4) j; 5) c; 6) h; 7) f; 8) g; 9) e; 10) i.

Ex. 3(a)

1) c; 2) e; 3) a; 4) f; 5) b; 6) g; 7) d.

Ex. 4

Cork (b); moisture (d); cambium (e); trunk (a); hormone (c).

Ex. 7

1) a; 2) b; 3) c; 4) d; 5) c.

Ex. 8

1) bark; 2) moisture; 3) insect; 4) cork; 5) layer; 6) wood; 7) leaf buds;
8) sapwood; 9) heartwood; 10) lignin.

UNIT 6

Ex. 3

1) c; 2) a; 3) d; 4) e; 5) g; 6) b; 7) f.

Ex. 5

1) show; 2) have not surveyed; 3) were; 4) are flowering; 5) call;
6) has evolved.

Ex. 6

1) plant; 2) evolution; 3) reproductive; 4) challenging; 5) flower;
6) know; 7) separate(d); 8) survival.

Ex. 7

1) different; 2) reproductive; 3) separately; 4) grow; 5) survive.

Ex. 8

1) b; 2) h; 3) a; 4) g; 5) c; 6) e; 7) d; 8) f.

Ex. 10

1) T; 2) F; 3) T; 4) F; 5) F; 6) NI; 7) T; 8) NO.

Ex. 11

1) plant; 2) forms; 3) classes; 4) majority; 5) earliest; 6) ferns;
7) horsetails; 8) conifers; 9) flowering; 10) copse; 11) forest;
12) savana; 13) taiga.

UNIT 7

Ex. 5

1) f; 2) c; 3) h; 4) a; 5) b; 6) d; 7) i; 8) e; 9) j; 10) g.

Ex. 7

1) c; 2) g; 3) a; 4) b; 5) f; 6) d; 7) i; 8) e; 9) h.

Ex. 9

1) B; 2) F; 3) D; 4) A; 5) C; 6) G; E-extra.

Ex. 10

1) c; 2) g; 3) a; 4) e; 5) b; 6) d; 7) f.

Ex. 11

1) T; 2) T; 3) F; 4) F; 5) F; 6) T; 7) No; 8) No; 9) T; 10) No.

UNIT 8

Ex. 3 (d)

1) c; 2) a; 3) e; 4) b; 5) f; 6) g; 7) d; 8) h.

Ex. 4

1) vast; 2) wet; 3) hardwoods; 4) habitat; 5) good-quality timber;
6) forest; 7) food chain.

Ex. 5

1) farming; 2) protection; 3) destroyed; 4) conservation.

Ex. 7

A) 2; B) 3; C) 4; D) 1. Benefits of rain forests – extra.

UNIT 9

Ex. 3(c)

1) c; 2) d; 3) b; 4) e; 5) a.

Ex. 4

1) a; 2) d; 3) c; 4) c; 5) b; 6) a.

Ex. 7

1) B; 2) C; 3) E; 4) D; 5) A; 6) B.

Ex. 8

1) T; 2) F; 3) T; 4) F; 5) F; 6) T; 7) No; 8) T; 9) F; 10) T; 11) No.

UNIT 10

Ex. 4

1) d; 2) e; 3) b; 4) a; 5) c; 6) g; 7) f.

Ex. 8

1) a; 2) c; 3) b; 4) b; 5) c.

Ex. 9

1) b; 2) d; 3) a; 4) f; 5) c; 6) e.

Ex. 10

1) 5; 2) 1; 3) 6; 4) 2; 5) 8; 6) 3; 7) 4; 8) 7.

UNIT 11

Ex. 8

1) b; 2) e; 3) a; 4) c; 5) d; 6) g; 7) f.

Ex. 9

1) T; 2) T; 3) F; 4) F; 5) No; 6) T; 7) F; 8) No.

UNIT 12

Ex. 3(b)

1) popular; 2) planted; 3) production; 4) divided; 5) ornamental.

Ex. 3(d)

1) c; 2) d; 3) a; 4) e; 5) f; 6) b.

Ex. 6

1) b; 2) b; 3) a; 4) b; 5) b.

Ex. 7

1) F; 2) T; 3) NO; 4) T; 5) T; 6) T; 7) NO.

