English Language for Agriculture Learners

PREPARED

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حقوق النشر

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Preface

This textbook, English language for agriculture learners, is prepared vigilantly designed to help agriculture learners improve their English language. All units practice skills in reading, writing, listening and speaking based around particular structures and vocabulary. All units are carefully selected to cover various agriculture areas.

It is to be hoped that many students will improve their English language skills by working through this book.

Finally, the authors would like to express their gratitude for the ***Committee board of the Open Education Center, Faculty of Agriculture, Ain Shams University*** *for their support and encouragement in printing and publishing this textbook.*

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Unit 1

Agriculture and agricultural science

Civilization began with agriculture. As soon as humans began to form permanent settlements and gave up wandering in search of food, agriculture was born. The Latin roots of the word agriculture mean "cultivation of the fields". Agriculture and agricultural science are two terms often confused. However, they cover different concepts. From the beginning; agriculture has included a set of activities that raising both crops and livestock to meet the food, fiber, fuel, and other needs of humans. Agricultural sciences include research and development on areas, such as soil sciences, horticulture, agronomy, pest management, and agricultural engineering.

At first, this new way of providing food and other raw materials developed slowly. But, because it made life much easier for many people, it became the preferred way of supplying a basic human need. The people who worked at agriculture came to be called farmers.

Farming is the use of land and other resources to grow crops and raise animals. Methods of farming are diverse. The agriculture industry that once focused mainly on the production of food for humans and animals has grown to be very complex.

The agriculture industry includes farm and nonfarm operations. It encompasses preparing the soil for optimum

returns, improving crops, services relating to horticulture and veterinary services.

Fields of agricultural science

- Agricultural engineering
- Animal Science
- Aquaculture
- Agronomy
- Horticulture
- Animal science
- Soil and water sciences.
- Biotechnology, genetic engineering, and microbiology
- Irrigation and water management
- Agricultural economics
- Food science
- Environmental science

Questions on Text

1- Define the term agriculture.
2- Name four areas of specialization in the agriculture field.
3- Define the term farming?
4- Who are the farmers?

5- Complete

a. The agriculture industry includes ……and …… operations.

b. The Latin roots of the word agriculture mean……

c. Agriculture has included a set of activities that raising both crops and livestock to meet needs of……..

d. Agricultural sciences include research and ……on different science areas.

Translate into Arabic

1- Agriculture includes various branches like soil sciences, agronomy and horticulture.

2- Agriculture provides human beings with food and fiber.

VOCABULARY

Civilization	حضارة
permanent	دائم– مستديم
horticulture	بساتين
livestock	دواجن، دواب، أغنام، مواش، ماشية
settlements	مستعمرة، مستوطنة، تسديد، استيطان
Farm	مزرعة
Management	إدارة
Diverse	متنوع، متعدد
Optimum	الأفضل، الأمثل

Unit 2

Soil is alive...

Soil is the top layer on the surface of the earth in which plants grow. Soil consists of mineral part, organic part, water and air.

Soil is alive! In fact, a single shovel full of dark colored soil contains more species of organisms than can be found above ground in the entire Amazon rain forest!

Soil organisms, an important part of the underground living system, can be divided into six groups: bacteria, fungi, protozoa, nematodes, arthropods and earthworms. Although most soil organisms are too small to see with the human eye, some nematodes, arthropods and earthworms can be easily removed from a soil sample and then observed.

Soil organisms are responsible for supplying the environment with a number of critically important ecosystem services such as: decomposition of organic matter to minerals and nutrients, transformations of pollutants and cycles of essential elements such as nitrogen and carbon. Soil organisms have positive effects on soil fertility and plant growth.

Roots of crops grow primarily in the spaces between the soil particles. As the earthworms penetrate the subsoil, it opens for root growth, and castings are left in the soil. These castings

contain from five to ten times as much nitrogen, phosphorus and potassium as the surrounding soil, and have one-third higher beneficial bacteria. The tunnels allow rainwater to penetrate quickly throughout the topsoil layer, and runoff is lessened.

Questions on Text

1- Define the term "Soil".
2- How many microorganisms groups could be found in the soil? Name them.
3- Why do you think soil is alive?
4- Name two services that soil organisms are provide to the environment.
5- Complete
   a. Soil is the ..... layer on the surface of the earth.
   b. Some soil organisms could be seen with the human eye like.....and ....., but some others could be seen only with microscope like.....
   c. Soil organisms have ..... effects on soil fertility and plant growth.

Translate into English

أراضي الغابات تحتوي على كمية كبيرة من الكائنات الحية الدقيقة.

Translate into Arabic

Soil is composed of two main ingredients, mineral particles and organic materials.

VOCABULARY

shovel	جاروف
ecosystem	الإيكولوجي- بيئة
runoff	الجريان السطحي
decomposition	تحلل
tunnel	نفق- ممر
organisms	كائن حي -جهاز عضوي- هيئة- منظمة
transformations	تحويل، تغيير هيئة، استحالة، تحول
primarily	بصفة أساسية
rain forest	غابات ممطرة
pollutants	ملوثات
fungi	الفطريات
lessened	قلل- خفف- خفض

Unit 3

World with no Plants

Plants play the most important part in the cycle of nature. Without plants, there could be no life on Earth. They are the primary producers that sustain all other life forms. This is so because plants are the only organisms that can make their own food. Animals, incapable of making their own food, depend directly or indirectly on plants for their supply of food. All animals and the foods they eat can be traced back to plants.

The oxygen we breathe comes from plants. Through photosynthesis, plants take energy from the sun, carbon dioxide from the air, and water and minerals from the soil. They then give off water and oxygen. Animals and other non-producers take part in this cycle through respiration. Respiration is the process where oxygen is used by organisms to release energy from food, and carbon dioxide is given off. The cycles of photosynthesis and respiration help maintain the earth's natural balance of oxygen, carbon dioxide, and water.

Leaves are the main food-making part of most plants. They capture energy from sunlight, and turn water and carbon dioxide into sugar and starch. This sugar and starch becomes the food that provides plants with energy to grow, to produce flowers and seeds, and carry on their other life processes.

Scientists believe there are over 260,000 species of plants. Some plants are so small they can barely be seen. Others are taller than people or animals. Certain characteristics of plants set them apart from other living things. Both plants and animals are complex organisms that are made up of many types of cells, but plant cells have thick, rigid walls that consist of a material called cellulose. Animal cells do not have this material. The cellulose enables plants to stand upright without the aid of an internal or external skeleton.

Questions on Text

1- Where does photosynthesis take place?
2- Which beneficial gas is produced during photosynthesis?
3- What is the material that enables plants to stand upright without aid of skeleton?
4- Which harmful gas do plants take from the atmosphere?
5- Which part of the plant is considered the food-factory?
6- Complete
   a. Plant capture ..... from sunlight, and turn water and ..... into ..... and starch.
   b. Plant.....have thick, rigid walls that consist of a material called .....
   c. Through photosynthesis, plants take.....from soil and .....from air.
   d. Respiration is the process where oxygen is used by organisms to release energy from.....

   e. Sunlight + carbon dioxide +..... ⟶
      oxygen +.....

Translate into Arabic

1- During photosynthesis, the plant leaves change the energy from the sun into chemical energy.
2- The plants make their own food through photosynthesis.

VOCABULARY

photosynthesis	التمثيل الضوئي
give off	خرج، أخرج، أطلق
rigid	قاس صلب
sustain	ساند، عزز، أيد واصل، مدد،
Absorb	يمتص
incapable	عاجز، غير قادر
respiration	التنفس
capture	، استولى، أسر
nature	الطبيعة

Unit 4

Why Do Plants Have Roots?

A plant needs roots for two chief reasons: as a means of anchorage or support, and to absorb water and mineral salts from the soil.

The roots of most plants grow in the soil. They don't "just sit there", but seem to reach out in the soil to help the plant grow. By elongating near their tips, roots are always coming in contact with new portions of soil.

Thousands of tiny root hairs project from the surface of the young root and absorb materials from the soil. That's why when a young root is pulled from the soil; particles often cling to the root hairs.

Some plants have taproots. A taproot is a large, single root, much larger than any of the branch roots. Other plants have not one large root, but several roots of approximately equal size. These form what is called a fibrous root system.

Grasses have fibrous root systems. Soil in which there are many fibrous roots is protected in this way from erosion. In other plants, most of the roots grow from stems as, for example, the geranium.

As roots grow older, some of them store large quantities of sugar and starch. Beet and sweet potatoes are examples of this. A sweet potato is a root, but an Irish potato, with its eyes, is a stem.

Not all plants have roots that grow in the soil. Some tropical orchids that grow on trees have spongy roots that grow in the air and absorb moisture. Both the English ivy and poison ivy cling to walls or trees by means of tiny aerial roots.