Ex. 8

1) science; 2) branches; 3) fruit; 4) vegetable; 5) plants; 6) elements;
7) history 8) development; 9) popular; 10) decorative; 11) pleasing;
12) therapeutic.

Ex. 9

1) b; 2) c; 3) a; 4) d; 5) c; 6) c; 7) d; 8) a; 9) d; 10) c.

UNIT 13

Ex. 3(b)

1) developed; 2) power; 3) application; 4) points; 5) symbol.

Ex. 3(d)

1) 11; 2) 6; 3) 9; 4) 2; 5) 13; 6) 5; 7) 8; 8) 12; 9) 7; 10) 3; 11) 10;
12) 1; 13) 14; 14) 4.

Ex. 4

1) poplar; 2) oak; 3) pine tree.

Ex. 8

1) T; 2) F; 3) T; 4) F; 5) T; 6) NO; 7) T.

UNIT 14

Ex. 4

1) e; 2) c; 3) a; 4) b; 5) g; 6) d; 7) f.

Ex. 5

1) eat ; 2) catch ; 3) grow; 4) sharp; 5) dirty; 6) water; 7) poison.

Ex. 9

1) insect; 2) flower; 3) food; 4) poison; 5) frog.

Ex. 10

1) b; 2) a; 3) d; 4) c.

Ex. 11

1) c; 2) c; 3) a; 4) c; 5) c; 6) c; 7) b; 8) a.

Ex. 12

a(2); b(3); c(4); d(1); e(5); f(2); g(4); h(3).

UNIT 15

Ex. 4

1) b; 2) c; 3) a; 4) e; 5) j; 6) i; 7) f; 8) g; 9) d; 10) h.

Ex. 8

1) d; 2) a; 3) e; 4) b; 5) c.

Ex. 9

1) T; 2) F; 3) T; 4) F; 5) T; 6) F; 7) T; 8) NO; 9) NO; 10) NO;
11) NO; 12) NO; 13) NO; 14) T.

UNIT 16

Ex. 3 (6)

1) forest inventory sampling; 2) tall vertical; 3) different other organic;
4) terrestrial plant ; 5) tree regeneration.

Ex. 4

1) ecosystem; 2) ecology; 3) connotes; 4) concentrate; 5) research;
6) branch.

Ex. 5

1) c; 2) f; 3) i; 4) a; 5) b; 6) g; 7) e; 8) j; 9) d; 10) h.

Ex. 8

1) D; 2) C; 3) F; 4) E; 5) A; B) extra.

Ex. 10

1) d; 2) f; 3) a; 4) c; 5) b; 6) h; 7) e; 8) g.

Ex. 11

1) C; 2) I; 3) C; 4) I; 5) I; 6) C; 7) I; 8) I.

UNIT 17

Ex. 5

1) pollution; 2) destruction; 3) danger; 4) elections; 5) hunting.

Ex. 11.

1) F; 2) T; 3) NO; 4) T; 5) T; 6) NO; 7) NO; 8) F; 9) T; 10) NO; 11) F.

Условные сокращения

Английские слова:

adj – имя прилагательное

adv – наречие

function word – функциональное слово

n – имя существительное

pl – множественное число

v – глагол

Русские слова:

без измен. – без изменений

биол. – биологическое

бот. – ботаническое

геол. – геологическое

зоол. – зоологическое

лес. – лесное

мед. – медицинское

с/х – сельскохозяйственное

физ. – физическое

физиол. – физиологическое

GLOSSARY

A a

- accumulate** [ə'kju:mjuleit] *v* аккумулировать, накапливать
acid ['æsid] *n* кислота
advancement [əd'vɑ:nsmənt] *n* прогресс, успех
aesthetic forest [i:s'θetik 'fɒrɪst] рекреационный (оздоровительный) лес
air [eə] *n* воздух
alder ['ɔ:ldə] *n* ольха
alga ['ælgə] *n* морская водоросль
algae ['ældʒi:] *pl* морская водоросль
altogether [,ɔ:ltə'geðə] в общем, в целом
alter ['ɔ:ltə] *v* изменять(ся)
amphibian(s) [æm'fɪbiən] *n* земноводный зоол.; амфибия
ancient ['eɪnfənt] *adj* древний
antiquity [æn'tɪkwɪti] древность, старина
appreciate [ə'pri:ʃieɪt] *v* высоко ценить, оценивать по достоинству, принимать во внимание
approach [ə'prəʊtʃ] *n* приближение, подход
approximately [ə'prɒksɪmɪtli] *adv* приблизительно, приближенно
architecture ['ɑ:kɪtektʃə] *n* архитектура, архитектурный стиль
arboriculture ['ɑ:bəri,kʌltʃə] *n* древоводство; разведение, выращивание деревьев и кустарников
arid ['æɪɪd] *adj* сухой, засушливый
ash [æʃ] *n* бот. ясень
aspen [æspən] *n* бот. осина
assemblage [ə'sembliɪdʒ] *n* скопление, группа
auxin ['ɔ:ksɪn] *n* биол. ауксин, гормон роста растений

B b

- bark** [bɑ:k] *n* кора дерева
barren ['bærən] *adj* тощий (о земле); неплодородный
bear [beə] *n* медведь
beech [bi:tʃ] *n* бук, буковое дерево
benefit ['benefɪt] *n* выгода, польза
biochemistry [ˌbaɪəu'kemɪstri] *n* биохимия

biomass [ˈbaɪəʊmæs] *n* биомасса, фитомасса
biome [baɪˈəʊm] *n* природная зона
birch [bɜːtʃ] *n* береза
birch bark [bɜːtʃ bɑːk] *n* береста
bloom [ˈbluːm] *n* цвет, цветение
branch [brɑːntʃ] *n* ветка
breakthrough [ˈbreɪkθruː] *n* достижение, открытие, прорыв
breathe [briːð] *v* дышать
bush [bʊʃ] *n* куст, кустарник

C c

cabbage [ˈkæbɪdʒ] *n* капуста
cactus [ˈkæktəs] *n*, **cacti** [ˈkæktɪ] *pl* кактус
cambium [ˈkæmbɪəm] *n* бот. камбий
campaign [kæmˈpeɪn] *v* проводить кампанию
canopy [ˈkænəpi] *n* полог (насаждения)
carbon dioxide [ˈkɑːbən daɪˈɒksaɪd] двуокись углерода
carboniferous [ˌkɑːbəˈnɪfərəs] *adj* каменноугольный период (о периоде, системе, формации)
carnivore [ˈkɑːnɪvɔː] *n* бот. насекомоядное растение
carnivorous [kɑːˈnɪvərəs] *adj* плотоядный
carrot [ˈkærət] *n* морковь
cellulose [ˈseljʊləʊs] *n* целлюлоза, клетчатка
cherry [ˈtʃeri] *(n)* вишня (плод) = **cherry-tree**
chestnut [ˈtʃesnʌt] *n* каштан
chop [tʃɒp] *v* нарезать
cinnamon [sɪnəˈmɒn] *n* корица
comprise [kəmˈpraɪz] *v* составлять
conifer [ˈkɒnɪfə] *v* хвойное дерево
coniferous [kəʊˈnɪfərəs] *adj* хвойный, шишконосный
connote [kəˈnəʊt] *v* иметь дополнительное значение
continuous [kənˈtɪnjuəs] *adj* непрерывный
conserve [kənˈsɜːv] *v* сохранять, сберегать
conversion [kənˈvɜːʃən] *n* превращение, переработка, трансформирование
copse coppice [ˈkɒpsɪ] *n* 1) рощица, подлесок; 2) лесной участок (для периодической вырубki)
cork [kɔːk] *n* кора пробкового дуба
crown [kraʊn] *n* крона (деревьев)
cucumber [kjuːkʌmbə] *n* огурец
culinary [ˈkʌlɪnəri] *adj* кулинарный

D d

- dandelion** _n [ˈdændilaɪən] одуванчик
decay [diˈkeɪ] _v гнить, разлагаться
deciduous [disɪdjuəs] _{adj} лиственный
decision – making [diˈsiʒənˈmeɪkɪŋ] _n принятие решения
deer [diə] _n олень
deliberate [diˈlibəɪt] _{adj} хорошо обдуманный
desert [ˈdezət] _n пустыня
destroy [diˈstrɔɪ] _v разрушать, уничтожать
diameter [daɪˈæmɪtə] _n диаметр, минимально допустимый диаметр деревьев ,
 отводимых в рубку
diversity [daɪˈvɜːsɪti] _n разнообразие, многообразие
disability [ˌdɪsəˈbɪlɪti] _n неспособность, бессилие
dominance [ˈdɒmɪnəns] _n преобладание, господство
droplet [ˈdrɒplɪt] _n капелька
duckweed [ˈdʌkwɪːd] _n бот. ряска