Some plants have special roots that develop from the stem above the ground and grow down into the soil, forming props. A few roots, such as the sweet potato, form buds that grow into leafy branches and can be used to propagate the plant.

Questions on Text

1-For what reasons do plants need roots?
2- How do roots come in contact with new parts of soil?
3- Which part of the root is responsible for absorption of materials from the soil?
4- Describe the Form of roots that is called fibrous root system?
5-What does some roots do when grow older.
7- Mention what are other sorts of roots rather than soil roots.

Translate into English

1- جذور النباتات تعمل علي تثبيتها و أمدادها بالماء و العناصر الغذائية.
2- يتكون النبات من جزئين رئيسيين: المجموع الجذري تحت سطح الأرض، والمجموع الخضري فوق سطح الأرض.

VOCABULARY

Anchorage	إرساء- رسو
To reach out	طاول – امتد
Elongating	الاستطالة
In contact with	تماس – اتصال
Tiny	صغير جدا – دقيق
Erosion	تأكل – اندثار – تفتت
Prop	دعامة – مرتكز – سند ، دعم ، صلب
Fibrous	ليفي
Tap-root	جذر وتدي
Project	نتأ- برز ، مشروع
Cling to	تمسك ب ، علق بـ

Unit 5

How Do New Flowers Grow?

Every living thing has some means of reproducing itself. In flowers, the process takes place as follows:

A typical flower has four main parts. There is usually a green outer cup made up of leaf like sepals. Within the sepals are the petals. Within the petals are the reproductive organs necessary for producing seeds.

In the very centre of the flower are one or more pistils. Around the pistils is a ring of stamens. The pistil is the female part of the flower. The bottom of it is enlarged and is called the ovary. Inside the ovary are little round ovules, which later become seeds. But they become seeds only if they are fertilized by the contents of a pollen grain.

Pollen grains are produced by the stamens, the male organs of the flower. If seeds are to form, the pollen grains must go through the top of the pistil and reach the ovules at the bottom. The top of the pistil is called the stigma.

Pollen grains first fall on the stigma. They absorb moisture there from the sugary liquid on the surface. Then they swell and grow. The grain pushes down and becomes a tube. The tube keeps growing down through the stalk of the pistil, then through the wall of the ovary, and then into an ovule.

The contents of the tube then empty into the ovule and fertilize it. Many pollen tubes may grow down to an ovary at the same time. Each tube will enter and fertilize a single ovule.

Only pollen from the same kind of plant will grow tubes and reach the ovules. The part of the stamen that produces pollen is called the anther. The transfer of pollen from anther to stigma is called pollination. If it takes place in the same flower, it is called self-pollination. If the pollen goes to a flower on a different plant of the same kind, it is called cross-pollination.

Cross-pollination of flowers is done by the wind, by insects, by birds, and by certain animals. Later on, the seeds that develop also have to be carried to a place where they can form root and grow into flowers.

Questions on Text

1-Describe the typical flower composition?
2- What are the main parts of the pistil?
3- How do ovules become seeds?
4- Describe the journey of pollen grains from stigma to ovule?
5- Complete
   a- Pollination is the .....
   b- When pollination takes place in the same flower It is called ..... but wham it goes to a flower on a different plant of the some kind it is called .....

VOCABULARY

Reproductive	منتج
Stamens	أسدية
Fertilize	أخصب - لقح – سمد
Pollination	تلقيح
Sepal	سبلة – ورقة كأسية
Petal	ورق– بتلة –توبجيه
Pistil	المتاع "عضو التأنيث في النبات"
Anther	المتك – وعاء اللقاح
Ovary	مبيض
Ovule	بويضة
Pollen grains	حبوب لقاح
Sugary liquid	سائل سكري

Unit 6

Soil Nutrients and Fertilizers

Plants use nutrients from the soil. The main nutrients that crops need are nitrogen, phosphorus and potassium. When crops are harvested, all the food elements that have gone into them are taken away from the soil. In this way, crops use up the supply of food elements in soil. Farmers replace these nutrients in the soil with fertilizers. Any material that is added to the soil to give it the elements that will help plants grow is a fertilizer. The farmer replaces nutrients in the soil in two ways: with organic fertilizers and with inorganic or chemical fertilizers. Both organic and inorganic fertilizers add the same nutrients to the soil. It all comes down to chemistry.

Inorganic fertilizers or chemical fertilizers are man-made products. Scientists take natural elements and change them to make fertilizer. This process allows fertilizer producers to mix the elements to a specific formula for each field. Farmers using chemical fertilizers should have a soil test done to find out exactly what nutrients each field requires. The farmer then mix the nutrients required for the soil and crop according to the results of the soil test. Chemical fertilizers do not add organic matter back into the soil. Organic matter is important because it improves the soil structure to prevent erosion. At harvest, organic matter can be returned to the soil by leaving the crop residue on the land.

Animal manure is an organic fertilizer that farmers may get either from their own animals or from a supplier located near the farm. Animal manure must be near the farm because it is bulky and hard to transport. The farmer spreads the animal manure on the field and works it into the soil. The amount of nutrients that animal manure provides to plants is difficult to determine but it does provide the soil with needed organic matter.

Another organic fertilizer is green manure. To make green manure a farmer grows a crop that is high in nitrogen. When the crop is still green the farmer works the crop into the soil where it adds nitrogen and organic matter.

Question on text

1- What is a fertilizer?
2- What are main nutrients that crops need?
3- Why are fertilizers needed?
4- Why does the farmer use fertilizers?
5- Why do you think organic matter is important for the growing crops?
6- How can the farmer make the green manure?
7- Replace the underlined words by another one that has the same meaning (synonym)
   a. Chemical fertilizers are important for plants.
   b. The farmers replace the lost nutrients from the soil using fertilizers.

c. Farmers add fertilizers to the soil to increase the nutrients content in the soil.

d. Nutrients are sucked in from soil by plant roots.

8- Translate into English

1. إستخدام الأسمدة الكيماوية في الزراعة يلوث البيئة.
2. تضاف الأسمدة الى الأرض لتعويض بعض العناصر مثل النيتروجين و البوتاسيوم.

9- Translate into Arabic

When crops are harvested, all the food elements that have gone into them are taken away from the land.

VOCABULARY

Fertilizer	سماد
Green Manure	سماد أخضر
soil structure	البناء الأرضي
improve	يحسن – يطور
Provide	يمد ب– يعطي
replace	يحل محل
Material	مادة – مادي
Element	عنصر. جوهر . اساس . مبدأ
Fertility	خصوبة – اثمار – كثرة الانتاج
Organic	عضوى
Nutrient	عنصر غذائي
harvest	الحصاد
producer	مُنتج
Scientist	عالم
Environment	بيئة

Unit 7

What is the Difference Between Fruits and Vegetables?

The word "fruit" usually describes any fleshy part of a plant that has developed from a flower and has seeds. Vegetables are herbaceous plants. An herbaceous plant is one that has a soft stem and little or no woody tissue.

According to botanists, the part of a plant that carries seeds is its fruit. They divide fruits into three main classes: fleshy fruits with seeds in the flesh, such as oranges, melons, berries, and apples; fruits containing pits or stones, such as cherries, plums, and peaches; and dry fruits, such as nuts, grains, beans, and peas.

If it surprises you to learn that botanists consider beans and peas fruits (because they contain seeds), you will be even more surprised to learn that cucumbers and marrows can be called fruits also! It all depends on how technical we want to be. In addition, because eating customs vary in different parts of the world, the same edible part of a plant may be considered a fruit in one place and a vegetable in another.

Just as there are "families" of related creatures in the animal kingdom, so many vegetables are related. Did you know, for example, that the cabbage, turnip, radish, broccoli, and cauliflower all belong to one family of vegetables?

Lettuce, chicory, and artichokes belong to another vegetable family. The gourd family includes cucumbers, melons, and pumpkins. The pea family consists of peas, all kinds of beans, peanuts, and soya beans.

Asparagus is related to the common onion, leek, garlic, chive and shallot. Beets, spinach, and Swiss chard all belong to one family. And here is an interesting one: the nightshade family. It includes potatoes, eggplants, peppers, and tobacco!

Questions on Text

1- Define the word "Fruit"?
2- What are vegetables?
3- According to botanists, how many classes are known for fruits? Give examples?
4- What does the gourd Family include?
5- How do eating customs affect whether or not a plant is a fruit or a vegetable?

Translate into Arabic

Fruits and vegetables are alike in that they supply us with the vitamins and minerals that help to keep us healthy.

VOCABULARY

Cucumbers	الخيار
Melons	البطيخ – الشمام
Pumpkins	القرع العسلي
Peas	البسلة
Beans	الفاصوليا
Peanuts	فول سوداني
Soya beans	فول الصويا
Beets	بنجر
Spinach	سبانخ
Eggplants	باذنجان
tobacco	الدخان
peppers	الفلفل
Cabbage	كرنب
Turnip	لفت
Radish	فجل
Broccoli	البروكلي
Cauliflowers	القرنبيط
Lettuce	خس
Chicory	شيكوريا
Artichokes	الخرشوف
Asparagus	الاسبرجس
Onion	بصل
Leek	كرات
Garlic	ثوم
Chive	ثوم معمر

Unit 8

Is the Tomato a Fruit or Vegetable?

Of course, it doesn't really matter very much which it is, since we use it in this country as a vegetable. A fascinating thing about this question is that the Supreme Court of the United States actually had to decide what the tomato is!

Botanically, the tomato is a fruit. There can be no question about that. But it is used in soups, sauces, ketchup, and in many other ways in the main part of the meal. So, for purposes of trade, the Supreme Court in 1893 classified the tomato as a vegetable!

The tomato originated in its wild form in South America in Peru, Ecuador, and Bolivia long before Columbus went to the new world. Cultivated forms of the tomato had already been developed in Mexico. And it is probable that tomatoes from Mexico were the first ones ever seen by people in Europe.

The first definite description of the tomato in Europe was in Italy in 1554, where it was called *pomi d'oro*, or "apple of gold" This means that a yellow type of tomato was the first kind known in Europe. Before the end of the sixteenth century, tomatoes were being grown in the gardens of England, Spain, Italy, France and the countries of mid-Europe. But they were considered a sort of curiosity.

By the mid-1700's people in several countries of Europe were using the tomato as food, and the first person to grow it in the United States was Thomas Jefferson, in 1781. But a great many people considered the tomato to be poisonous. It wasn't until 1900 that it became popular for eating.

The tomato plant is a relative of the potato and tobacco plants. It needs a long growing season and light, rich, well-drained soil. In northern Europe and the northern United States it is often grown in hot-houses during the winter. It is also grown in Florida, Texas, and Mexico during the winter. Winter tomatoes are picked while green and shipped to northern markets. They ripen on the way to market.

Questions on Text

1- Who had to decide the classifications of the tomato in the United States? Why?

2- Where did the tomato originate?

3-How do we know that the first tomato known in Europe was yellow type?

4- How are the winter tomatoes grown and picked?

VOCABULARY

Fascinating	مفتن ، مبهج
Supreme Court	المحكمة العليا
Botanically	من الوجهة النباتية
Trade	تجارة حرفة ، تاجر
Wild form	طرز او اشكال برية
Cultivated form	اشكال مستزرعة
Description	وصف – بيان – تعريف
Ripen	نضج ، إستوى
Sort of	نوعا ما
Curiosity	فضول – تحفة – طرفة
Definite	علي نحو واضح ، محدد
Poisonous	سامة
Well drained	جيدة الصرف
Picked	تقطف

Unit 9

Honeybees

Honeybee hives have long provided humans with honey and beeswax. Such commercial uses have generated a large beekeeping industry, though many species still occur in the wild. All honeybees are social and cooperative insects. A hive's inhabitants are generally divided into three types.

Life cycle

Colony generally contains one queen bee, fertile female; seasonally up to a few thousand drone bees or fertile males; and a large seasonally variable population of worker bees. Details vary among the different species of honey bees, but common features include:

Eggs are laid singly in a cell in a wax honeycomb, produced and shaped by the worker bees. Larvae are initially fed with royal jelly produced by worker bees, later switching to honey and pollen. The exception is a larva fed solely on royal jelly, which will develop into a queen bee. Drones hatch from unfertilized eggs, females (Queens and worker bees) hatch from fertilized eggs. The queen actually can choose to fertilize the egg she is laying, usually depending on what cell she is laying in.

Young worker bees clean the hive and feed the larvae. When their royal jelly producing glands begin to deteriorate, they begin building comb cells. They progress to other within-colony tasks as they become older, such guarding the hive.

Later still, a worker takes her first orientation flights and finally leaves the hive and typically spends the remainder of her life as a forager.

Worker bees cooperate to find food and use a pattern of "dancing" to communicate information regarding resources with each other.

Honey

Honey is the complex substance made when the nectar and sweet deposits from plants and trees are gathered, modified and stored in the honeycomb by honeybees as a food source for the colony.

Questions on the text

1- How many types of bees does the hive contain?
2- The honeybees provide humans with some important products. What are the three main products?
3- How many eggs are being placed in a wax honeycomb cell?

4- Complete the following sentences

a. Honeybee hive contains.....queen.
b. ..... clean the hive and feed the larvae.
c. The main food source in the honeybee colony is.. .....
d. ..... is a complex substance made from flowers' nectar by .....
e. ..... is the food of honeybee queen.

Translate into Arabic

Some insects are harmful to plants like cotton worms but some other insects are beneficial like honeybees.

Translate into English

عسل النحل ذو قيمة إقتصادية عالية و فوائد صحية كبيرة.

خلية النحل يعيش بها ملكة واحدة فقط .

VOCABULARY

Hive	خلية
Colony	مستعمرة
Cooperative	متعاون
Royal jelly	غذاء ملكي
Commercial	تجاري
Social	أجتماعي
Larva	يرقة
Inhabitants	سكان
Female	أنثى
Gather	يجمع
Complex	معقد
Worker	عامل
Orientated	منظم
Nectar	رحيق
Cooperate	يتعاون
Royal Jelly	غذاء ملكات النحل

Unit 10

Crop rotation

A simple definition of crop rotation is the planting of different crops in recurring succession in the same field in sequential seasons for various benefits such as to avoid the buildup of pathogens and pests that often occurs when one species is continuously cropped.

Reasons for crop rotation

The two problems with growing the same (or similar) crops in the same area year on year, is that the nutrients in the soil become unbalanced and that pests and diseases which are attracted to the crop can increase in the soil. In other words, Crop rotation avoids a decrease in soil fertility, as growing the same crop repeatedly in the same place eventually depletes the soil of various nutrients.

By changing the position of the crops, the nutrients can remain balanced (as different groups of crops require different nutrients) in addition; soil borne pests and diseases are reduced as they are not given the chance to build up year after year.

One point of using the particular groupings of crops, is that the treatment of the soil is very similar and over the period of the rotation, the condition of the soil is maintained by the use of the various soil preparation used. The benefits usually associated with good crop rotations are:

- Maintains good soil physical condition and organic matter.

- Improves distribution of plant nutrients in the soil by varying the feeding range of roots.
- Improves fertility with legume nitrogen and, when using green manure crops, makes other plant nutrients more available.
- Improves crop quality and yields.

The choice and sequence of rotation crops depends on the nature of the soil, the climate, and precipitation which together determine the type of plants that may be cultivated. Other important aspects of farming such as crop marketing and economic variables must also be considered when choosing a crop rotation.

Question on text

1- Define the crop rotation?
2- Is it good for the soil to cultivate the same crop every year? If your answer is no give the reasons.
3- What are the benefits usually associated with good crop rotations?
4- **Complete the following sentences:**
   a. By changing the position of the crops, the soil nutrients can remain……..
   b. Crop rotation ……..the soil organic matter.
   c. The crop rotation has various ……. for plants such as……..and for the soil such as……..

VOCABULARY

pathogen	مسببات ألأمراض
Unbalanced	غير متزن
Position	مكان- موقع
Maintain	يحافظ على
Rotation	دورة ، مناوبة ، تعاقب
deplete	يستنزف
benefits	فوائد – مكاسب
Associated with	يلازم مع- يرافق
avoid	يتجنب
distribution	توزيع

Unit 11

Is All Milk the Same?

People have used milk as a food since very ancient times. Yet in different parts of the world, different animals have been the source of its supply.

In Britain and among other English- speaking people, the cow furnishes most of the milk supply. In Spain, a great deal of the milk comes from sheep. The desert tribes of Arabia get milk producing animal from the camel. In Egypt, the water buffalo is a source of milk. In Lapland, reindeer furnish milk to the people. In Peru, the llama is a milk-producing animal. In Tibet, the people get milk from the yak. And in many countries, the goat is an important supplier of milk.

Is all this milk the same? The answer is no. Each animal produces milk especially suited for its own young. Cow's milk is intended for a calf and not for a human baby. Since a calf is a much coarser creature than a baby, cow's milk is much coarser than human milk.

But cow's milk is enough like human milk so that a baby can drink it and grow strong and healthy. Cow's milk has less sugar, more salts, and four times as much casein, an important protein substance, as human milk.