E e

- ecosystem** [ˈiːkəʊsɪstəm] _n экосистема
edible [ˈedəbl] _{adj} съедобный
effect [ɪˈfekt] _n следствие, результат
elm [elm] _n бот. вяз, ильм
embody [ɪmˈbɒdi] _v осуществлять
emergence [ɪˈmɜːdʒ(ə)ns] _n лес. вырост, появление, возникновение
emergence of seedlings прорастание, появление всходов
emergent [ɪˈmɜːdʒ(ə)nt] _{adj} полупогруженный (о растении), неожиданно
 появляющийся, внезапно всплывающий
encourage [ɪnˈkʌrɪdʒ] _v ободрять, поощрять, поддерживать
environment [ɪnˈvaɪrənmənt] _n окружающая среда
ermine [ˈɜːmɪn] _n горноста́й
erode [ɪˈrəʊd] _v геол. выветривать, размывать
erosion [ɪˈrəʊʒ(ə)n] _n эрозия, разъедание, размывание, выветривание
evaporate [ɪˈvæpəreɪt] _v испаряться
execute [ˈeksɪˌkjʊːt] _v осуществлять, выполнять, делать; реализовать (в чем-л),
 доводить до конца

F f

feather [ˈfeðə] _n перо
 fern [fɜ:n] _n папоротник
 fertile [ˈfɜ:taɪl] _{adj} плодородный
 fibre [ˈfaɪbə] _n 1) бот. боковой корень; 2) волокно
 fir [fɜ:] _n ель
 floriculture [ˈflɔ:riklʌltʃə] _n цветоводство
 flytrap [ˈflaɪtræp] _n мухоловка
 food chain [ˈfud ˈtʃeɪn] цепь питания
 forest [ˈfɒrɪst] _n лес
 fossilize [ˈfɒsəlaɪz] _v превращаться в окаменелость, закаменеть
 fragmentation [ˌfrægmənˈteɪʃən] _n дробление, раздробление
 furniture [ˈfɜ:nɪtʃə] _n мебель

G g

gene [dʒi:n] _n ген
 generate [ˈdʒenəreɪt] _v генерировать, производить
 germ [dʒɜ:m] _n микроб, бактерия
 girth [gɜ:θ] _n лес. минимально допустимая окружность деревьев, отводимых в рубку
 grass [grɑ:s] _n трава
 grassland [grɑ:slænd] _n луг, сенокосное угодие

H h

habitat [ˈhæbɪtæt] _n среда обитания
 harsh [hɑ:ʃ] _{adj} суровый, резкий, неприятный
 heartwood [ˈhɑ:twud] _n лес. ядровая древесина; ядро древесины
 hectare [ˈhekteə] _n гектар
 height [haɪt] _n высота, вышина
 hemisphere [ˈhemɪsfɪə] _n полушарие
 heterogeneous [ˌhetərəʊˈdʒi:niəs] _{adj} гетерогенный, разнородный
 hinder [ˈhɪndə] _v мешать, препятствовать
 holly [ˈhɒli] _n бот. падуб
 holm [hɒm] _n бот. дуб каменный
 hormone [ˈhɔ:məʊn] _n физиол. гормон
 hornbeam [ˈhɔ:nbi:m] _n бот. граб
 humidity [hju:ˈmɪdɪtɪ] _n сырость, влажность, влага

I i

- imagine** [i'mædʒɪn] *v* представлять себе, догадываться
include [ɪn'klu:d] *v* содержать в себе; включать
induce [ɪn'dju:s] *v* 1) убеждать, побуждать, заставить; 2) лог. **выводить**
 умозаключение
infinite [ɪn'fɪnət] *adj* бесконечный, безграничный
instantaneous [ɪnstən'teɪniəs] *adj* мгновенный, немедленный
intact [ɪn'tækt] *adj* неповрежденный, нетронутый
intellectual [ɪntə'lektʃuəl] *adj* интеллектуальный, умственный
intertwine [ɪntə'twain] *v* сплетаться(ся), переплетать(ся)
intricate [ɪn'trɪkɪt] *adj* запутанный, сложный, замысловатый
invoke [ɪn'vəuk] *v* 1) вызывать духов; 2) призывать, вызывать