While milk differs a great deal, depending on the species of animal, it always contains fat, protein, carbohydrate, and minerals. No matter which milk people drink in different

parts of the world, they obtain these vital substances for nourishment.

Just to see how different milks compare, let's look at cow's milk and reindeer milk. Cow's milk contains about 87 per cent water; reindeer, only about 68 per cent. Cow's milk has about 4 per cent fat; reindeer milk, about 17 per cent. Reindeer milk has half the amount of sugar of cow's milk, three times as much casein, and about five times as much other protein. So you see, it's quite different from cow's milk, and yet the people of Lapland get along on it very well indeed!

Even cow's milk may vary greatly, depending on the breed, the health of the individual cow's and the time between milking. The last milk to be drawn at each milking is richer in fat than the rest, so a good job of milking can produce richer milk from the same cow than a poor job!

Questions on Text

1-What is the source of milk supply in different parts of the world ? Verity?
2- Is all milk the same? Why?
3- What is the more similar milk to human milk?
4- Describe the contents of any milk?
5- Compare between cow's milk and reindeer's milk?
6-complete:
   a- The last milk to be drawn at each milking is ..... in fat than the rest.

b- A good job of milking can produce .....milk than a poor job of milking.

c- Cow's milk can vary greatly according to

a-.....

b-.....

c-.....

Translate into Arabic.

Milk is an opaque white liquid produced by mammals. It provides the primary source of nutrition for young mammals before they are able to digest other types of food.

VOCABULARY

Arabia	جزيرة العرب
Water buffalo	جاموس
Reindeer	الرنة – الأيل
goat	ماعز
nourishment	غذاء – قوت – تغذية
Sheep	غنم – شاة ، خروف
English- speaking people	المتحدثين بالانجليزية
Furnishe	يؤسس
human	إنساني

Unit 12

How Many Types of Climate Are There?

There are different types of climate on earth. Climate, by the way, is the combination of temperature, moisture, wind, and sunshine at a place over a period of many years. Climates of the world can be classified according to their latitudes and the plants that grow there. Different kinds of plants need different amounts of moisture and heat to grow. So the vegetation of a place tells us about temperature and rainfall conditions over a long period of time.

Basically, there are five major classifications of climates, with many subdivisions in each class. There are tropical climates, subtropical climates, mid-latitude climates, high-latitude climates, and high-altitude climates.

Tropical climates are found in regions between 350° North and 350° South latitude. In the tropical rain forests (nearest the Equator), conditions are warm and rainy all year long, and there is a thick cover of trees. In this tropical area there are also tropical wet-and-dry climates; tropical savannas, where the climate is too dry for forests; tropical steppes (still drier); and the tropical desert climate.

Subtropical climates prevail in 30◦ and 40◦ north and South latitudes. In these areas there is a Mediterranean climate of hot, dry summers and mild, wet winters and a humid subtropical climate of hot summers and mild winters, with enough rainfall in all seasons to sustain forests.

Mid-latitude climates occur between 40◦ and 60◦ North and South latitudes. Included in this area are a marine west coast climate (west coast of North America); cool steppe or cool desert climates; and humid continental climates---- each with different vegetation and rainfall patterns.

High-latitude climates are characteristic of from 60◦ North and South latitudes to the Poles. Here temperatures are very cold in winter and cool in summer. Within this area is a taiga climate (very cold in winter); a tundra climate, where only grasses, mosses and lichens can grow; and the polar climate, where great ice caps exist.

High-altitude climates, or highland climates, are found on the high mountains of the world, even at the Equator.

Questions on Text

1-What is a climate?
2- How can climates of the world be classified?
3- What does a vegetation of a place tell us?
4- What are basically the major classifications of climates?
5- What are the tropical climates prevail? What are the or found? Conditions of this climate
6- Where are subtropical climates prevail? and what are this characters?
7- What is the difference between mid-latitude and high latitude climates?

Translate into Arabic

Climate is commonly defined as the weather averaged over a long period of time. The standard averaging period is 30 years, but other periods may be used depending on the purpose.

VOCABULARY

Climate	مناخ
Combination	خليط
Temperature	درجة حرارة
moisture	رطوبة
Sun-shine	شمس ساطعة
According to	تبعا لـ
Equator	خط الاستواء
latitude	خط عرض-عرض
altitude	إرتفاع- علو عن سطح البحر
Vegetation	كساء خضري
Rainfall	نزول او هطل المطر
Taiga climate	مناخ شديد البروده شتاءاً
Over a period of	خلال فترة
Moss	اشنة
Prevail	غلب
lichen	حشيشة البحر
Characteristic	مميزاو متميز
Tropical	استوائي
Sub-tropical	تحت استوائي

Unit 13

Do Cacti Have Leaves?

A cactus (plural: cacti) is able to exist under extreme conditions because it is a plant that has adapted itself to those conditions.

Cacti have the same basic structures and processes as other plants. But the work that is done by leaves in most other plants is done by the stems and branches of the cacti. In fact, the absence of leaves and the presence of spine-covered branches and stems enable them to survive in hot, dry regions.

The leaves of other plants are thin structures and are filled with pores through which the plant breathes. During the cell-making process carried on by the plants, water is given off to the air through these pores.

A cactus plant must guard every drop of water. So the work of the leaves is taken over by the stems and branches. Their thick skins have very few pores, and the water in the cactus is retained.

The roots of cacti are spread out, close to the surface of the ground. That's why cacti can quickly absorb water from the earth after a rainfall. This water, which is taken in through the roots, is stored in the spongy or hollow stems of a cactus. The outer layer of the plant is thick and waxy, and this also prevents the escape of water.

The outer skin of a cactus is ribbed. Some cacti have ribs that fold and expand like an accordion. They expand as they fill up with water and fold together as the water in the stem is used up.

There are some members of the cactus family that do have leaves, such as the lemon vine of the West Indies. But in most cacti the leaves have developed into spines, needles, or hairs. These help protect the cacti from animals that would otherwise eat them, since they may be the only green plants in the area.

Questions on text

1-What is a cactus?
2- What is different about cactus?
3-How can a cactus guard every drop of water?
4- Why cactus can quickly absorb water from the soil after a rainfall?
5- How can the cacti be protected from animals?

VOCABULARY

Extreme condition	ظروف منتهي الشدة او ظروف متطرفه
Carry on	باشر – أدار
Pores	مسام – ثقوب
Guard	يحرس
Accordion	اكورديون (الة موسيقية)
Spine- covered branches	افرع مغطاة بالأشواك
Ribbed	مضلع – مخطط
Take over	يستبقي
Use- up	استهلك– استنفذ
retained	يحفظ

Unit 14

How Many kinds of Oranges Are There?

Nobody knows exactly where the orange originated. Though it is grown today in most of the warmer parts of the world, it was not until recently that the crop became so widespread.

The Greeks and Romans knew about the orange, and it probably was carried from India to western Asia and then to all of Europe. The Spanish colonists took the sour orange to the West India, and from there to Florida soon after the first settlement there in 1565.

The three most important species of oranges are the sweet or common orange, the mandarin orange, and the sour orange. But as many as ninety-seven varieties of sweet and mandarin oranges alone have been counted!

Different varieties of oranges are grown in different parts of the country and the world. For example, of the sweet oranges, California and Arizona grow the Washington Navel and the Valencia. In Florida there is quite a variety of sweet oranges grown: the Hamlin, Pineapple, Parson Brown, Homosassa, and Valencia. Texas also grows the Valencia and the Hamlin.

An interesting type of sweet orange is called the blood orange. It has a pulp with a deep-red tint. It is grown extensively in the Mediterranean region.

The mandarin oranges, which include the tangerines, are grown mostly in Florida. The Temple, which is a loose, thin-skinned orange, is a hybrid of the mandarin and the sweet orange.

The sour orange is grown to some extant everywhere, but Spain produces most of the sour oranges used for commercial purposes. The chief use of this orange is in making marmalade, since it is too acid and bitter to be eaten as a fruit. But there are many other interesting uses, ranging from medicines to perfume!

Questions on Text

1-Suggest how dose orange reach to Europe?
2- What are the most important species of oranges?
3- What are the different verities of oranges that grown in different parts of America?
4- What do you know about blood and Temple oranges?
5- Where is sourer orange grown?
6- In what purposes are sour orange used?
7- How many verities of sweet and mandarin oranges are existed so far?

VOCABULARY

Greeks and Romans	اليونانيون والرومان
Spanish colonists	مستعمرات أسبانية
marmalade	مرملاد (نوع من المربي)
Tint	لون بلون خفيف – صبغة
Medicines	أدوية
loose	مفكك – سائب
Sour orange	النارنج
Sweet orange	البرتقال العادي
Settlement	إستيطان – إستعمار
Blood orange	برتقال بدمة
Perfume	عطر
Extensively	بشمول (v. extent) شامل اتساع
Mandarin orange	اليوسفي
Bitter	مر – حاد (اليم – محزن)
Commercial purposes	أغراض تجاريه
Hybrid	هجين

Unit 15

What Is Peat?

Peat is not coal. It might be called a step in the process of making coal.

Coal itself is made of the remains of ancient trees and plants that grew in swampy jungles in warm, moist climates hundreds of mil-lions of years ago. These trees and plants fell into the swamp waters. Bacteria changed some parts of the wood into gases that escaped, leaving behind a black mixture, mostly carbon. In time the pressure from mud and sand above squeezed out most of the liquid, leaving behind a pasty mass that slowly hardened into coal.

This process, from beginning to end, took thousands of years. But the first stages of that process of making coal can actually be seen going on today. In the Great Dismal Swamp of Virginia and North Carolina and in thousands of swamps of the northern states of the U.S.A. and Canada, peat is being made.

In the swamps, plants are gradually decaying in a process that leaves most of the carbon in place. A few years of such action produces a brown, matted mass of twigs, branches, and leaves. This is known as peat. When the water is drained from such a swamp, the peat can be cut into blocks, set out dry, and then burned as fuel.

Drying is important because peat in the ground may be three- fourths water. In Ireland, where peat is plentiful and the higher forms of coal are expensive, more than half of the farms depend entirely on peat for fuel.

The other forms of coal are developments from peat. If peat is allowed to remain where it forms, it gradually changes into lignite, or brown coal. It is more solid that coal, but still soft enough to crumble when shipped long distances.

The next form of coal is bituminous, or soft coal. It is formed from lignite by chemical change and pressure in the earth over thousands of years. This is the most important member of the coal family. It burns easily and is abundant.

It bituminous coal remains in the earth and is subjected to enough pressure, it gradually changes to hard coal or anthracite. It burns with very little smoke and for a longer time than bituminous coal.

Questions on text

1- What is peat?
2- What is coal?
3- Where does coal process take place?
4- Which parts of the world are famous for coal production?
5- Why drying is important for peat quality?
6- What are other forms of peat?

VOCABULARY

Coal	فحم حجري
Remains	بقايا
Swampy	مستنقع – موحل
Jungle	غابة
Behind	خلف– وراء – دون
Mud	وحل – طين
Squeeze out	عصر، كبس ، ضغط
Pasty	عجين (مثل العجين)
Mass	كومة – كتلة – جمهور،جمع
crumble	فتت– كسر– حطم– تحطم
Plentiful	غزير . جزيل ، وافر
Ground	ارض ،بر ، بلاد، منطقة، اساس .برهان
Fuel	وقود
Block	كتلة خشب – حجر ، جملة عمارة ، مجمع
Drained	صرف ، نزح ، سحب ، صفي
Matted	متلبد– غير لامع
Decay	إنحلال – إنحطاط – تعفن
Going	مستمر – تقدم

Grammar

Unite 1

Parts of Speech

We can categorize English words into 8 basic types or classes. These classes are called "parts of speech". It's quite important to recognize parts of speech. This helps you to analyze sentences and understand them. It also helps you to construct good sentences.

The Part	Basic Function	Example
Noun	**Person, things, places, feelings, Ideas**	**Ahmed, book, work , sadness, truth, Egypt**
		Egypt is my country
Pronoun	**Takes the place of a noun**	**I, he, she, it, you, them ours, who**
		He is a boy
Verb	**Action or state**	**Play, work, have**
		I **like** football
Adjective	**describes a noun**	**some, good, big, red, well**
		big dog **- rich** man

Adverb	**describes a verb, adjective or adverb**	**quickly, silently, well, badly, very, really**
		When he is **very** hungry, he eats really **quickly.**
Preposition	**to, at, after, on, but**	**to, at, after, on, but**
		Ahmed goes **to** school They traveled **by** plane
Conjunction	**joins clauses or sentences or words**	**and, but, when**
		Ali **and** Ahmad visited us yesterday.
Interjection	**short exclamation, sometimes inserted into a sentence**	**oh!, ouch!, hi!, well**
		Alas! She died. **Hi**! How are you?

Articles: There are 3 articles widely used in English: There are two types of articles **indefinite** '**a**' and '***an***' or **definite** '**the**'.

a	Before singular not specifically known. begins with a <u>consonant</u> letter	This is **a** book. I ate **a** banana
an	Before singular not specifically known. begins with a <u>vowel letter</u>	This is **an** apple.
the	Before singular specifically known. You should also use **the** when you have already mentioned the thing you are talking about	This is **the** book I bought yesterday.

Unit 2

Sentences

1. Simple Sentences
2. Compound Sentences
3. Complex Sentences

1-<u>Simple Sentences</u>

Simple sentence contains a subject and a verb, and it expresses a complete thought. In the following simple sentences

1) I saw a cat eating a fish
2) Ahmed and Yasser play football every afternoon.
3) Some students like to study in the mornings.

2-<u>Compound Sentences</u>

A compound sentence contains two independent clauses joined by a coordinator. The coordinators are as follows:

for, and, nor, but, or, yet, so.

Ahmed did his homework. Yasser helped him.

Ahmed did his homework and Yasser helped him.

Khaled is rich. He is unhappy.

Khaled is rich but he is unhappy.

We can play football. We can watch TV.

We can play football or we can watch TV.

3- Complex Sentences

A complex sentence has an independent clause joined by one or more dependent clauses. A complex sentence always has a subordinator such as ***because, since, after, although, or when*** **or a relative pronoun such as *that, who, or which.***

A. When he handed in his homework, he forgot to give the teacher the last page.

B. The teacher returned the homework after she noticed the error.

C. The students are studying because they have a test tomorrow.

D. After they finished studying, Juan and Maria went to the movies.

E. Juan and Maria went to the movies after they finished studying.

When a complex sentence begins with a subordinator such as sentences A and D, a comma is required at the end of the dependent clause.

Complex sentences / adjective clauses

Finally, sentences containing adjective clauses (or dependent clauses) are also complex because they contain an independent clause and a dependent clause. The subjects, verbs, and subordinators are marked the same as in the previous sentences, and in these sentences, the independent clauses are also underlined.

A. The woman who(m) my mom talked to sells cosmetics.

B. The book that Ahmed read is on the shelf.

C. The town where I grew up is in Egypt.

Unit 3

Nouns

Nouns are words we use to name:

People	man, father, teacher, neighbor, …
Things	book, table, sugar, fruit, …
Places	School, street, city, house, …..
Ideas	Freedom, honesty, truth, ….
Feelings	Happiness, anger, boredom, joy, ….

Countable and Uncountable Nouns

Countable Nouns are things that could be counted as one, two, three, and so on. They are things that we can count. For example: "pen". We can count pens. We can have one, two, three or more pens. Here are some more countable nouns:

- dog, cat, animal, man, person
- bottle, box, liter
- coin, note, dollar
- cup, plate, fork
- table, chair, suitcase, bag

Countable nouns can be singular or plural:

- My **dog is** playing.
- My **dogs are** hungry.

We can use the indefinite article **a/an** with countable nouns:

- **A** dog is **an** animal.

When a countable noun is singular, we must use a word like **a/the/my/this** with it:

- I want **an** orange. (*not* I want orange.)
- Where is **my** bottle? (*not* Where is bottle?)

When a countable noun is plural, we can use it alone:

- I like oranges.
- Bottles can break.

We can use **some** and **any** with countable nouns:

- I've got **some** books.
- Have you got **any** pens?

We can use **a few** and **many** with countable nouns:

- I've got **a few** dollars.
- I haven't got **many** pens.

"People" is countable. "People" is the plural of "person". We can count people:

- There is one person here.
- There are three people here.

Uncountable Nouns

Uncountable nouns are substances, concepts etc that we cannot divide into separate elements. We cannot "count" them.

For example, we cannot count "milk". We can count "bottles of milk".

Some uncountable nouns:

- music, art, love, happiness
- advice, information, news
- furniture, luggage
- rice, sugar, butter, water
- electricity, gas, power
- money, currency

We usually treat uncountable nouns as singular. We use a singular verb. For example:

- **This** news **is** very important.
- Your luggage **looks** heavy.

We do not usually use the indefinite article **a/an** with uncountable nouns. We cannot say "an information" or "a music". But we can say **a something of**:

- **a piece of** news
- **a bottle of** water
- **a grain of** rice

We can use **some** and **any** with uncountable nouns:

- I've got **some** money.
- Have you got **any** rice?

We can use **a little** and **much** with uncountable nouns:

- I've got **a little** money.
- I haven't got **much** rice.

Nouns that can be Countable and Uncountable

Sometimes, the same noun can be countable and uncountable, often with a change of meaning.