J j

- join** [dʒɔɪn] *v* 1) объединяться, действовать сообща; 2) соединять(ся)
jungle ['dʒʌŋɡəl] *n* джунгли, густые заросли
jute [dʒu:t] *n* джут

K k

- kinetic** [kaɪ'netɪk] *adj* физ. кинетический
knotty ['nɒtɪ] *adj* узловатый

L l

- landscape** ['lændskeɪp] *n* ландшафт
larch [lɑ: tʃ] *n* бот. лиственница
layer ['leɪə] *n* ярус, слой, пласт
leach [li:tʃ] *v* выщелачивать
leaf [li:f] *n* лист
lichen ['laɪkən] *n* 1) мед. лишай; 2) бот. лишайник
life cycle [laɪf 'saɪk(ə)l] жизненный цикл
ligneous ['lɪɡniəs] бот. деревянистый
lignin ['lɪɡnɪn] *n* лигнин
lignification *n* лигнификация, одревеснение
lignum vitae [lɪɡnəm 'vaɪtɪ] бот. Бакаут, железное дерево
lilac ['laɪlək] *n* сирень

lime [laɪm] _n бот. липа; лайм настоящий
lizard ['lɪzəd] _n ящерица
log [lɒg] _n бревно, колода, полено, кряж
lumber ['lʌmbə] _n бревна, пиломатериалы

M m

maggot ['mæɡət] _n личинка
maple ['meɪpəl] _n клен
maturity [mə'tʃʊərətɪ] _n зрелость, достижение зрелого возраста
mimosa [mɪ'mɒzə] _n бот. мимоза
miraculous [mɪ'rækjʊləs] _{adj} удивительный
moss [mɒs] _n 1) бот. мох; _v 2) покрываться мхом

N n

natural selection естественный отбор
nimble [nɪmbəl] _{adj} проворный, живой, подвижный
nutrient ['nju:triənt] _n питательное вещество
nut [nʌt] _n орех
nutmeg ['nʌtmeg] _n мускатный орех
nut-tree _n орешник

O o

oak [əuk] _n дуб
olericulture [əu'leri,kʌltʃə] _n овощеводство, огородничество, выращивание овощей
orchard ['ɔ:ʃəd] _n фруктовый сад
orchid ['ɔ:kɪd] _n бот. орхидея
ornamental [ˌɔ:nə'mentəl] _{adj} орнаментальный, декоративный, служащий украшением; декоративные растения
origin ['ɒrɪdʒɪn] _n источник; происхождение
owl [aʊl] _n сова
oxygen ['ɒksɪdʒ(ə)n] _n кислород

P p

particularly [pə'tɪkjʊləli] _{adv} подробно, детально

patch [pætʃ] *n* небольшой участок земли
pea [pi:] *n* горох
peanut [ˈpi:nʌt] *n* арахис
pear [peə] *n* бот. груша; грушевое дерево
perennial [pəˈreniəl] *adj* бот. многолетний
pesticides [ˈpesti,saidz] *n* пестициды
phloem [ˈfləʊem] *n* бот. флоэма
photosynthesis [ˌfəʊtəʊ,sɪnθəˈsɪs] *n* биол. фотосинтез
pine [paɪn] *n* бот. сосна; **pinery** сосняк; **pinewood** сосновый лес
pipeline [ˈpaɪp,laɪn] *n* система снабжения
pomology [pəʊˈmɒlədʒi] *n* помология
poplar [ˈpɒplə] *n* бот. тополь
potato [p(ə)ˈteɪtəʊ] *n* картофель
prairie(s) [ˈpreəri] *n* прерия, степь
precautionary [priˈkɔːʃənəri] *adj* предупредительный; ~measures меры предосторожности
predatory [ˈpredətəri] *adj* хищный, грабительский
protective [prəˈtektɪv] *adj* (colouration or colouring)покровительственная, защитная окраска