Countable		Uncountable
There are two hairs in my coffee!	**hair**	I don't have much hair.
There are two lights in our bedroom.	**light**	There's too much light!
I thought I heard a noise.	**noise**	It's difficult to work when there is too much noise.
Our apartment has two rooms.	**room**	Is there room for me to sit here?
Macbeth is one of Shakespeare's greatest works.	**work**	I have no money. I need work!

Unit 4

Verbs

Verbs give the idea of action, of "doing" something. *For example*, words like *run, play, do* and *work* all express action.

But some verbs do not give the idea of action; they give the idea of existence, of state, of "being". For example, verbs like *be, exist, seem* and *belong* all express state.

A verb always has a subject. (In the sentence "Ahmed speaks English", *Ahmed* is the subject and *speaks* is the verb.) In simple terms, therefore, we can say that verbs are words that tell us what a subject **does** or **is**; they describe:

- **Action** (Yasser plays football.)
- **State** (Nouran seems kind.)

There is something very special about verbs in English. Most other words (adjectives, adverbs, prepositions etc) do not change in form (although nouns can have singular and plural forms). But almost all verbs change in form. For example, the verb **to study** has five forms:

•to study, study, studies, studied, studying.

The various parts of the verb phrase are divided into two main categories: auxiliary verbs and main verb. The auxiliary is further sub-divided into modal auxiliary and primary auxiliary.

Subject	Modal auxiliary verb	Primary auxiliary verb(s)	Main verb	Object
I	-	-	*play*	*the piano.*
He	-	*is*	*studying*	*English.*
Sarah	*can*	-	*sing*	*opera.*
I	-	*have been*	*painting*	*the house.*
You	*should*	*have been*	*watching*	*the baby*

Unit 5

Tenses

Present Simple Tense

How do we make the Simple Present Tense?

subject	+	auxiliary verb	+	main verb
		do		base

There are three important exceptions:

1. For positive sentences, we do not normally use the auxiliary.
2. For the 3rd person singular (he, she, it), we add s to the main verb or es to the auxiliary.
3. For the verb to be, we do not use an auxiliary, even for questions and negatives.

Look at these examples with the main verb *like*:

	subject	auxiliary verb		main verb	
+	I, you, we, they			like	Tea.
	He, she, it			likes	Tea.
-	I, you, we, they	Do	not	like	tea
	He, she, it	Does	not	like	tea.
?	Do	I, you, we, they		like	tea?
	Does	he, she, it		like	tea?

Look at these examples with the main verb *be*. Notice that there is no auxiliary:

	subject	main verb		
+	I	am		Egyptian.
	You, we, they	are		Egyptian.
	He, she, it	is		Egyptian.
-	I	am	not	old.
	You, we, they	are	not	old.
	He, she, it	is	not	old.
?	Am	I		late?
	Are	you, we, they		late?
	Is	he, she, it		late?

How do we use the Simple Present Tense?

We use the simple present tense when:

- the action is general
- the action happens all the time, or habitually, in the past, present and future
- the action is not only happening now
- the statement is always true

EXERCISES

A. Complete the sentence using one of the following:

Cause (s) close(s) drink(s) live(s) open(s) ~~speak(s)~~ take(s) place

1- Ahmed speaks German very well.

2- I never.....tea.

3- The club .....at 7 o'clock AM and .....at11 O'clock PM every day

4- Bad driving.....accidents.

5- I .....in a small apartment.

6- The soccer world cup .....every four years.

Present Perfect Tense

The structure of the present perfect tense is:

subject	+	auxiliary verb	+	main verb
		have		past participle

Here are some examples of the present perfect tense:

	subject	auxiliary verb		main verb	
+	I	have		seen	ET.
+	You	have		eaten	mine.
-	She	has	not	been	to Rome.
-	We	have	not	played	football.
?	Have	you		finished?	
?	Have	they		done	it?

How do we use the Present Perfect Tense?

This tense is called the present perfect tense. There is always a connection with the past and with the present. There are basically three uses for the present perfect tense:

1. experience
2. change
3. continuing situation

We often use the present perfect tense to talk about experience from the past. We are not interested in when you did something. We only want to know if you did it

EXERCISES

You are writing a letter to a friend. In the letter you give news about yourself and other people.

Use the words given to make sentences. Use the present perfect.

Dear Amir,

Lots of things have happened since I wrote to you last time.

1- *I/buy/ a new car I have bought a new car.*

2- *My father/ start/ a new job.....*

3- *I/ give up/ smoking.....*

4- *Ahmed and Nouran/ go/ to England.....*

5- *Mahmoud/ have / a baby.....*

Present Continuous Tense

The structure of the present continuous tense is:

subject	+	auxiliary verb	+	main verb
		be		base + ing

	subject	auxiliary verb		main verb	
+	I	am		speaking	to you.
+	You	are		reading	this.
-	She	is	not	staying	in London.
-	We	are	not	playing	football.
?	Is	he		watching	TV?

We use the present continuous tense to talk about:

- action happening now
- action in the future

Present continuous tense for action happening now

a) for action happening exactly now : ***I am eating my lunch.***

b) for action happening **around now:** The action may not be happening exactly now, but it is happening just before and just after now, and it is not permanent or habitual: ***Hassan is going out with Ahmed***

Present continuous tense for the future

We can also use the present continuous tense to talk about the **future** - if we add a **future word**!! We must add (or understand from the context) a future word. "Future words" include, for example, **tomorrow**, **next year**, **in June**, **at Christmas** etc. We only use the present continuous tense to talk about the future when we have planned to do something before we speak. We have already **made a decision and a plan** before speaking.

I am taking my exam next month

EXERCIES

Complete the sentences with one of the following verbs in the correct form:

Come get happen look make start stay try ~~work~~

1- "You *'re working* hard today.". "Yes, I have a lot to do"
2- I.....for Samy. Do you know where he is?
3- It..... dark. Shall I turn on the light?
4- They haven't got anywhere to live at the moment. They .....with friends until they find somewhere.
5- "Are you ready, Amina? "Yes, I.....
6- Have you got an umberella? It.....to rain.
7- You.....a lot of noise. Could you be quiter? I.....to concentrate.
8- Why are all these people here? What.....?

Use the words in brackets to complete the questions.

1- "Is Ahmed working this week?' "No, he's on holyday.' (Ahmed/look)
2- Why.....at me like that? What's the matter? (you/look)
3- Reham is a student at university.' 'Is she? What.....? (she/ study)

Past Simple Tense

To make the simple past tense, we use:

- **past form** only

  or
- auxiliary **did + base form**

Here you can see examples of the **past form** and **base form** for irregular verbs and regular verbs:

	V1 base	**V2 past**	**V3 past participle**	
regular verb	**work** **explode** **like**	**worked** **exploded** **liked**	worked exploded liked	The past form for all regular verbs ends in -ed.
irregular verb	**go** **see** **sing**	**went** **saw** **sang**	gone seen sung	The past form for irregular verbs is variable. You need to learn it by heart.
			You do not need the past participle form to make the simple past tense. It is shown here for completeness only.	

The structure for **positive** sentences in the simple past tense is:

subject	+	*main verb*
		past

The structure for **negative** sentences in the simple past tense is:

subject	+	auxiliary verb	+	not	+	main verb
		did				base

The structure for **question** sentences in the simple past tense is:

auxiliary verb	+	subject	+	main verb
did				base

The auxiliary verb **did** is not conjugated. It is the same for all persons (I did, you did, he did etc). And the base form and past form do not change. Look at these examples with the main verbs **go** and **work**:

	subject	**auxiliary verb**		**main verb**	
+	I			went	to school.
	You			worked	very hard.
-	She	did	not	go	with me.
	We	did	not	work	yesterday.
?	Did	you		Go	to London?
	Did	they		work	at home?

Exception! The verb **to be** is different. We conjugate the verb to be (I was, you were, he/she/it was, we were, they were); and we do **not** use an auxiliary for negative and question sentences. To make a question, we exchange the subject and verb. Look at these examples:

	subject	**main verb**		
+	I, he/she/it	was		here.
	You, we, they	were		in London.
-	I, he/she/it	was	not	there.
	You, we, they	were	not	happy.
?	Was	I, he/she/it		right?
	Were	you, we, they		late?

We use the simple past tense to talk about an action or a situation - an event - in the past. The event can be **short** or **long**.

Here are some **short** events with the simple past tense:

She went to the door.

We did not hear the telephone.,

Did you see that car?

Here are some **long** events with the simple past tense:

I lived in Cairo for 10 years.

The Jurassic period lasted about 62 million years.

Did you watch TV last night?

EXERCISES

Put one of these verbs in each sentence:

Buy catch cost drink fall hurt sell spend teach throw win ~~write~~

1- Mozart *wrote* more than 600 pieces of music.

2- ' How did you learn to drive?' 'My father .....me.'

3- We couldn't afford to keep our car, so we.....it.

4- I was very thersity. I.....the water very quickly.

5- Mahmoud and I played tennis yesterday. He's much better than me, so he.....easily.

6- Ahmed..... down the stairs this morning and.....his leg.

7- Hamdy.....the ball to Yasser, who.....it.

Past Continuous Tense

The structure of the past continuous tense is:

subject	+	auxiliary verb BE	+	main verb
		conjugated in simple past tense		present participle
		was **were**		**base + ing**

For negative sentences in the past continuous tense, we insert **not** between the auxiliary verb and main verb. For question sentences, we exchange the **subject** and **auxiliary verb**. Look at these example sentences with the past continuous tense:

	subject	**auxiliary verb**		**main verb**	
+	I	was		watching	TV.
+	You	were		working	hard.
-	He, she, it	was	not	helping	Mary.
-	We	were	not	joking.	
?	Were	you		being	silly?
?	Were	they		playing	football?

The past continuous tense expresses action at a **particular moment** in the past. The action started before that moment but has not finished at that moment. For example, yesterday I watched a film on TV. The film started at 7pm and finished at 9pm.

At 8pm yesterday, I was watching TV.

*I **was working** at 10pm last night.*

*They **were** not **playing** football at 9am this morning.*

*What **were** you **doing** at 10pm last night?*

*What **were** you **doing** when he arrived?*

EXERCIES

Put the verbs into the correct form, past continues or past simple.

1- Hanan ***was waiting*** (wait) for me when I ***arrived*** (arrive).
2- What.....(you/do) this time yesterday? 'I was asleep.'
3- .....(you/go) out last night?' No, I was too tired."
4- Was Nadia at the party last night? 'Yes, she.....(wear) a really nice dress.'
5- How fast.....(you/drive) when the accident.....(happen)?
6- Hany.....(take) a photograph of me while I .....(not/look).
7- We were in a very difficult position. We.....(not/know) what to do.
8- I haven't seen Ashraf for ages. When I last.....(see) him, he.....(try) to find a job in Cairo.

Past Perfect Tense

The structure of the past perfect tense is:

subject	+	auxiliary verb HAVE	+	main verb
		conjugated in simple past tense		past participle
		had		**V3**

For negative sentences in the past perfect tense, we insert **not** between the auxiliary verb and main verb. For question sentences, we exchange the **subject** and **auxiliary verb**. Look at these example sentences with the past perfect tense:

	subject	**auxiliary verb**		**main verb**	
+	I	had		finished	my work.
+	You	had		stopped	before me.
-	She	had	not	gone	to school.
-	We	had	not	left.	
?	Had	you		arrived?	
?	Had	they		eaten	dinner?

The past perfect tense expresses action in the **past** before another action in the **past**. This is the **past in the past**. For example:

The train left at 9am. We arrived at 9.15am. When we arrived, the train **had left**.

*The train **had left** when **we arrived**.*

*I wasn't hungry. I **had** just **eaten**.*

*They were hungry. They **had** not **eaten** for five hours.*

*I didn't know who he was. I **had** never **seen** him before.*

EXERCIES

Read the situations and write sentences from the words in brackets.

1- You went to Ahmed's house but he wasn't there. (he/ go/ out)
he had gone out.
2- You went back to your home town after many years. It wasn't the same as before. (it/ change/ a lot).....
3- I invited Yasser to the party but he couldn't come. (he/ arrange/ to do something else).....
4- You went to the Cinema last night. You arrived at the Cinema late. (the film/ already/begin).....
5- I was very pleased to see Kamal again after such a long time. (I/ not/ see/ him for five years).....
6- I offered Nour something to eat but she wasn't hungry. (She/ just/ have/ breakfast).....

Past Perfect Continuous Tense

The structure of the past perfect continuous tense is:

subject	+	auxiliary verb HAVE	+	auxiliary verb BE	+	main verb
		conjugated in simple past tense		past participle		present participle
		had		**been**		**base + ing**

For negative sentences in the past perfect continuous tense, we insert **not** after the first auxiliary verb. For question sentences, we exchange the **subject** and **first auxiliary verb**. Look at these example sentences with the past perfect continuous tense:

	subject	**auxiliary verb**		**auxiliary verb**	**main verb**	
+	I	had		been	working.	
+	You	had		been	playing	tennis.
-	It	had	not	been	working	well.
-	We	had	not	been	expecting	her.
?	Had	you		been	drinking?	
?	Had	they		been	waiting	long?

The past perfect continuous tense is like the past perfect tense, but it expresses longer actions in the **past** before another action in the **past**. For example:

- Ram started waiting at 9am. I arrived at 11am. When I arrived, Ram **had been waiting** for two hours.

*Ram **had been waiting** for two hours when **I arrived**.*

*John was very tired. He **had been running**.*

*I could smell cigarettes. Somebody **had been smoking**.*

***Had** the pilot **been drinking** before the crash?*

EXECIES

Read the situations and make sentences from the words in brackets

1- I was very tired when I arrived home. (I/ work/ hard all day)
(The answer) ***I had been working hard all day.***

2- The two boys came into the house. They had a football and they were both very tired. (they/ play/ football)
(The answer) .....

3- There was nobody in the room but there was a smell of cigarettes. (somebody/ smoke/ in the room)
(The answer) .....

4- Ahmed woke up in the middle of the night, he was frightened and didn't know where she was. (she/ dream)
(The answer) .....

5- When I got home, Khaled was sitting in front of the TV. He had just turned it off. (he/ watch/ TV)
(The answer) .....

Simple Future Tense

The **simple future tense** is often called **will**, because we make the simple future tense with the modal auxiliary **will**.

The structure of the simple future tense is:

subject	**+**	**auxiliary verb WILL**	**+**	**main verb**
		invariable		base
		will		**V1**

For negative sentences in the simple future tense, we insert **not** between the auxiliary verb and main verb. For question sentences, we exchange the **subject** and **auxiliary verb**. Look at these example sentences with the simple future tense:

	subject	**auxiliary verb**		**main verb**	
+	I	will		open	the door.
+	You	will		finish	before me.
-	She	will	not	be	at school tomorrow.
-	We	will	not	leave	yet.
?	Will	you		arrive	on time?
?	Will	they		want	dinner?

We use the simple future tense when there is no plan or decision to do something before we speak. We make the decision spontaneously at the time of speaking. Look at these examples:

*Hold on. **I'll get** a pen.*

*We **will see** what we can do to help you.*

*Maybe we**'ll stay in** and **watch** television tonight.*

In these examples, we had no firm plan before speaking. The decision is made **at the time of speaking**.

We often use the simple future tense with the verb **to think** before it:

*I **think** I'll go to the gym tomorrow.*

*I **think** I will have a holiday next year.*

*I don't **think** I'll buy that car.*

Prediction

We often use the simple future tense to make a prediction about the future. Again, there is no firm plan. We are saying **what we think will happen**. Here are some examples:

*It **will rain** tomorrow.*

*People **won't go** to Jupiter before the 22nd century.*

*Who do you think **will get** the job?*

Be

When the main verb is **be**, we can use the simple future tense even if we have a firm plan or decision before speaking. Examples:

*I'll **be** in London tomorrow.*

*I'm going shopping. I **won't be** very long.*

***Will** you **be** at work tomorrow?*

Future Continuous Tense

The structure of the future continuous tense is:

subject	+	**auxiliary verb WILL**		**auxiliary verb BE**	+	**main verb**
		invariable		invariable		present participle
		will		**be**		**base + ing**

For negative sentences in the future continuous tense, we insert **not** between **will** and **be**. For question sentences, we exchange the **subject** and **will**. Look at these example sentences with the future continuous tense:

	subject	**auxiliary verb**		**auxiliary verb**	**main verb**	
+	I	will		be	working	at 10am.
+	You	will		be	lying	on a beach tomorrow.
-	She	will	not	be	using	the car.
-	We	will	not	be	having	dinner at home.
?	Will	you		be	playing	football?
?	Will	they		be	watching	TV?

The future continuous tense expresses action at a **particular moment** in the future. The action will start before that moment but it will not have finished at that moment. For example, tomorrow I will start work at 2pm and stop work at 6pm:

*At 4pm tomorrow, **I will be working***

*I **will be playing** tennis at 10am tomorrow.*

*They **won't be watching** TV at 9pm tonight.*

*What **will** you **be doing** at 10pm tonight?*

*What **will** you **be doing** when I arrive?*

*She **will** not **be sleeping** when you telephone her.*

Future Perfect Tense

The structure of the future perfect tense is:

subject	+	auxiliary verb WILL	+	auxiliary verb HAVE	+	main verb
		invariable		invariable		past participle
		will		**have**		**V3**

Look at these example sentences in the future perfect tense:

	subject	**auxiliary verb**		**auxiliary verb**	**main verb**	
+	I	will		have	finished	by 10am.
+	You	will		have	forgotten	me by then.
-	She	will	not	have	gone	to school.
-	We	will	not	have	left.	
?	Will	you		have	arrived?	
?	Will	they		have	received	it?