Q q

quality [ˈkwɒləti] *n* качество
quantity [ˈkwɒntəti] *n* количество

R r

rac(c)oon [rəˈkuːn] *n* зоол. енот
rain forest [ˈreɪn ˈfɒrɪst] *n* тропический лес; влажные джунгли
rapid [ˈræpɪd] *adj* быстрый, скорый
rarity [ˈreəri] *n* редкость
redwood [ˈredwud] *n* бот. калифорнийское мамонтовое дерево
recipe [ˈresəpi] *n* рецепт; средство, способ (для достижения чего-либо)
resistant [rɪˈzɪstənt] *adj* сопротивляющийся, стойкий, прочный
rough [rʌf] *adj* суровый (о климате)
rowan [ˈrəʊən] *n* бот. рябина

S s

sapwood [ˈsæpwud] *n* бот. заболонь древесины
scatter [ˈskætə] *v* разбрасывать
seedlings [ˈsi:dliŋz] *n pl* сеянцы
sequoia [siˈkwɔɪə] *n* бот. секвойя
shady [ˈʃeɪdɪ] *adj* тенистый
shamrock [ˈʃæmrɒk] *n* бот. трилистник; кислица обыкновенная
significant [sɪɡˈnɪfɪkənt] *adj* значительный
smooth [smu:ð] *adj* гладкий, ровный
soil [sɔɪl] *n* почва, земля
species [ˈspi:ʃi:z] *n* (pl без измен.) биол. вид
stink [ˈstɪŋk] *v* смердеть, вонять
successive generation последующее поколение
surface [ˈsɜ:fɪs] *n* поверхность

T t

to take into account принимать во внимание, учитывать
terrestrial [təˈrestriəl] *adj* сухопутный, наземный
therapeutic [ˌθerəˈpjʊ:tɪk] *adj* терапевтический
though [ðəu] *function word* хотя, несмотря на
thrive [θraɪv] *v* (throve, thriven) буйно, пышно расти; разрастаться
throughout [θruˈaʊt] *function word* повсюду
timber [ˈtɪmbə] *n* лесоматериалы; бревно, брус; строевой лес
trunk [trʌŋk] *n* ствол (дерева)
turfgrass [ˈtɜ:fgrɑ:s] *n* газон
twig [twɪg] *n* веточка

U u

understory *n* лес. нижний ярус (насаждение)
unearth(ed) [ʌnˈɜ:θ] *v* выкапывать, выкопать
unforested *adj* не покрытый лесом
unique [juˈnɪk, juːˈni:k] *adj* уникальный, единственный (в своем роде); замечательный, исключительный
uppermost [ˈʌpəməʊst] *adj* самый верхний, высший, преобладающий, главный

V v

value [ˈvælju:] **n** ценность
valuable [ˈvæljuəbəl] **adj** ценный, полезный
variegation [ˈveəriə,geɪʃən] **n** пестрая раскраска
variety [vəˈraɪəti] **n** многообразие
vast [vɑːst] **adj** обширный, громадный, безбрежный
vegetarian [ˌvedʒɪˈteəriən] **n** вегетарианец
vegetation [ˌvedʒɪˈteɪʃən] **n** растительность
venenous [ˈvenɪnəs] **adj** мед. ядовитый
venus [ˈviːnəs] **n** красавица
vertebrate [ˈvɜːtɪbreɪt] **n** позвоночное животное
viable [ˈvaɪəbəl] **adj** с/х всхожий (о семенах)

W w

wilderness [ˈwɪldənɪs] **n** запущенная часть (сада и т.д.)
willow [ˈwɪləʊ] **n** бот. ива
wood [wud] **n** дерево; лес; роща; древесина
wood pecker [ˈwud, pekə] **n** дятел

X x

xylem [ˈzaɪləm] бот. ксилема
xylogen [ˈzaɪlədʒən] **n** бот. ксилоген, лигнин
xylogeneous [ˌzaɪləuˈdʒeɪəs] **adj** бот. растущий на древесине

Y y

yarrow [ˈjærəʊ] **n** бот. тысячелистник обыкновенный

Z z

zapovednik [ˌzʌpɒˈvednɪk] **n** заповедник

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