The future perfect tense expresses action in the future **before** another action in the future. This is the **past in the future**. For example:

- The train will leave the station at 9am. You will arrive at the station at 9.15am. When you arrive, the train **will have left**.

*The train **will have left** when **you arrive**.*

*You can call me at work at 8am. I **will have arrived** at the office by 8.*

*They will be tired when they arrive. They **will** not **have slept** for a long time.*

*"Mary won't be at home when you arrive." "Really? Where **will** she **have gone**?"*

Future Perfect Continuous Tense

The structure of the future perfect continuous tense is:

subject	+	**auxiliary verb WILL**	+	**auxiliary verb HAVE**	+	**auxiliary verb BE**	+	**main verb**
		invariable		invariable		past participle		present participle
		will		**have**		**been**		**base + ing**

For negative sentences in the future perfect continuous tense, we insert **not** between **will** and **have**. For question sentences, we exchange the **subject** and **will**. Look at these example sentences with the future perfect continuous tense:

	subject	**auxiliary verb**		**auxiliary verb**	**auxiliary verb**	**main verb**	
+	I	will		have	been	working	for four hours.
+	You	will		have	been	travelling	for two days.
-	She	will	not	have	been	using	the car.
-	We	will	not	have	been	waiting	long.
?	Will	you		have	been	playing	football ?
?	Will	they		have	been	watching	TV?

We use the future perfect continuous tense to talk about a long action before some point in the future. Look at these examples:

*I **will have been working** here for ten years next week.*

*He will be tired when he arrives. He **will have been travelling** for 24 hours.*

EXERCIES

B. Choose the correct future form to complete the sentences below.

1- *I'm hungry - Oh, I .....(make) you a sandwich.*

2- *He.....(study) Law at Sheffield University next year.*

3- *The flight .....(leave) at 8 p.m.*

4- *Look at those clouds! It .....(rain) any minute.*

5- *Mohamed.....(meet) Kim tomorrow afternoon.*

6- *I think he .....(be) very successful.*

7- *When.....(visit) me next year?*

8- *As soon as she arrives in Manchester she .....(give) you a call.*

9- *Look at those clouds on the horizon! It is .....(rain) soon.*

10- *Who do you think .....(win) the next national elections?*

11- *I'll take this letter to the post office when I.....(go) into town this afternoon.*

Complete List A-Z of irregular verbs		
Base Form	**Past Simple Form**	**Past Participle Form**
arise	arose	arisen
awake	awoke	awoken
be	was /were	been
beat	beat	beaten
become	became	become
begin	began	begun
bend	bent	bent
bet	bet	bet
bid	bid	bid
bite	bit	bitten
blow	blew	blown
break	broke	broken
bring	brought	brought
broadcast	broadcast	broadcast
build	built	built

burst	burst	burst
buy	bought	bought
catch	caught	caught
choose	chose	chosen
come	came	come
cost	cost	cost
creep	crept	crept
cut	cut	cut
deal	dealt	dealt
dig	dug	dug
do	did	done
draw	drew	drawn
drink	drank	drunk
drive	drove	driven
eat	ate	eaten
fall	fell	fallen
feed	fed	fed
feel	felt	felt
fight	fought	fought
find	found	found

flee	fled	fled
fly	flew	flown
forbid	forbade	forbidden
forget	forgot	forgotten
forgive	forgave	forgiven
freeze	froze	frozen
get	got	got
give	gave	given
go	went	gone
grow	grew	grown
hang	hung	hung
have	had	had
hear	heard	heard
hide	hid	hidden
hit	hit	hit
hold	held	held
hurt	hurt	hurt
interweave	interwove	interwoven
keep	kept	kept
kneel	knelt	knelt

know	knew	known
lay	laid	laid
lead	led	led
leave	left	left
lend	lent	lent
let	let	let
lie	lay	lain
light	lit	lit
lose	lost	lost
make	made	made
mean	meant	meant
meet	met	met
mistake	mistook	mistaken
offset	offset	offset
pay	paid	paid
put	put	put
quit	quit	quit
read	read*	read*
ride	rode	ridden
ring	rang	rung

rise	rose	risen
run	ran	run
say	said	said
see	saw	seen
seek	sought	sought
sell	sold	sold
send	sent	sent
set	set	set
sew	sewed	sewn
shake	shook	shaken
shine	shone	shone
shoot	shot	shot
show	showed	shown
shrink	shrank	shrunk
shut	shut	shut
sing	sang	sung
sink	sank	sunk
sit	sat	sat
sleep	slept	slept
slide	slid	slid

speak	spoke	spoken
spend	spent	spent
spit	spat	spat
split	split	split
spread	spread	spread
spring	sprang	sprung
stand	stood	stood
steal	stole	stolen
stick	stuck	stuck
sting	stung	stung
stink	stank	stunk
strike	struck	struck
swear	swore	sworn
sweep	swept	swept
swim	swam	swum
swing	swung	swung
take	took	taken
teach	taught	taught
tear	tore	torn
tell	told	told

think	thought	thought
throw	threw	thrown
understand	understood	understood
undo	undid	undone
wake	woke	woken
wear	wore	worn
weave	wove	woven
weep	wept	wept
win	won*	won*
write	wrote	written

All the same		
Base Form	**Past Simple Form**	**Past Participle Form**
bet	bet	bet
bid	bid	bid
broadcast	broadcast	broadcast
burst	burst	burst
cost	cost	cost
cut	cut	cut
hit	hit	hit
hurt	hurt	hurt
let	let	let
put	put	put
quit	quit	quit
set	set	set
shut	shut	shut
split	split	split

Past Simple and Past Participle are same		
Base Form	**Past Simple Form**	**Past Participle Form**
bend	bent	bent
bring	brought	brought
build	built	built
buy	bought	bought
catch	caught	caught
creep	crept	crept
deal	dealt	dealt
dig	dug	dug
feed	fed	fed
feel	felt	felt
fight	fought	fought
find	found	found
flee	fled	fled
get	got	got
hang	hung	hung
have	had	had

hear	heard	heard
hold	held	held
keep	kept	kept
kneel	knelt	knelt
lay	laid	laid
lead	led	led
leave	left	left
lend	lent	lent
light	lit	lit
lose	lost	lost
make	made	made
mean	meant	meant
meet	met	met
pay	paid	paid
read	read*	read*
say	said	said
seek	sought	sought
sell	sold	sold
send	sent	sent
shine	shone	shone
shoot	shot	shot

sit	sat	sat
sleep	slept	slept
slide	slid	slid
spend	spent	spent
spit	spat	spat
stand	stood	stood
stick	stuck	stuck
sting	stung	stung
strike	struck	struck
sweep	swept	swept
swing	swung	swung
teach	taught	taught
tell	told	told
think	thought	thought

Base Form and Past Simple are the same		
Base Form	**Past Simple Form**	**Past Participle Form**
beat	beat	beaten

Base Form and Past Participle are same		
Base Form	**Past Simple Form**	**Past Participle Form**
become	became	become
come	came	come
run	ran	run

All are different		
Base Form	**Past Simple Form**	**Past Participle Form**
arise	arose	arisen
awake	awoke	awoken
be	was /were	been
begin	began	begun
bite	bit	bitten
blow	blew	blown
break	broke	broken
choose	chose	chosen
do	did	done
draw	drew	drawn
drink	drank	drunk
drive	drove	driven
eat	ate	eaten
fall	fell	fallen
fly	flew	flown
forbid	forbade	forbidden
forget	forgot	forgotten

forgive	forgave	forgiven
freeze	froze	frozen
give	gave	given
go	went	gone
grow	grew	grown
hide	hid	hidden
know	knew	known
lie	lay	lain
mistake	mistook	mistaken
ride	rode	ridden
ring	rang	rung
rise	rose	risen
see	saw	seen
sew	sewed	sewn
shake	shook	shaken
show	showed	shown
shrink	shrank	shrunk
sink	sank	sunk
sing	sang	sung
speak	spoke	spoken
spring	sprang	sprung

steal	stole	stolen
stink	stank	stunk
swear	swore	sworn
swim	swam	swum
take	took	taken
tear	tore	torn
throw	threw	thrown
wake	woke	woken
wear	wore	worn
write	wrote	written

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